

# Welcome to Central Lakes College



I'm excited that you're exploring all the great things Central Lakes College has to offer!

I, too, was exploring CLC just months ago when I was living in Virginia. The College stood out as an incredibly advanced learning institution. Its wide range of programs, commitment to an outstanding student experience, and dedication to partnership are second to none. These features caught my attention, and I knew I wanted to be part of the CLC family. I was thrilled to join the College as president on July 1, 2016.

Although you and I may be new to CLC, the College has a long history as an outstanding place to learn and grow. Our future is bright. I look forward to working with the CLC team to build strong relationships, make sure that you, our student, are the reason for all that we do, and serve as a key partner in our community. Because your success is our success, our focus will be to help you reach your goals. We take seriously our mission to "build futures."

You will find CLC is committed to providing limitless opportunities, regardless of your path in life and education. To do so, both our Brainerd and Staples campuses feature a wide range of student life activities, outstanding occupational and technical programs, customized training, and the ability to start here and transfer anywhere.

Colleges are about people, and the special nature of CLC comes from our outstanding faculty and staff. They know students by name and truly care about you as an individual. We strive to make every decision with your best interests in mind. We are proud of CLC's unwavering commitment to our students. It is truly unique, and I know you'll feel it as soon as you visit.

Whatever your background or goals, you've come to the right place. Come see our campuses for yourself. I, along with every faculty and staff member, am here to answer any of your questions. I sincerely look forward to meeting you!

*Dr. Hara Charlier, President  
Central Lakes College*

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It is our intention to provide resources relevant to the academic, extracurricular, and social lives of students.

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# DEGREES, DIPLOMAS AND CERTIFICATES

**Associate in Arts Degree.** An Associate in Arts (AA) degree may be awarded upon successful completion of a 60 credit program in the liberal arts and sciences curriculum designed to constitute the first two years of a baccalaureate degree. An AA degree requires the completion of at least a 40 credit general education curriculum that fulfills the Minnesota Transfer Curriculum goal areas.

**Associate in Science Degree.** An Associate in Science (AS) degree may awarded upon successful completion of a 60 to 64 credit program in a designated field or area which transfers to a baccalaureate major in a related scientific, technological, or other non-liberal arts professional field. An AS degree must have one or more articulation agreement(s) between the institution awarding the AS degree and the institution awarding a related baccalaureate degree. An AS degree shall include a minimum of 30 semester credits in general education selected from at least six of the ten goal areas of the Minnesota Transfer Curriculum. An AS degree may also be designed to prepare students for employment.

**Associate in Fine Arts Degree.** An Associate in Fine Arts (AFA) degree may be awarded upon successful completion of a 60 credit program in a designated discipline in fine arts. An AFA degree is designed for transfer to a baccalaureate degree, as specified in an articulation agreement between the partnering institutions. An AFA degree offered by a college must have at least one articulation agreement between the institution awarding the degree and an institution awarding a baccalaureate degree in a related fine arts discipline. An AFA degree shall include a minimum of 24 semester credits in general education selected from at least six of the ten goal areas of the Minnesota Transfer Curriculum.

**Associate in Applied Science Degree.** An Associate in Applied Science (AAS) degree may be awarded upon successful completion of a 60 to 72 credit program. An AAS degree is intended to prepare students for employment or may be designed to transfer to a related baccalaureate major. An AAS degree shall include 25 percent of the total semester credits in general education credits. General education courses shall be selected from at least three of the ten goal areas of the Minnesota Transfer Curriculum.

**Diploma.** A diploma may be awarded upon successful completion of a 30 to 72 credit program. A diploma is intended to provide students with employment skills.

**Certificate.** A certificate may be awarded upon successful completion of a 9 to 30 credit specialized program of study.

# ACADEMIC AND CAREER MAJORS

## Liberal Arts and Sciences

### Transfer Program

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## **Liberal Arts & Sciences**

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### Liberal Arts and Sciences Associate in Arts Degree Four-year College Transfer

An Associate in Arts Degree earned at Central Lakes College is recommended as the transfer degree that enables a student to transfer to a Minnesota four-year college or university. Through special agreements, the A.A. Degree, in most cases, allows a student to continue with a "junior status" at the selected state university.

Included in the Associate in Arts Degree is the Minnesota General Education Transfer Curriculum, which contains the minimum number of credits (40) needed to complete general education requirements at all public colleges and universities in the state of Minnesota.

These requirements apply to new students, and students who have been absent from this college one academic year or longer.

- At least one semester before you plan to graduate, complete an Application to Graduate.
- A total of 60 college level credits with a cumulative GPA of 2.0 or higher are required for an Associate in Arts Degree.
- A cumulative GPA of 2.0 or higher in all Minnesota Transfer Curriculum courses is required to complete the MnTC.
- 15 credits must be earned at Central Lakes College to be eligible for an Associate in Arts Degree.
- Classes may meet requirements for more than one goal area, but credit will not be awarded for any course twice.

#### Minnesota Transfer Curriculum (MnTC)

Central Lakes College's version of the Minnesota General Education Transfer Curriculum is a 40-credit course cluster designed to transfer by formal agreement to all Minnesota public colleges and universities where it will meet all lower division general education requirements. It is certified by the faculty of CLC as meeting the goals and student competencies for general education agreed to by the faculties and official administrative representatives of all Minnesota public higher education systems.

CLC's transfer curriculum, like similar curricula in all public colleges and universities in the state of Minnesota, is designed to provide students with

a broad liberal arts and sciences foundation integrated with communications and thinking skills, and a study of contemporary concerns – all essential to serving an individual student's lifetime personal, social, and career needs. This curriculum recognizes that knowledge of the liberal arts and sciences, by its universality and timelessness, equips students to transcend individual differences and the inevitable changes affecting life in the 21st century.

This curriculum identifies the knowledge and skills people need to participate successfully in a complex and changing world. Its courses emphasize our common membership in the human community; our personal need for intellectual fulfillment achieved through lifelong learning, and our daily involvement in a diverse world. Courses emphasize diverse ways of knowing, factual content, theories and models, and the creative modes of a broad spectrum of disciplines and interdisciplinary fields. Emphasized equally are the basic skills of discovery, integration, application, and communication. Students must complete courses in 10 goals of the MnTC. Grades of D- or higher will transfer into the MnTC. To complete the MnTC, a student must earn a cumulative grade point average of at least 2.0 in MnTC courses.

#### Goal Area 1 Written & Oral Communication (9-11 credits minimum)

To develop writers and speakers who use the English language effectively and who read, write, speak and listen critically. As a base, all students should complete introductory communication requirements early in their collegiate studies. Writing competency is an ongoing process to be reinforced through writing-intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking, and discussion.

Students will be able to:

- Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
- Select appropriate communication choices for specific audiences.
- Construct logical and coherent arguments.
- Use authority, point-of-view, and individual voice

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and style in their writing and speaking.

- Employ syntax and usage appropriate to academic disciplines and the professional world.
- Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
- Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.

Both ENGL 1410 (or ENGL 1420) and ENGL 1411 (or ENGL 1421) are required. Students must select on additional Goal 1 course.

AMSL 1420	American Sign Language Cultural Immersion Travel. (2 cr)
COMM 1410	Introduction to Communication . . . . . (3 cr)
COMM 1420	Interpersonal Communication . . . . . (3 cr)
COMM 1422*	Honors Interpersonal Communication (3 cr)
COMM 1430	Public Speaking . . . . . (3 cr)
COMM 2420	Intercultural Communication. . . . . (3 cr)
COMM 2422*	Honors Intercultural Communication. (3 cr)
ENGL 1410	Composition I. . . . . (4 cr)
ENGL 1411	Composition II. . . . . (4 cr)
ENGL 1420*	Honors Composition I . . . . . (4 cr)
ENGL 1421*	Honors Composition II. . . . . (4 cr)
ENGL 1422	Practical Writing . . . . . (3 cr)
PHIL 1421	Critical Thinking . . . . . (3 cr)
PHIL 1422*	Honors Critical Thinking . . . . . (3 cr)
THTR 1461	Acting I. . . . . (3 cr)

#### Goal Area 2 Critical Thinking (1 course)

To develop thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought. Critical thinking will be taught and used throughout the general education curriculum in order to develop students' awareness of their own thinking and problem-solving procedures. To integrate new skills into their customary ways of thinking, students must be actively engaged in practicing thinking skills and applying them to open-ended problems.

Students will be able to:

- Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
- Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
- Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a

problem or claim; generate and evaluate implications that follow from them.

- Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

COMM 1430	Public Speaking . . . . . (3 cr)
COMM 1450	Introduction to Mass Communication .(3 cr)
ENGL 1422	Practical Writing . . . . . (3 cr)
ENGL 2450	World Literature . . . . . (3 cr)
GEOG 1430	Introduction to Geographic Information Systems (3 cr)
MATH 1461*	Honors Introduction to Statistics . . . (4 cr)
PHIL 1417	Immortality and the Afterlife. . . . . (3 cr)
PHIL 1421	Critical Thinking . . . . . (3 cr)
PHIL 1422*	Honors Critical Thinking. . . . . (3 cr)
PHIL 1460	Logic . . . . . (3 cr)
PHIL 2410	Introduction to Philosophy . . . . . (3 cr)
PSYC 2421	General Psychology. . . . . (4 cr)
PSYC 2423*	Honors General Psychology . . . . . (4 cr)
READ 1401	College Reading . . . . . (3 cr)
SOCL 1401	Introduction to Sociology . . . . . (3 cr)

#### Goal Area 3 Natural Sciences (6 credits minimum)

To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

Students will be able to:

- Demonstrate understanding of scientific theories.
- Communicate their experimental findings, analyses, and interpretations both orally and in writing.
- Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.
- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of

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these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.

Two science courses from two different disciplines are recommended, including one required analytical lab course. BIOL 1420, ESCI 1400, ESCI 1444, ESCI 1451 and ESCI 1457 do NOT include required lab components.

BIOL 1404	Human Biology . . . . .	(3 cr)
BIOL 1415	Environmental Biology . . . . .	(4 cr)
BIOL 1422*	Honors Biology - An Inquiry-Based Course in Life 3 Science . . . . .	(5 cr)
BIOL 1432	General Biology II . . . . .	(5 cr)
BIOL 2415	General Ecology . . . . .	(4 cr)
BIOL 2467	Anatomy & Physiology I . . . . .	(4 cr)
BIOL 1411	Concepts of Biology . . . . .	(3 cr)
BIOL 1420	Nutrition . . . . .	(3 cr)
BIOL 1431	General Biology I . . . . .	(5 cr)
BIOL 2411	Biology of Women . . . . .	(3 cr)
BIOL 2457	Microbiology . . . . .	(4 cr)
BIOL 2468	Anatomy & Physiology II . . . . .	(4 cr)
CHEM 1407	Life Science Chemistry . . . . .	(4 cr)
CHEM 1410	Environmental Chemistry . . . . .	(3 cr)
CHEM 1414	Fundamentals of Chemistry . . . . .	(4 cr)
CHEM 1424	Chemical Principles I . . . . .	(5 cr)
CHEM 1425	Chemical Principles II . . . . .	(5 cr)
CHEM 2472	Organic Chemistry I . . . . .	(5 cr)
CHEM 2473	Organic Chemistry II . . . . .	(5 cr)
ESCI 1400	Geology of National Parks . . . . .	(3 cr)
ESCI 1405	Astronomy . . . . .	(4 cr)
ESCI 1421	Minnesota Geology . . . . .	(3 cr)
ESCI 1444	Natural Disasters . . . . .	(3 cr)
ESCI 1451	Oceanography . . . . .	(3 cr)
ESCI 1452	Oceanography Lab . . . . .	(1 cr)
ESCI 1454	Earth Science and the Environment . . . . .	(4 cr)
ESCI 1455*	Honors Earth Science and the Environment (4 cr)	
ESCI 1460	Exploring the Edge of Space . . . . .	(3 cr)
ESCI 1461*	Honors Exploring the Edge of Space . . . . .	(4 cr)
PHYS 1401	College Physics I . . . . .	(4 cr)
PHYS 1402	College Physics II . . . . .	(4 cr)
PHYS 1407	Principles of Physics . . . . .	(3 cr)
PHYS 1411	Classical Physics I . . . . .	(5 cr)
PHYS 1412	Classical Physics II . . . . .	(5 cr)
PHYS 1425*	Honors Astronomy/Physics . . . . .	(4 cr)
PHYS 1430	Concepts of Physics: A Universe of Hidden Charm ....(3 cr)	
PHYS 2537	Modern Physics . . . . .	(1 cr)

**Goal Area 4****Mathematical/Logical Reasoning  
(3 credits minimum)**

To increase students' knowledge about mathematical and logical modes of thinking. This will

enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra.

Students will be able to:

- Illustrate historical and contemporary applications of mathematics/logical systems.
- Clearly express mathematical/logical ideas in writing.
- Explain what constitutes a valid mathematical/logical argument (proof).
- Apply higher-order problem-solving and/or modeling strategies.

MATH 1441	Concepts in Mathematics . . . . .	(3 cr)
MATH 1460	Intro to Statistics . . . . .	(4 cr)
MATH 1461*	Honors Introduction to Statistics . . . . .	(4 cr)
MATH 1470	College Algebra . . . . .	(3 cr)
MATH 1472	Precalculus . . . . .	(5 cr)
MATH 1477	Calculus I . . . . .	(5 cr)
MATH 1478	Calculus II . . . . .	(5 cr)
MATH 1480*	Honors Calculus I . . . . .	(5 cr)
MATH 2457	Linear Algebra . . . . .	(3 cr)
MATH 2458	Multivariable Calculus (. . . . .	4 cr)
MATH 2459	Differential Equations . . . . .	(4 cr)
PHIL 1460	Logic . . . . .	(3 cr)

\*Honors courses

**Goal Area 5****History and the Social and Behavioral Sciences  
(9 credits minimum)**

To increase students' knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

Students will be able to:

- Employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods and cultures.
- Use and critique alternative explanatory systems

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or theories.

- Develop and communicate alternative explanations or solutions for contemporary social issues.

Students are required to complete courses from a minimum of two different disciplines; however, three different disciplines are recommended.

ANTH 1457	Cultural Anthropology . . . . .	(3 cr)
ANTH 2411	Cultures of American Indians . . . . .	(3 cr)
ECON 1450	The American Economy . . . . .	(3 cr)
ECON 1451*	Honors American Economy . . . . .	(3 cr)
ECON 2401	Principles of Economics-Macroeconomics (3 cr)	
ECON 2402	Principles of Economics-Microeconomics . . . . .	(3 cr)
ENVR 1400	Introduction to Environmental Studies (3 cr)	
GEOG 1400	Physical Geography . . . . .	(3 cr)
GEOG 1410	Maps and Places . . . . .	(3 cr)
GEOG 1421	World Regional Geography . . . . .	(3 cr)
GEOG 1430	Introduction to Geographic Information Systems (3 cr)	
GEOG 1459	Cultural Geography . . . . .	(3 cr)
GEOG 1460*	Honors Cultural Geography . . . . .	(3 cr)
GLST 1401	Introduction to Global Studies . . . . .	(3 cr)
GLST 1491	Global Studies Experience - International (1-4 cr)	
HIST 1412	World History I, From the Beginning to 1500 (3 cr)	
HIST 1413	World History II, 1500 to Present. . . . .	(3 cr)
HIST 1472	U.S. History to 1865 . . . . .	(3 cr)
HIST 1473	U.S. History Since 1865 . . . . .	(3 cr)
HIST 1475*	Honors U.S. History 1865 to Present (3 cr)	
HIST 2404	Minnesota History . . . . .	(3 cr)
HIST 2411	American Indian History . . . . .	(3 cr)
HIST 2420	History of Women in the U.S. . . . .	(3 cr)
POLS 1430	Introduction to Political Science . . . . .	(3 cr)
POLS 1435	American Government and Politics . . . . .	(3 cr)
POLS 1439	State and Local Government . . . . .	(3 cr)
POLS 1440	Society and Law . . . . .	(3 cr)
POLS 2401	Federal Indian Policy . . . . .	(3 cr)
POLS 2402	Tribal Government . . . . .	(3 cr)
POLS 2450	International Relations . . . . .	(3 cr)
PSYC 1423	Positive Psychology: . . . . . The Science of Well-Being (3 cr)	
PSYC 1425	Environmental Psychology . . . . .	(3 cr)
PSYC 2421	General Psychology . . . . .	(4 cr)
PSYC 2423*	Honors General Psychology . . . . .	(4 cr)
PSYC 2431	Human Development . . . . .	(3 cr)
PSYC 2435	Educational Psychology . . . . .	(3 cr)
PSYC 2470	Abnormal Psychology . . . . .	(3 cr)
SOCL 1401	Introduction to Sociology . . . . .	(3 cr)
SOCL 1403*	Honors Introduction to Sociology . . . . .	(3 cr)
SOCL 1472	Sociology of the Family . . . . .	(3 cr)
SOCL 2405	Criminology. . . . .	(3 cr)
SOCL 2411	Social Problems . . . . .	(3 cr)
SOCL 2422	Culture and Environment . . . . .	(3 cr)
SOCL 2480	Sociology of Death and Dying . . . . .	(3 cr)
SOCL 2481	Race, Ethnicity & Oppression . . . . .	(3 cr)
SPAN 2425	Cultures of Latin America . . . . .	(3 cr)
THTR 2450	Theatre History . . . . .	(3 cr)
WMST 1400	Introduction to Women's Studies . . . . .	(3 cr)

WMST 2420 Women & Religion . . . . . (3 cr)

**Goal Area 6****Humanities and Fine Arts  
(9 credits minimum)**

To expand students' knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities.

Students will be able to:

- Respond critically to works in the arts and humanities.
- Engage in the creative process or interpretive performance.
- Articulate an informed personal reaction to works in the arts and humanities.
- Demonstrate awareness of the scope and variety of works in the arts and humanities.
- Understand those works as expressions of individual and human values within an historical and social context.

Students are required to complete courses from a minimum of two different disciplines; however, three different disciplines are recommended.

AMSL 2420	Deaf Culture . . . . .	(3 cr)
ARTS 1401	Black and White Photography I . . . . .	(3 cr)
ARTS 1403	Color Photo I . . . . .	(3 cr)
ARTS 1405	Exploring Color Photography . . . . .	(3 cr)
ARTS 1420	The Art of Digital Photography . . . . .	(3 cr)
ARTS 1425	Introduction to Graphic Design . . . . .	(3 cr)
ARTS 1450	Introduction to Studio Art . . . . .	(3 cr)
ARTS 1458	Drawing . . . . .	(3 cr)
ARTS 1468	Painting. . . . .	(3 cr)
ARTS 1459	2-D Design & Color . . . . .	(3 cr)
ARTS 1470	Art Appreciation . . . . .	(3 cr)
ARTS 1487	Ceramics: Beginning Hand Building . . . . .	(3 cr)
ARTS 1488	Ceramics: Beginning Throwing . . . . .	(3 cr)
ARTS 1489	Intermediate Ceramics . . . . .	(3 cr)
ARTS 2401	Black and White Photography II . . . . .	(3 cr)
ARTS 2403	Color Photo II . . . . .	(3 cr)
ARTS 2410	Introduction to Photo/Video Art . . . . .	(3 cr)
ARTS 2485	American Indian Art . . . . .	(3 cr)
ARTS 2486	Art History/Ancient . . . . .	(3 cr)
ARTS 2487	Art History/Modern . . . . .	(3 cr)
ARTS 2490	Art History/Non-Western . . . . .	(3 cr)
ENGL 1420*	Honors Composition I . . . . .	(4 cr)
ENGL 1450	Introduction to Humanities . . . . .	(3 cr)

## LIBERAL ARTS AND SCIENCES

ENGL 1452	Classical Mythology . . . . .	(3 cr)
ENGL 1454	Film Appreciation . . . . .	(3 cr)
ENGL 1460*	Honors Literature: The Great Books . . . . .	(3 cr)
ENGL 1463	Introduction to Literature . . . . .	(3 cr)
ENGL 1468	Poetry . . . . .	(3 cr)
ENGL 1470	Introduction to Science Fiction and Fantasy Literature (3 cr)	
ENGL 1477	Authors in Focus . . . . .	(1-3 cr)
ENGL 1478	Authors in Focus . . . . .	(1-3 cr)
ENGL 2451	Women in Literature . . . . .	(3 cr)
ENGL 2455	American Indian Literature . . . . .	(3 cr)
ENGL 2467	American Literature Pre-1861 . . . . .	(3 cr)
ENGL 2468	American Literature 1861-Present . . . . .	(3 cr)
ENGL 2470	Creative Nonfiction . . . . .	(3 cr)
ENGL 2483	Creative Writing . . . . .	(3 cr)
MUSC 1403	American Popular Music . . . . .	(3 cr)
MUSC 1405	Jazz Band . . . . .	(1 cr)
MUSC 1408	Community Band . . . . .	(1 cr)
MUSC 1415	Brass Ensemble . . . . .	(1 cr)
MUSC 1418	Woodwind Ensemble . . . . .	(1 cr)
MUSC 1421	Cantare' Concert Chorale . . . . .	(1 cr)
MUSC 1431	Chamber Singers . . . . .	(1 cr)
MUSC 1441	Applied Music - Guitar . . . . .	(1 cr)
MUSC 1450	Music in World Cultures . . . . .	(3 cr)
MUSC 1452	Intro to Music Industry . . . . .	(3 cr)
MUSC 1453	Audio Recording I . . . . .	(3 cr)
MUSC 1455	Voice Training . . . . .	(2 cr)
MUSC 1457	Music Appreciation . . . . .	(3 cr)
MUSC 1459	Fundamentals of Music . . . . .	(3 cr)
MUSC 1464	Applied Music - Brass . . . . .	(1 cr)
MUSC 1475	Applied Music - Woodwind . . . . .	(1 cr)
MUSC 1481	Applied Music - Piano . . . . .	(1 cr)
MUSC 1485	Applied Music - Instrumental . . . . .	(1 cr)
MUSC 1491	Applied Music - Voice . . . . .	(1 cr)
MUSC 2401	Evolution of Jazz . . . . .	(3 cr)
PHIL 1411	World Religions . . . . .	(3 cr)
PHIL 1415	Philosophy and Popular Culture . . . . .	(3 cr)
PHIL 1417	Immortality and the Afterlife . . . . .	(3 cr)
PHIL 2410	Introduction to Philosophy . . . . .	(3 cr)
PHIL 2420	Ethics . . . . .	(3 cr)
PHIL 2421*	Honors Ethics . . . . .	(3 cr)
PHIL 2422	Medical Ethics . . . . .	(3 cr)
PHIL 2430	Contemporary Moral Problems . . . . .	(3 cr)
SPAN 2401	Intermediate Spanish I . . . . .	(4 cr)
SPAN 2404	Intermediate Spanish II . . . . .	(4 cr)
SPAN 2420	Many Faces of Mexico . . . . .	(3 cr)
THTR 1442	Improvisation . . . . .	(3 cr)
THTR 1443	Stage to Screen: Plays that Become Movies (3 cr)	
THTR 1445	Acting for the Camera . . . . .	(3 cr)
THTR 1451	Introduction to Theatre . . . . .	(3 cr)
THTR 1452	Stage Make-up . . . . .	(3 cr)
THTR 1453	Theatre Costuming . . . . .	(3 cr)
THTR 1462	Acting II . . . . .	(3 cr)
THTR 1466	Acting Lab . . . . .	(1 cr)
THTR 1471	Theatre Production Lab . . . . .	(1 cr)
THTR 1478	Technical Theatre . . . . .	(3 cr)
THTR 1480	The Theatre Experience . . . . .	(1-3 cr)
THTR 1481	The Theatre Experience-New York . . . . .	(1-3 cr)
THTR 1482	The Theatre Experience-London . . . . .	(1-3 cr)
THTR 1483*	Honors Theatre Experience . . . . .	(3 cr)
THTR 1496	Summer Theatre Workshop . . . . .	(3 cr)
THTR 2410	Children's Theatre . . . . .	(3 cr)

THTR 2441	Directing for the Theatre . . . . .	(3 cr)
THTR 2491	Theatre Independent Study . . . . .	(1-3 cr)
WMST 2402	Gender and Popular Culture . . . . .	(3 cr)
*Honors courses		

### Goal Area 7 Human Diversity (1 course)

To increase students' understanding of individual and group differences (e.g. race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States' historical and contemporary responses to group differences.

Students will be able to:

- Understand the development of and the changing meanings of group identities in the United States' history and culture.
- Demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
- Analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
- Describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.
- Demonstrate communication skills necessary for living and working effectively in a society with great population diversity.

AMSL 2420	Deaf Culture . . . . .	(3 cr)
ANTH 2411	Cultures of American Indians . . . . .	(3 cr)
ARTS 2485	American Indian Art . . . . .	(3 cr)
BIOL 2411	Biology of Women . . . . .	(3 cr)
COMM 2420	Intercultural Communication . . . . .	(3 cr)
COMM 2422*	Honors Intercultural Communication . . . . .	(3 cr)
ENGL 1463	Introduction to Literature . . . . .	(3 cr)
ENGL 2455	American Indian Literature . . . . .	(3 cr)
ENGL 2467	American Literature Pre-1861 . . . . .	(3 cr)
ENGL 2468	American Literature 1861-Present . . . . .	(3 cr)
HIST 1472	U.S. History to 1865 . . . . .	(3 cr)
HIST 1473	U.S. History Since 1865 . . . . .	(3 cr)
HIST 1475*	Honors U.S. History 1865 to Present . . . . .	(3 cr)
HIST 2411	American Indian History . . . . .	(3 cr)
HIST 2420	History of Women in the U.S. . . . .	(3 cr)
MUSC 1403	American Popular Music . . . . .	(3 cr)
MUSC 2401	Evolution of Jazz . . . . .	(3 cr)
PSYC 2435	Educational Psychology . . . . .	(3 cr)
PSYC 2470	Abnormal Psychology . . . . .	(3 cr)
SOCL 2481	Race, Ethnicity & Oppression . . . . .	(3 cr)
THTR 1483*	Honors Theatre Experience . . . . .	(3 cr)

WMST 1400	Introduction to Women's Studies . . . . .	(3 cr)
WMST 2402	Gender and Popular Culture . . . . .	(3 cr)
WMST 2420	Women & Religion . . . . .	(3 cr)

### Goal Area 8 Global Perspective (1 course)

To increase students' understanding of the growing interdependence of nations and peoples and develop their ability to apply a comparative perspective to cross-cultural social, economic and political experiences.

Students will be able to:

- Demonstrate knowledge of cultural, social, religious and linguistic differences.
- Describe and analyze political, economic, and cultural elements which influence relations of states and societies in their historical and contemporary dimensions.
- Understand the role of a world citizen and the responsibility world citizens share for their common global future.
- Analyze specific international problems, illustrating the cultural, economic, and political differences that affect their solution.

AMSL 1410	American Sign Language I . . . . .	(4 cr)
AMSL 1412	American Sign Language II . . . . .	(4 cr)
AMSL 1420	American Sign Language Cultural Immersion (2 cr)	
ANTH 1457	Cultural Anthropology . . . . .	(3 cr)
AMSL 2410	American Sign Language III . . . . .	(4 cr)
AMSL 2412	American Sign Language IV . . . . .	(4 cr)
AMSL 2414	Conversational ASL . . . . .	(1 cr)
ARTS 2490	Art History/Non-Western . . . . .	(3 cr)
ENGL 1450	Introduction to Humanities . . . . .	(3 cr)
ENGL 2450	World Literature . . . . .	(3 cr)
GEOG 1410	Maps and Places . . . . .	(3 cr)
GEOG 1421	World Regional Geography . . . . .	(3 cr)
GEOG 1459	Cultural Geography . . . . .	(3 cr)
GEOG 1460*	Honors Cultural Geography . . . . .	(3 cr)
GLST 1401	Introduction to Global Studies . . . . .	(3 cr)
GLST 1491	Global Studies Experience - International Travel (1-4 cr)	
GLST 2401	Global Studies Capstone . . . . .	(1-3 cr)
HIST 1412	World History I, From the Beginning to 1500 (3 cr)	
HIST 1413	World History II, 1500 to Present . . . . .	(3 cr)
MUSC 1450	Music in World Cultures . . . . .	(3 cr)
OJIB 1401	Beginning Ojibwe I . . . . .	(4 cr)
OJIB 1402	Beginning Ojibwe II . . . . .	(4 cr)
OJIB 2401	Intermediate Ojibwe I . . . . .	(4 cr)
OJIB 2402	Intermediate Ojibwe II . . . . .	(4 cr)
PHIL 1411	World Religions . . . . .	(3 cr)
POLS 2450	International Relations . . . . .	(3 cr)
SOCL 1403*	Honors Introduction to Sociology . . . . .	(3 cr)
SPAN 1401	Beginning Spanish I . . . . .	(4 cr)

SPAN 1402	Beginning Spanish II . . . . .	(4 cr)
SPAN 2401	Intermediate Spanish I . . . . .	(4 cr)
SPAN 2404	Intermediate Spanish II . . . . .	(4 cr)
SPAN 2420	Many Faces of Mexico . . . . .	(3 cr)
SPAN 2425	Cultures of Latin America . . . . .	(3 cr)
SUST 1400	Introduction to Sustainability . . . . .	(3 cr)
THTR 1451	Introduction to Theatre . . . . .	(3 cr)
THTR 1482	The Theatre Experience-London . . . . .	(1-3 cr)
THTR 2450	Theatre History . . . . .	(3 cr)
*Honors courses		

### Goal Area 9 Ethical & Civic Responsibility (1 course)

To develop students' capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to understand their own and other's positions, be part of the free exchange of ideas, and function as public-minded citizens.

Students will be able to:

- Analyze and reflect on the ethical dimensions of legal, social, and scientific issues.
- Recognize the diversity of political motivations and interests of others.
- Identify ways to exercise the rights and responsibilities of citizenship.
- Examine, articulate, and apply their own ethical views.
- Understand and apply core concepts (e.g. politics, rights and obligations, justice, liberty) to specific issues.

COMM 1450	Introduction to Mass Communication (3 cr)	
ENGL 1421*	Honors Composition II . . . . .	(4 cr)
ENGL 1470	Introduction to Science Fiction and Fantasy Literature (3 cr)	
MUSC 1452	Intro to Music Industry . . . . .	(3 cr)
PHIL 2420	Ethics . . . . .	(3 cr)
PHIL 2421*	Honors Ethics . . . . .	(3 cr)
PHIL 2422	Medical Ethics . . . . .	(3 cr)
PHIL 2430	Contemporary Moral Problems . . . . .	(3 cr)
POLS 1430	Introduction to Political Science . . . . .	(3 cr)
POLS 1435	American Government and Politics . . . . .	(3 cr)
POLS 1439	State and Local Government . . . . .	(3 cr)
POLS 1440	Society and Law . . . . .	(3 cr)
POLS 2402	Tribal Government . . . . .	(3 cr)
PSYC 1423	Positive Psychology: The Science of Well-Being (3 cr)	
SOCL 2411	Social Problems . . . . .	(3 cr)

## LIBERAL ARTS AND SCIENCES

**Goal Area 10****People and the Environment  
(1 course)**

To improve students' understanding of today's complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and sociocultural systems is the foundation for integrative and critical thinking about environmental issues.

Students will be able to:

- Propose and assess alternative solutions to environmental problems.
  - Articulate and defend the actions they would take on various environmental issues.
- Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
- Discern patterns and interrelationships of biophysical and socio-cultural systems.
  - Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
  - Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions. Propose and assess alternative solutions to environmental problems.

BIOL 1415	Environmental Biology . . . . .	(4 cr)
BIOL 1432	General Biology II . . . . .	(5 cr)
BIOL 2415	General Ecology . . . . .	(4 cr)
CHEM 1410	Environmental Chemistry . . . . .	(3 cr)
ENVR 1400	Introduction to Environmental Studies	(3 cr)
ESCI 1400	Geology of National Parks . . . . .	(3 cr)
ESCI 1444	Natural Disasters . . . . .	(3 cr)
ESCI 1451	Oceanography . . . . .	(3 cr)
ESCI 1452	Oceanography Lab . . . . .	(1 cr)
ESCI 1454	Earth Science and the Environment. .	(4 cr)
ESCI 1455*	Honors Earth Science and the Environment	(4 cr)
GEOG 1400	Physical Geography . . . . .	(3 cr)
PSYC 1425	Environmental Psychology . . . . .	(3 cr)
SOCL 2422	Culture and Environment . . . . .	(3 cr)

**Fitness for Life (2 credits)**

Students may select from the following health, physical education and underwater diving courses. Two (2) credits for varsity sport participation may be used.

Students may select from the following health, physical education and underwater diving courses. Two (2) credits for varsity sport participation

may be used.

HLTH 1501	Personal Health and Wellness . . . . .	(3 cr)
HLTH 1507	Drug Awareness . . . . .	(3 cr)
HLTH 1510	Intro to Massage . . . . .	(2 cr)
HLTH 1520	Principles of Nutrition . . . . .	(3 cr)
HLTH 1531	Women's Health . . . . .	(3 cr)
HLTH 1541	Human Sexuality . . . . .	(3 cr)
PHED 1502	Circuit Training . . . . .	(2 cr)
PHED 1505	Fitness Walking . . . . .	(2 cr)
PHED 1508	Bicycling . . . . .	(2 cr)
PHED 1510	Beginning Skiing/Snowboarding . . . . .	(2 cr)
PHED 1511	Advanced Skiing/Snowboarding . . . . .	(2 cr)
PHED 1512	Beginning Yoga . . . . .	(2 cr)
PHED 1513	Aerobic Conditioning . . . . .	(2 cr)
PHED 1514	Cardio Sampler . . . . .	(2 cr)
PHED 1516	Yoga for Stress Relief . . . . .	(2 cr)
PHED 1520	Vinyasa (Flow) Yoga . . . . .	(2 cr)
PHED 1521	Body Conditioning . . . . .	(2 cr)
PHED 1522	Weight Training . . . . .	(2 cr)
PHED 1523	Strength Training for Women . . . . .	(2 cr)
PHED 1524	Recreational Sampler . . . . .	(2 cr)
PHED 1525	Personal Protection Awareness . . . . .	(2 cr)
PHED 1534	Beginning Golf . . . . .	(2 cr)
PHED 1536	Advanced Golf . . . . .	(2 cr)
PHED 1541	Bowling . . . . .	(2 cr)
PHED 1544	Basketball - Coed . . . . .	(1 cr)
PHED 1553	Power Volleyball . . . . .	(2 cr)
PHED 1594	Fitness for Life . . . . .	(2 cr)
PHED 1597*	Honors Fitness for Life . . . . .	(3 cr)
PHED 2501	Varsity Sports - Football . . . . .	(1 cr)
PHED 2502	Varsity Sports - Volleyball . . . . .	(1 cr)
PHED 2503	Varsity Sports - Men's Basketball . . . . .	(1 cr)
PHED 2504	Varsity Sports - Women's Basketball . . . . .	(1 cr)
PHED 2505	Varsity Sports - Baseball . . . . .	(1 cr)
PHED 2506	Varsity Sports - Softball . . . . .	(1 cr)
PHED 2507	Varsity Sports - Golf . . . . .	(1 cr)
PHED 2511	Varsity Sports - Football II . . . . .	(1 cr)
PHED 2512	Varsity Sports - Volleyball II . . . . .	(1 cr)
PHED 2513	Varsity Sports - Men's Basketball II . . . . .	(1 cr)
PHED 2514	Varsity Sports - Women's Basketball II . . . . .	(1 cr)
PHED 2515	Varsity Sports - Baseball II . . . . .	(1 cr)
PHED 2516	Varsity Sports - Softball II . . . . .	(1 cr)
PHED 2517	Varsity Sports - Golf II . . . . .	(1 cr)
UWDV 1301	PADI Basic Open Water Diving . . . . .	(4 cr)

**Student Success (1 credit)**

Students may select one course from the following College and Career Studies courses. It is recommended that students enroll in this course during their first semester. Students who have already completed and Associate or Bachelor's Degree may apply for a waiver/exemption from this requirement.

CCST 1510	College Success Skills . . . . .	(3 cr)
CCST 1520	Career Planning . . . . .	(2 cr)
CCST 1535*	Honors Leadership Development . . . . .	(3 cr)
CCST 1550	Introduction to College . . . . .	(1 cr)

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CCST 1552	Success Strategies for Athletes . . . . .	(1 cr)
CCST 1570	On Course . . . . .	(3 cr)

**General Electives (17 credits)**

Students must complete up to 17 credits of courses at the 1000 level or higher to earn 60 credits required for an Associate in Arts Degree. These credits may be taken at Central Lakes College, transferred from any regionally accredited institution of higher learning, or accepted based upon any approved advanced standing agreement with Central Lakes College.



## HONORS

### Program Description

The Honors Associate of Arts program is for high-achieving students intending to transfer to a four-year college or university. Of the 60 credits required for the AA degree, 12 will be designated 'Honors' core credits. The honors classes will be rigorous, limited in size, and characterized by a high level of intellectual engagement – coursework will emphasize inquiry, investigation, and analysis. In addition, students will receive leadership training, participate in a service learning activity, and be encouraged to join and participate in the Phi Theta Kappa Academic Honors Society.

Fall 2016  
 CCST 1535 Honors Leadership Development .....(3 cr)  
 COMM 2422 Honors Intercultural Communication .....(3 cr)  
 ECON 1451 Honors American Economy .....(3 cr)  
 ENGL 1420 Honors Composition I .....(4 cr)  
 ESCI 1461 Honors Exploring the Edge of Space.....(3 cr)  
 MATH 1480 Honors Calculus I .....(4 cr)  
 SOCL 1403 Honors Introduction to Sociology.....(3 cr)  
 \*ECON 1451 Honors American Economy will be attending the 2016 Nobel Conference in Gustavus in October. A \$50 fee is added to this course to cover a portion of the cost.

Spring 2017  
 CCST 1535 Honors Leadership Development .....(3 cr)  
 ENGL 1421 Honors Composition II .....(4 cr)  
 ENGL 1460 Honors Literature: The Great Books .....(3 cr)  
 GEOG 1460 Honors Cultural Geography .....(3 cr)  
 MATH 1461 Honors Introduction to Statistics .....(4 cr)  
 PHED 1597 Honors Fitness for Life.....(3 cr)  
 PHIL 2421 Honors Ethics .....(3 cr)

### Special Program Requirements

CCST 2512: Honors Leadership Development is required - enrolling in this course during a student's sophomore year is recommended. CCST 2510, the one credit service learning component, may be linked to an existing course or independent study.

### Admissions

Those meeting the eligibility standards must complete the application form found on the Central Lakes College website and submit an essay. Applicants completing these steps will be admitted to the program on a first come/first serve basis. The annual cohort limit for the program is 24 students.

### Transfer Opportunities

Central Lakes College is exploring articulation agreements with area university honors programs to allow for transfer upon graduation into their honors programs with advanced standing. An Associate in Arts degree earned at Central Lakes College is recom-

mended as the transfer degree that enables a student to transfer to a Minnesota four-year college or university. Through special agreements, the A.A. degree, in most cases, allows a student to continue with a "junior status" at the selected state university. Included in the Honors A.A. degree is the Minnesota General Education Transfer Curriculum which contains the minimum number of credits (40) needed to complete general education requirements at all public colleges and universities in the State of Minnesota.

### For more information

Contact the Honors Program Coordinator via email at [honors@clcmn.edu](mailto:honors@clcmn.edu) or the Admissions Office at 218-855-8031 or [askclc@clcmn.edu](mailto:askclc@clcmn.edu).

## AMERICAN INDIAN STUDIES CERTIFICATE

### Department Description

Courses in Anthropology address questions about the human experience: What does it mean to be human? How does the human experience vary across time and culture? How do people organize their lives to make sense of the world in which they live? How does culture influence how people interpret their world? Students of anthropology learn to be respectful of diversity by understanding the reasons behind our differences. They develop a global perspective by learning to look beyond their own world view to see the world through other eyes. Students also develop analysis skills, communications skills and an understanding of many different cultures. The field of anthropology includes both cultural anthropology and archeology, along with physical and linguistic anthropology.

### Department Learning Outcomes

Graduates will be able to:

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

### Special Department Information

Students in this program may earn a certificate that will enrich their knowledge of the American Indians of the central Minnesota region. The American Indian Studies certificate explores the culture, history, art and literature of the American Indian.

### Transfer Opportunities

Anthropology courses generally transfer to all accredited schools. The issues addressed in anthropology prepare students to study in many fields. All aspects of life today can be enhanced by a cross-cultural perspective.

### Career Opportunities

Many anthropologists find careers working with diverse cultures or in any field requiring a global perspective such as education, public service, social and political activism, as well as private sector careers. An archeology focus prepares students to teach or to work with agencies that do excavation and/or survey archeology, artifact inventory, forensics, and related areas.

### American Indian Studies Certificate

#### Program Course Requirements

Student must choose 12 credits from the following list:

ANTH 2411 Culture of American Indians .....(3 cr)  
 ARTS 2485 American Indian Art .....(3 cr)  
 ENGL 2455 American Indian Literature .....(3 cr)  
 HIST 2411 American Indian History.....(3 cr)  
 POLS 2401 Federal Indian Policy .....(3 cr)  
 GRADUATION REQUIREMENT 12 CREDITS

# DEAF STUDIES CERTIFICATE

## Department Description

American Sign Language is the third most commonly used language in the United States, behind only English and Spanish. Students taking American Sign Language courses will learn grammar, structure, and syntax of this beautiful language. They will have opportunities to interact with people who are deaf and build a strong basis for learning ASL and using it in their future employment.

## Special Department Information

Students desiring to learn basic American Sign Language and understand the culture of people who are deaf may elect to complete the Deaf Studies Certificate. This program will not prepare students to become interpreters, but covers the basics about ASL and deaf culture. This certificate is appropriate for students who are planning to enter, or are currently employed in, all areas of customer relations, including but not limited to business, education, criminal justice, interpreting or the medical field. Knowledge of ASL and deaf culture will help them to be more competitive for jobs as employers strive for diversity in the workplace. Students who complete this certificate will be in a position to use basic communication with colleagues or customers who are ASL users. Courses may also be used to satisfy interpreter training program prerequisite requirements at many institutions.

## Department Learning Outcomes

Students will be able to:

- Demonstrate appropriate class level oral or expressive World Language skills;
- Demonstrate knowledge and appreciation of cultural values, norms and traditions per specific World Language;
- Demonstrate basic understanding that these differences have an impact on group relationships and interactions;
- Demonstrate appropriate class level receptive and/or written World Language skills;
- Demonstrate appropriate cultural rules of interaction when conversing in the target language.

## Transfer Opportunities

The second language skills acquired in ASL courses enhance a student's chance for success in any profession. Students looking beyond a certificate, or considering a future specialization in the field of American Sign Language Interpreting, should know that many institutions offering degrees in Interpreter Training will accept these courses as prerequisites to their programs.

## Career Opportunities

The nationwide shortage of qualified ASL Interpreters in the United States is at an all time high and continues to escalate. With the passage of the ADA act, the public is required to make accommodations for Deaf/Hard-of-Hearing patrons. Sign Language Interpreters are the most sought after accommodation for D/HH people. Public schools, higher education, health care providers, hospitals, courts, public safety and other government offices are seeing increased demand for qualified ASL Interpreters.

## Special Program Requirements

In addition to the program requirements, students must meet the following conditions in order to graduate: 1. The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0 ; 2. Students must complete one third (7) of their credits at Central Lakes College.

## Deaf Studies Certificate

Program Course Requirements

AMSL 1410 American Sign Language I .....	(4 cr)
AMSL 1412 American Sign Language II .....	(4 cr)
AMSL 2410 American Sign Language III .....	(4 cr)
AMSL 2412 American Sign Language IV .....	(4 cr)
AMSL 2414 Conversation ASL.....	(1 cr)
AMSL 2420 Deaf Culture .....	(3 cr)
SPCH 2421 Intercultural Communication .....	(3 cr)
GRADUATION REQUIREMENT - 23 CREDITS	)

# GLOBAL STUDIES CERTIFICATE

## Department Description

The program consists of an introductory course in global studies and a capstone project including a travel study option or cultural immersion experience. Students will develop an awareness of intercultural relations skills, diversity issues, and human rights issues. They will gain an understanding of international ethical issues and America's own multicultural structure. Students are exposed to the literature, music and art of other cultures and gain knowledge of human and social geography.

## Department Learning Outcomes

Students will be able to:

- Demonstrate knowledge of global issues, processes, trends and systems (i.e. economic and political interdependency among nations; environmental-cultural interaction; global governance bodies);
- Articulate an understanding of her/his culture in global and comparative context; that is, recognizes that her/his culture is one of many diverse cultures and that alternate perceptions and behaviors may be based in cultural differences;
- Demonstrate an understanding of the meaning and practice of political, military, economic, and cultural hegemony within states and within the global system;
- Demonstrate an understanding of how her/his field is viewed and practiced in different international contexts;
- Use diverse cultural perspectives and frames of reference, including those of the media, to think critically and solve problems;
- Use information from other languages and other countries to extend their access to information and experiences;
- Interpret issues and situations from more than one cultural perspective;
- Articulate differences among cultures; demonstrates tolerance for the diverse viewpoints that emerge from these differences;
- Demonstrate a critical understanding of the historical origins of the nation-state, and its current role in the global system;
- Apply the key theoretical concepts in the field to interpret global issues; and
- Exhibit an ongoing willingness to seek out international or intercultural opportunities.

## Career Opportunities

The Global Studies Certificate is designed to enable students to meet the demands of a global society. As competition for employment increases employers will be seeking employees that will enhance their organization through global and diverse perspectives. This certificate provides students with a competitive advantage that their peers may not possess. There are

many career opportunities for students with Global Studies Emphasis. Students can apply their knowledge and skills in areas of business, education, international associations, non-governmental and governmental organizations, and foreign relations.

## Career Titles

Many U.S. government jobs that don't require specialization or additional education are available with agencies such as the Peace Corps or in the Foreign Services. • A number of international nonprofits and Nongovernmental Organizations (NGOs) offer solid entry-level positions for people without advanced degrees. Examples of international nonprofits and NGOs include the United Nations, CARE, UNICEF and Direct Relief International. Corporate Positions • Students might find a job in a U.S.-based corporation that does business internationally and eventually work their way into an international position. A number of industries do extensive international business, including banks, engineering firms and consulting companies. • Teaching English internationally to English as a Second Language (ESL) students.

## Global Studies Certificate

Program Course Requirements

GLST 1401 Introduction to Global Studies .....	(3 cr)
GLST 2401 Global Studies Capstone .....	(1-3 cr)
SPAN 1402* Beginning Spanish II.....	(4 cr)
SPCH 1421 Intercultural Communication .....	(3 cr)

Select 3 credits from the following History/Social Behavior Sciences courses:

ANTH 1457 Cultural Anthropology.....	(3 cr)
ESCI 1459 Earth Science and the Environment .....	(4 cr)
GEOG 1400 Physical Geography .....	(3 cr)
GEOG 1410 Maps and Places .....	(3 cr)
GEOG 1421 World Regional Geography .....	(3 cr)
GEOG 1459 Cultural Geography .....	(3 cr)
GLST 1491 Global Studies Experience - International Travel (1-4 cr)	
HIST 1413 World History II, 1500 to Present .....	(3 cr)
POLS 2450 International Relations .....	(3 cr)
SOCL 2422 Culture and Environment .....	(3 cr)

Select 3 credits from the following Fine Arts and Humanities courses:

MUSC 1450 Music in World Culture.....	(3 cr)
PHIL 1411 World Religion.....	(3 cr)
SPAN 2420 Many Faces of Mexico .....	(3 cr)
SPAN 2425 Cultures of Latin America.....	(3 cr)
GRADUATION REQUIREMENT 18 credits	

# LATIN AMERICAN STUDIES CERTIFICATE

## Department Description

Students may elect to complete a certificate in Latin American Studies that will enrich their understanding and appreciation of Latin American culture, communication, language, music, and art. This program is appropriate for citizens in an increasingly diverse society and for individuals entering or currently employed in positions in education, business, criminal justice, and other occupations where an understanding of Hispanic culture enhances their abilities in the workplace. Students will have an opportunity to study the cultural, historical, political, economic, religious, and social realities of Mexico, Central, and South America to gain a better understanding of the Hispanic impact on the United States and the growing Latino population in Minnesota.

## Department Learning Outcomes

- Demonstrate appropriate class level oral or expressive World Language skills.
- Demonstrate knowledge and appreciation of cultural values, norms and traditions per specific World Language, and will demonstrate basic understanding that these differences have an impact on group relationships and interactions.
- Demonstrate appropriate class level receptive and/or written World Language skills.
- Demonstrate appropriate cultural rules of interaction when conversing in the target language.

## Latin American Studies Certificate

Program Course requirements

SPAN 1402 Beginning Spanish II .....(4 cr)  
 SPAN 2401 Intermediate Spanish I .....(4 cr)  
 SPAN 2404 Intermediate Spanish II.....(4 cr)  
 SPAN 2420 Many Faces of Mexico..... (3 cr)  
 SPAN 2425 Cultures of Latin American .....(3 cr)  
 GRADUATION REQUIREMENT 18 credits

# OJIBWE STUDIES CERTIFICATE

## Department Description

Ojibwe Studies focuses on the language, history and culture of the Ojibwe within the context of the American Indian experience.

## Special Department Information

Students in this program may earn a certificate that will prepare them to enrich their knowledge of the Ojibwe people of the central Minnesota region.

## Ojibwe Studies Certificate

Program Course requirements

HIST 2406 Ojibwe History .....(3 cr)  
 Student must choose 2 courses from the following list:  
 OJIB 1401 Beginning Ojibwe I .....(4 cr)  
 OJIB 1402 Beginning Ojibwe II .....(4 cr)  
 OJIB 2401 Intermediate Ojibwe I .....(4 cr)  
 OJIB 2402 Intermediate Ojibwe II .....(4 cr)  
 Student must choose 3 courses from the following list:  
 ANTH 2411 Culture of American Indians .....(3 cr)  
 ARTS 2485 American Indian Art..... (3 cr)  
 ENGL 2455 American Indian Literature .....(3 cr)  
 HIST 2411 American Indian History .....(3 cr)  
 OJIB 2500 Conversational Ojibwe .....(3 cr)  
 POLS 2401 Federal Indian Policy .....(3 cr)  
 Any Language course not taken above .....(4 cr)  
 GRADUATION REQUIREMENT 20 CREDITS

# ENGINEERING A.S. DEGREE

## Department Description

Engineering appeals to students who enjoy the challenge of learning how things work and using this knowledge to improve the world in which they live. They are creative thinkers who enjoy design activities and building things.

## Special Department Information

A strong background in math is required for successful completion of second-year engineering courses.

## Department Learning Outcomes

- Accurately use mathematical functions that apply to Engineering problems.
- Use graphing technologies to help explain physical phenomena related to engineering challenges and discuss them orally or in writing.
- Correctly apply the principals governing physical phenomena to solve engineering problems collaboratively.

## Transfer Opportunities

Central Lakes College offers in Associates of Science (AS) Degree that is designed to lead to a bachelor's degree in Engineering at a four-year university. These credits transfer in full through articulation agreements with all area engineering schools. CLC students most often transfer to the University of Minnesota (Minneapolis or Duluth), North Dakota State University (NDSU), the University of North Dakota (UND), Mankato State University (MSU), and St. Cloud State University (SCSU).

## Career Opportunities

Engineering degrees are among the most highly paid of Bachelor's degrees and span a very large number of fields. The most common engineering fields include Civil Engineering, Mechanical Engineering, Electrical Engineering, and Chemical Engineering. Other fields include, but are not limited to, Aerospace Engineering, Computer Engineering, and Industrial Engineering. Engineers commonly transition to management positions in business and industry, start their own companies, or use their engineering degree to facilitate movement into other professional fields such as patent law and medicine.

## Career Titles

Engineer, Patent Attorney, Chief Executive Officer (CEO)

## Department Course Offerings

ENGR 1500 Introduction to Engineering .....(2 cr)  
 ENGR 1510 Introduction to Engineering Design .....(2 cr)  
 ENGR 1560 Digital Logic Design .....(3 cr)

ENGR 2540 Intro to Statics and Strengths of Materials..... (3 cr)  
 ENGR 2547 Statics .....(3 cr)  
 ENGR 2548 Dynamics .....(3 cr)  
 ENGR 2549 Mechanics of Materials .....(3 cr)  
 ENGR 2552 Introduction to Dynamics .....(3 cr)  
 ENGR 2569 Circuit Analysis I .....(4 cr)  
 ENGR 2570 Circuit Analysis II .....(3 cr)  
 ENGR 2580 Topics in Engineering .....(1-6 cr)

# HEALTH SCIENCES BROAD FIELD A.S. DEG.

## Program Information

This program prepares students for a career in the healthcare occupation field. It provides a broad base of general education course work relevant to health sciences in preparation for transfer to a broad array of health sciences majors at a college or university. This degree program is designed to fulfill the prerequisite requirements for health science baccalaureate requirements for specific majors at all MnSCU system universities offering related degrees through a statewide articulation agreement. (please refer to the articulation agreement for a listing of majors and MnSCU universities). Even with this agreement in place, students should consult with both Central Lakes College and the transfer university advisors early in the process for guidance and planning regarding how to best meet the requirements of the various health sciences baccalaureate programs.

## Special Program Requirements

In addition to the program requirements listed, students must meet the following conditions in order to graduate:

- College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0.
- Residency Requirement: students must complete one third (20) of their credits at Central Lakes College.

## Program Outcomes

Graduates will be able to:

- Develop as writers and speakers who use the English language effectively and who read, write, speak, and listen critically;
- Develop capacity to identify, discuss and reflect upon social and behavioral issues;
- Demonstrate comprehension of human and biological systems;
- Increase knowledge about mathematical and logical modes of thinking; and
- Improve their awareness and understanding of health, wellness and liberal arts.

## Transfer Opportunities

All courses in the degree program transfer and count toward the selected MnSCU university health sciences baccalaureate degree program requirements per the MnSCU Statewide Health Sciences Broad Field Articulation Agreement. (Refer to the Articulation Agreement for specific majors and MnSCU universities)

## Career Opportunities

This program provides preparation for transfer into a number of health sciences majors: physical therapist, occupational therapist, rehabilitation specialist, nurse,

nurse educator, athletic trainer, clinical social worker, health educator, nutritionist, dietitian, medical sonographer, radiologic technician, surgical technician, dental hygienist, psychologist, cardiovascular technologist, orthodontic technologist, exercise physiologist, health center manager.

## Department Course Offerings

BIOL 1431 General Biology I .....(5 cr)  
 BIOL 1420 Nutrition .....(3 cr)  
 BIOL 2457\* Microbiology .....(4 cr)  
 BIOL 2467\* Anatomy & Physiology I .....(4 cr)  
 BIOL 2468\* Anatomy & Physiology II .....(4 cr)  
 CHEM 1407 Life Science Chemistry (4 cr) OR CHEM 1424 Chemical Principles I .....(5 cr)  
 ENGL 1410 Composition I .....(4 cr)  
 MATH 1460 Introduction to Statistics .....(4 cr)  
 MATH 1470 College Algebra .....(3 cr)  
 PHIL 2420 Ethics .....(3 cr)  
 PSYC 2421 General Psychology .....(4 cr)  
 PSYC 2431\* Human Development .....(3 cr)  
 SOCL 1401 Introduction to Sociology.....(3 cr)  
 SPCH 2421 Intercultural Communication (3 cr) OR SPCH 1421 Interpersonal Communication .....(3 cr)  
 TOTAL REQUIRED: 51-52 credits

General Education:

Students must complete an additional 8-9 credits from the MN General Education Transfer Curriculum. (ENGL 1411 Composition II is highly recommended.)

TOTAL GENERAL EDUCATION: 8-9 credits

GRADUATION REQUIREMENT 60 CREDITS

NOTE: Total credits must include courses from at least 6 of the 10 Minnesota General Education Transfer Curriculum Goal Areas.

\*Denotes Prerequisite

# AMERICAN SIGN LANGUAGE

## Departments

### Department Description

American Sign Language is the third most commonly used language in the United States, behind only English and Spanish. Students taking American Sign Language courses will learn grammar, structure, and syntax of this beautiful language. They will have opportunities to interact with people who are deaf and build a strong basis for learning ASL and using it in their future employment.

### Department Learning Outcomes

Students will be able to:

- Demonstrate appropriate class level oral or expressive World Language skills;
- Demonstrate knowledge and appreciation of cultural values, norms and traditions per specific World Language;
- Demonstrate basic understanding that these differences have an impact on group relationships and interactions;
- Demonstrate appropriate class level receptive and/or written World Language skills;
- Demonstrate appropriate cultural rules of interaction when conversing in the target language.

### Transfer Opportunities

The second language skills acquired in ASL courses enhance a student's chance for success in any profession. Students looking beyond a certificate, or considering a future specialization in the field of American Sign Language Interpreting, should know that many institutions offering degrees in Interpreter Training will accept these courses as prerequisites to their programs.

### Career Opportunities

The nationwide shortage of qualified ASL Interpreters in the United States is at an all time high and continues to escalate. With the passage of the ADA act, the public is required to make accommodations for Deaf/Hard-of-Hearing patrons. Sign Language Interpreters are the most sought after accommodation for D/HH people. Public schools, higher education, health care providers, hospitals, courts, public safety and other government offices are seeing increased demand for qualified ASL Interpreters.

### Department Course Offerings

AMSL 1410 American Sign Language I.....	(4 cr)
AMSL 1412 American Sign Language II.....	(4 cr)
AMSL 2370 Topics in American Sign Language .....	(1-6 cr)
AMSL 2410 American Sign Language III .....	(4 cr)
AMSL 2412 American Sign Language IV .....	(4 cr)
AMSL 2414 Conversational ASL .....	(1 cr)
AMSL 2420 Deaf Culture .....	(3 cr)

# ANTHROPOLOGY

## Department Description

Courses in Anthropology address questions about the human experience: What does it mean to be human? How does the human experience vary across time and culture? How do people organize their lives to make sense of the world in which they live? How does culture influence how people interpret their world? Students of anthropology learn to be respectful of diversity by understanding the reasons behind our differences. They develop a global perspective by learning to look beyond their own world view to see the world through other eyes. Students also develop analysis skills, communications skills and an understanding of many different cultures. The field of anthropology includes both cultural anthropology and archeology, along with physical and linguistic anthropology.

## Career Description

Many anthropologists find careers working with diverse cultures or in any field requiring a global perspective such as education, public service, social and political activism, as well as private sector careers. An archeology focus prepares students to teach or to work with agencies that do excavation and/or survey archeology, artifact inventory, forensics, and related areas.

## Department Learning Outcomes

Graduates will be able to:

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

## Transfer Opportunities

Anthropology courses generally transfer to all accredited schools. The issues addressed in anthropology prepare students to study in many fields. All aspects of life today can be enhanced by a cross-cultural perspective.

## Career Opportunities

Many anthropologists find careers working with diverse cultures or in any field requiring a global perspective such as education, public service, social and political activism, as well as private sector careers. An archeology focus prepares students to teach or to work with agencies that do excavation and/or survey archeology, artifact inventory, forensics, and related areas.

## Department Course Offerings

ANTH 1457 Cultural Anthropology..... (3 cr)

# ART

## Department Description

The Art Department serves students planning to major or minor in Studio Art or Art Education, as well as students seeking to fulfill liberal arts requirements for transfer. Students will develop the skills necessary to produce art and experience the creative decision making process, enabling students to develop individual excellence in their work. Through art history classes, students will develop an understanding of the unfolding of the arts through time and contributions made through art to the larger culture.

## Department Learning Outcomes

- Demonstrate proper use of tools and media
- Understand and apply the elements and principles of visual composition
- Make artwork that reflects a conscious thought process

## Career Opportunities

Students completing a bachelor's degree in Art are frequently encouraged to attend graduate school to continue their development, eventually becoming self-employed studio artists. Art Education majors may go on to teach in the K-12 school system.

## Department Course Offerings

ARTS 1401 Black and White Photo I .....(3 cr)  
 ARTS 1403 Color Photo I..... (3 cr)  
 ARTS 1420 The Art of Digital Photography .....(3 cr)  
 ARTS 1458 Drawing .....(3cr)  
 ARTS 1459 2-D Design & Color .....(3 cr)  
 ARTS 1467 Watercolor Painting .....(3 cr)  
 ARTS 1468 Painting .....(3 cr)  
 ARTS 1470 Art Appreciation ..... (3 cr)  
 ARTS 1487 Ceramics: Beginning Hand Building .....(3 cr)  
 ARTS 1488 Ceramics: Beginning Throwing .....(3 cr)  
 ARTS 1489 Intermediate Ceramics .....(3 cr)  
 ARTS 1510 Autumn Landscape Photography ..... (3cr)  
 ARTS 1512 The Art of Photographing Wildflowers ..... (3 cr)  
 ARTS 1596 Topics in Art..... (1-6 cr)  
 ARTS 1597 Topics in Art .....(1-6 cr)  
 ARTS 1598 Topics in Art .....(1-6 cr)  
 ARTS 2401 Black & White Photo II .....(3 cr)  
 ARTS 2403 Color Photo II ..... (3 cr)  
 ARTS 2485 American Indian Art ..... (3 cr)  
 ARTS 2486 Art History/Ancient .....(3 cr)  
 ARTS 2487 Art History/Modern ..... (3 cr)  
 ARTS 2490 Art History/Non-Western ..... (3 cr)  
 ARTS 2583 Independent Study..... (1-6 cr)

# BIOLOGY

## Department Description

Courses in Biological Sciences involve numerous approaches to the life processes, including interactions at the molecular, cellular, tissue, organ, organ system, organism, population, community, and ecosystem levels.

## Special Department Information

A number of courses in Biology do not have any special requirements, as they are designed for the inquisitive individual desiring to learn about life. There are also a number of courses that require prior knowledge gained in a prerequisite course.

## Department Learning Outcomes

- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in natural science disciplines.
- Demonstrate understanding of scientific theories.
- Communicate experimental findings, analyses, and interpretations both orally and in writing.
- Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies

## Transfer Opportunities

Biology courses transfer to higher education institutions either as general electives or important components of a major. Students should check with their possible transfer institution before enrolling in a course.

## Career Opportunities

Employment opportunities abound with a degree in Biology or even just a few select courses. Often students can acquire internships or summer jobs giving them a taste of what biology has to offer.

## Career Titles

Biologist, Biological Technician, Lab Technician, Environmental Biologist, Nurse, Medical Doctor, Dentist, Chiropractor, Research Scientist, Geneticist, Agronomist, Entomologist, Cell Biologist, Zoologist, Botanist, Limnologist, Ecologist, Microbiologist, Pathologist, Parasitologist, Hematologist, Physiologist, Anatomist, Virologist, Neurobiologist, Horticulturist, Wildlife Biologist, Gerontologists, Taxonomist, Veterinarian, Ichthyologist, Biotechnologist, Field Biologist, Histologist, Reproduction Biologist, Immunologist, Conservation Biologist, Endocrinologist, Embryologist, Algologist, Bryologist, Evolutionary Biologist, Paleontologist, Biochemist, Marine Biologist, Molecular Biologist, Ornithologist, Biology Instructor, Pharmacologist, Toxi-

cologist, Forensic Scientist, Herpetologist, Mycologist, Behaviorist, Aquatic Biologist, Mammalogist, Archeologist, and Biological Sales.

## Department Course Offerings

BIOL 2468 Anatomy & Physiology II .....	(4 cr)
BIOL 1404 Human Biology.....	(3 cr)
BIOL 1411 Concepts of Biology .....	(3cr)
BIOL 1415 Environmental Biology .....	(4 cr)
BIOL 1420 Nutrition .....	(3 cr)
BIOL 1422 Honors Biology .....	(5 cr)
BIOL 1431 General Biology I .....	(5 cr)
BIOL 1432 General Biology II .....	(5 cr)
BIOL 2411 Biology of Women .....	(3 cr)
BIOL 2415 General Ecology .....	(4 cr)
BIOL 2416 General Ecology .....	(3 cr)
BIOL 2417 General Ecology Lab .....	(1 cr)
BIOL 2457 Microbiology .....	(4 cr)
BIOL 2467 Anatomy and Physiology I .....	(4 cr)
BIOL 2468 Anatomy & Physiology II .....	(4 cr)

# CHEMISTRY

## Department Description

Chemistry is a study of matter and all its interactions. It is central to our understanding of various disciplines such as biology, geology, materials science, medicine, physics and many branches of engineering. Chemistry and chemicals play a major role in our economy and affect our daily lives in a wide variety of ways. A course in chemistry can help you see how a scientist thinks about the world and how to solve problems. Knowledge and skills developed in chemistry will benefit you in many career paths and will help you become a better-informed citizen in a world that is becoming more technologically complex and interesting.

## Special Program Requirements

Besides a natural curiosity about what makes up the world around us and why things are the way they are, basic math and algebra skills are required for problem solving and chemical modeling. Please refer to the course catalog for each chemistry course's math requirements.

## Department Learning Outcomes

- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in natural science disciplines.
- Demonstrate understanding of scientific theories and the ways in which scientists develop, express, and question theories in the field of chemistry.
- Communicate their findings, analyses, and interpretations with other students and the instructor orally and in writing.

## Transfer Opportunities

Courses taken in chemistry will help develop your problem solving skills—a talent that is highly valued in today's workplace. In addition, chemistry courses are required for almost all scientific and medical careers. And although technology continues to change at a rapid pace, the basic principles and concepts of chemistry remain the same. As a result, the knowledge and skills acquired in chemistry courses never become outdated and can transfer from one field of technology to another when making career choices or transitions.

## Career Opportunities

Chemistry majors have career opportunities in research labs, teaching positions, environmental fields, pharmaceuticals or entrance into pharmacy or medical school.

## Career Titles

Research Assistant, Lab Assistant, Analytical Chemistry Technician, Production Chemist, Quality Control Chem-

ist, Chemical Sales, Environmental Chemist, Chemistry Instructor.

## Department Course Offerings

CHEM 1405 Life Science Chemistry .....	(3 cr)
CHEM 1406 Life Science Chemistry Lab .....	(1 cr)
CHEM 1410 Environmental Chemistry.....	(3 cr)
CHEM 1414 Fundamentals of Chemistry .....	(4 cr)
CHEM 1424 Chemical Principles I .....	(5 cr)
CHEM 1425 Chemical Principles II.....	(5 cr)
CHEM 2472 Organic Chemistry I .....	(5 cr)
CHEM 2473 Organic Chemistry II .....	(5 cr)

### Department Description

The College & Career Studies Department courses are designed to assist students in learning college and career success strategies and life management skills. These courses focus on development of the whole person and help students identify personal, educational, and career goals as well as make satisfying decisions for transition to the workforce as productive members of society. The learning and self-management skills developed in college and career courses can serve a lifetime. These courses do not lead to a major but are designed to provide students with the skills necessary for achieving personal, academic, and career success.

### Department Learning Outcomes

- Demonstrate an understanding of self through exploration of interests, personal values and personality traits.
- Develop and apply a repertoire of study skill strategies to optimize their academic success.
- Develop and apply job-search strategies that will lead to more effective marketing of their occupational skills.
- Develop and articulate a personal definition of a “successful life.”

### Department Course Offerings

CCST 1300 Transition to College for Students with Special Needs .....	(2 cr)
CCST 1510 College Success Skills .....	(3 cr)
CCST 1512 Combat to Classroom .....	(2 cr)
CCST 1514 Information Literacy & Research .....	(1 cr)
CCST 1520 Career Planning .....	(2 cr)
CCST 1530 Employment Strategies .....	(3 cr)
CCST 1535 Honors Leadership Development .....	(3 cr)
CCST 1541 Student Senate I .....	(1 cr)
CCST 1542 Student Senate II .....	(1 cr)
CCST 1550 Introduction to College .....	(1 cr)
CCST 1552 Success Strategies for Athletes.....	(1 cr)
CCST 1558 Introduction to E-Learning .....	(1 cr)
CCST 1559 Money Management Skills.....	(1 cr)
CCST 1560 Math without Fear .....	(2 cr)
CCST 1570 On Course .....	(3 cr)
CCST 1590 Service Learning and Civic Engagement .....	(1 cr)
CCST 1598 Topics in CCST .....	(1-6 cr)

### Department Description

Earth science encompass a broad range of interdisciplinary fields built on a foundation of physical sciences and mathematics. The transfer majors suggested in this section are designed to effectively prepare you for transfer to a four-year university major in one of the many sub-disciplines of earth science. Geology, Oceanography, Atmospheric Science, and Environmental Science all belong to the Earth Science discipline. Earth science classes at CLC offer you a variety of experiences for learning about Earth and the environment, including traditional classroom courses, on-line coursework, laboratory work and field trips. If you are considering earth science as a major you are encouraged to discuss your plans with one of the Earth Science faculty at CLC during your first year of study.

### Special Program Requirements

Extensive coursework in science and math is needed to enter any university earth science major. In your first at CLC year you should make a solid beginning in math, physics, and chemistry coursework that will form the foundation of your major.

### Department Learning Outcomes

- Comprehend complexity of interactions within and across Earth’s concentric spheres: lithosphere, hydrosphere, atmosphere, biosphere, and ethnosphere.
- Show literacy in contemporary issues in Earth Science.
- Use an informed, analytical approach to suggest solutions to contemporary issues in Earth Science from a scientific perspective.
- Generate and analyze data in Earth Science in basic laboratory and field investigations.

### Career Opportunities

Environmental Consultant, Hydrogeologist, Soil Scientist, Environmental Protection Specialist, Naturalist, Coastal Zone Manager, Laboratory Technician, Oceanographer, Science Technician, Teacher, Professor, Atmospheric Scientist, Geoscientist

### Department Course Offerings

ESCI 1400 Geology of National Parks .....	(3 cr)
ESCI 1405 Astronomy.....	(4 cr)
ESCI 1411 Physical Geology .....	(4 cr)
ESCI 1421 Minnesota Geology.....	(3 cr)
ESCI 1444 Natural Disasters.....	(3 cr)
ESCI 1451 Oceanography .....	(3 cr)
ESCI 1452 Oceanography Lab .....	(1 cr)
ESCI 1454 Earth Science and the Environment.....	(4 cr)
ESCI 1455 Honors Earth Science and the Environment ...	(4 cr)
ESCI 2581 Topics in Earth Science .....	(1-6 cr)



**Department Description**

A wise sage once suggested that economics is the study of peoples' efforts to satisfy their unlimited wants by utilizing their limited resources. Economics studies the cost implications of an individual making a decision to go to college, the cost implications of a society making a decision to go to war, and everything in-between. Economics might be the most broadly applied of the social sciences because economists believe that all human decisions have economic costs and, therefore, are worthy of economic analysis.

**Special Program Requirements**

Courses in economics involve reading, writing, and analyzing information and data. College level skills in these areas are important.

**Department Learning Outcomes**

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures

**Transfer Opportunities**

Economics courses offered at Central Lakes College fulfill requirements within the Minnesota Transfer Curriculum, Central Lakes College's graduation requirements, and readily transfer to four-year institutions.

**Career Opportunities**

A bachelor's degree in economics will open doors into a number of career fields including the following: management, public administration, public policy, banking, education, business policy, and many others. As well, it can be used as a step to advanced degrees in many fields.

**Department Course Offerings**

ECON 1450 American Economy .....(3 cr)  
 ECON 2401 Principles of Economics-Macroeconomics..... (3 cr)  
 ECON 2402 Principles of Economics-Microeconomics .....(3 cr)

**Department Description**

Engineering appeals to students who enjoy the challenge of learning how things work and using this knowledge to improve the world in which they live. They are creative thinkers who enjoy design activities and building things.

**Special Department Information**

A strong background in math is required for successful completion of second-year engineering courses.

**Department Learning Outcomes**

- Accurately use mathematical functions that apply to Engineering problems.
- Use graphing technologies to help explain physical phenomena related to engineering challenges and discuss them orally or in writing.
- Correctly apply the principals governing physical phenomena to solve engineering problems collaboratively.

**Transfer Opportunities**

Central Lakes College offers in Associates of Science (AS) Degree that is designed to lead to a bachelor's degree in Engineering at a four-year university. These credits transfer in full through articulation agreements with all area engineering schools. CLC students most often transfer to the University of Minnesota (Minneapolis or Duluth), North Dakota State University (NDSU), the University of North Dakota (UND), Mankato State University (MSU), and St. Cloud State University (SCSU).

**Career Opportunities**

Engineering degrees are among the most highly paid of Bachelor's degrees and span a very large number of fields. The most common engineering fields include Civil Engineering, Mechanical Engineering, Electrical Engineering, and Chemical Engineering. Other fields include, but are not limited to, Aerospace Engineering, Computer Engineering, and Industrial Engineering. Engineers commonly transition to management positions in business and industry, start their own companies, or use their engineering degree to facilitate movement into other professional fields such as patent law and medicine.

**Career Titles**

Engineer, Patent Attorney, Chief Executive Officer (CEO)

**Department Course Offerings**

ENGR 1500 Introduction to Engineering (2 cr)  
 ENGR 1510 Introduction to Engineering Design (2 cr)  
 ENGR 1560 Digital Logic Design (3 cr)

ENGR 2540 Intro to Statics and Strengths of Materials .....(3 cr)  
 ENGR 2547 Statics .....(3 cr)  
 ENGR 2548 Dynamics .....(3 cr)  
 ENGR 2549 Mechanics of Materials .....(3 cr)  
 ENGR 2552 Introduction to Dynamics..... (3 cr)  
 ENGR 2569 Circuit Analysis I..... (4 cr)  
 ENGR 2570 Circuit Analysis II .....(3 cr)  
 ENGR 2580 Topics in Engineering .....(1-6 cr)

## ENGLISH

## Department Description

The study of English means discovering the dynamic process of writing and the influential impact of literature on human thought. The English Department offers a variety of writing and literature courses that create opportunities for students to apply creative and analytical insight to various rhetorical situations. Faculty members guide writers and readers from the initial stages of discovery to the final steps of drafting cohesive, logical, and intelligent texts. A strong background in writing and literature assures that students possess skills necessary to succeed personally, academically, and professionally today and in the future.

## Special Department Information

Students are strongly advised to take English 1410 in the first semester and English 1411 in the second semester, as instruction in expository and research writing will promote success in other classes.

## Department Learning Outcomes

Students will be able to:

- Choose, develop, and support a thesis, producing a unified and coherent oral or written text that demonstrates awareness of purpose and audience and uses standard edited English.
- Utilize research tools, use correct and appropriate documentation format, and properly cite credible sources.
- Demonstrate understanding of the implications of cultural and historical contexts in literature.

## Career Titles

Advertising Copywriter, Computer Instructional Designer, Copy Editor or Editorial Assistant, Corporate Communications Specialist, Freelance Writer, Publications Researcher, Radio/Television Copywriter, Journalist, Technical Writer, Secondary School Teacher, Professor.

## Department Course Offerings

ENGL 1410 Composition I .....	(4 cr)
ENGL 1411 Composition II .....	(4 cr)
ENGL 1420 Honors Composition .....	(4 cr)
ENGL 1421 Honors Composition II.....	(4cr)
ENGL 1422 Practical Writing .....	(3 cr)
ENGL 1450 Introduction to Humanities .....	(3 cr)
ENGL 1452 Classical Mythology .....	(3 cr)
ENGL 1454 Film Appreciation.....	(3 cr)
ENGL 1460 Honors Literature: The Great Books .....	(3 cr)
ENGL 1463 Introduction to Literature.....	(3 cr)
ENGL 1468 Poetry .....	(3 cr)
ENGL 1469 American Short Story.....	(3 cr)
ENGL 1470 Introduction to Science Fiction and Fantasy Litera-	

ture .....	(3 cr)
ENGL 1477 Authors in Focus.....	(1 2 3 cr)
ENGL 1478 Authors in Focus .....	(1 2 3 cr)
ENGL 1501 Writing Fundamentals for Healthcare Professionals (1 cr)	
ENGL 1510 English for Academic Purposes .....	(3 cr)
ENGL 1512 English for Academic Purposes II.....	(3 cr)
ENGL 1520 Language Fundamentals .....	(1 cr)
ENGL 1521 Technical Writing Fundamentals .....	(1 cr)
ENGL 1522 Writing Fundamentals for Diesel & Heavy Equipment Technicians.....	(1 cr)
ENGL 1580 Topics in Humanities .....	(1-6 cr)
ENGL 1581 Topics in English .....	(1-6 cr)
ENGL 1590 Service Learning .....	(1 cr)
ENGL 1596 Writing II .....	(3 cr)
ENGL 2450 World Literature .....	(3 cr)
ENGL 2451 Women in Literature .....	(3 cr)
ENGL 2455 American Indian Literature .....	(3 cr)
ENGL 2457 British Literature Pre-1800.....	(3 cr)
ENGL 2458 British Literature 1800-Present .....	(3 cr)
ENGL 2467 American Literature pre-1861 .....	(3 cr)
ENGL 2468 American Literature 1861-Present .....	(3 cr)
ENGL 2470 Creative Nonfiction .....	(3 cr)
ENGL 2483 Creative Writing .....	(3 cr)
ENGL 2484 Advanced Creative Writing .....	(3 cr)
ENGL1469 American Short Story .....	(3 cr)

## GEOGRAPHY

## Department Description

Geography literally means “writing about the Earth.” Geography is so interesting and useful because it includes information from many other disciplines like political science, history and economics and from sciences such as geology, biology and meteorology. What connects these disciplines to geography is that they all have to happen somewhere. The power of place and the concepts of location and interaction are central to understanding geography. Places are important because they help to shape the events and the people that are associated with them. Geography brings many disciplines together to create a vivid and unique understanding of our lives on Earth.

## Special Department Information

A desire and interest to know more about the physical and cultural wonders of the world around you are all that you need to get started in geography.

## Department Learning Outcomes

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

## Transfer Opportunities

The spatial understanding and the social and physical science skills acquired in geography lend themselves to your success in many majors. Knowledge of spatial relationships enhances the study of politics, history and economics as well as the study of geology, biology and meteorology. Business and marketing majors often need the skills and insights geography offers as do planners and city managers.

## Career Opportunities

Geography as a discipline is becoming more popular at colleges and universities as it offers students a broad variety of career skills. A geography education can lead to employment in many diverse fields. There are lots of public or private sector employment opportunities in training in geographic information systems (GIS). Many high school social studies teachers study geography as do city planners, corporate location analysts, E911 system designers and dispatchers, land surveyors, plant and animal researchers, climate specialists and government employees at all levels. Geography is useful in business as it promotes an understanding of the

similarities and differences in people and places. This is very useful in designing marketing campaigns directed at particular geographic or demographic groups.

## Career Titles

Geographer, Professor, Social Studies Teacher, Urban/City Planner, GIS Specialist, Marketing Specialist, Location Analyst, Cartographer, Surveyor, Travel Planner.

## Department Course Offerings

GEOG 1400 Physical Geography .....	(3 cr)
GEOG 1410 Maps and Places.....	(3 cr)
GEOG 1421 World Regional Geography .....	(3 cr)
GEOG 1430 Introduction to Geography Information Systems (3 cr)	
GEOG 1459 Cultural Geography .....	(3 cr)
GEOG 1460 Honors Cultural Geography .....	(3 cr)
GEOG 1598 Topics in Geography .....	(1-6 cr)
GEOG 1599 Topics in Geography .....	(1-6 cr)
GEOG 2401 Economic Geography.....	(3 cr)

## HEALTH

**Department Description**

Health courses help create and disseminate knowledge with the aim of preventing disease and promoting the health of populations in the United States and worldwide. Our courses are concerned with personal and community health promotion. Included in our offerings are specialized training for Emergency Medical Technicians, First Responders, and those charged with basic life support. In addition, we have a course that examines the unique biology and other aspects of gender focused on wellness from a woman's perspective. Another studies the physical, mental, emotional, social, and spiritual aspects of one's health as relates to sexuality. Today's culture faces challenges to societal health, as well as that of the individual. Drug Awareness is therefore considered by many to be an essential three-credit course.

**Department Learning Outcomes**

- Understand and apply the basic principals related to health and wellness with a goal of promoting both individual health/wellness and that of the greater society as well.
- Recognize and define healthy behaviors as they exist in the areas of physical, mental, emotional, and social health as well as the spiritual aspects of one's health as it relates to sexuality.

**Special Department Information**

Students who wish to enroll in the Emergency Medical technician course must first have CPR certification.

**Career Opportunities**

Whether one is working toward a greater undergraduate degree or planning more immediate career goals following CLC, health courses provide relevant preparation for managing one's personal health in relation to values and choices that await everyone. Several health courses at CLC impart advanced knowledge to further the careers of emergency care professionals. Successful completion of the 5-credit EMT course qualifies the student to sit for the National Registry of EMTs examination. Internships may be available for health credits from CLC. There is a growing need for public health officials and private-sector experts capable of improving the quality of life in the workplace and at home.

**Career Titles**

Dietitian, Emergency Medical Technician, Health Educator, Health Unit Coordinator, Health Science Librarian, Medical Illustrator, Health Information Administrator, Certified Athletic Trainer, Recreational Therapist, Physical Therapist, Rehabilitation Counselor.

**Department Course Offerings**

HLTH 1501 Personal Health and Wellness .....	(3 cr)
HLTH 1507 Drug Awareness .....	(3 cr)
HLTH 1510 Intro to Massage .....	(2 cr)
HLTH 1520 Principles of Nutrition .....	(3 cr)
HLTH 1531 Women's Health .....	(3cr)
HLTH 1541 Human Sexuality .....	(3 cr)
HLTH 2550 Internship in Health .....	(1-4 cr)
HLTH 2570 Topics in Health .....	(1-6 cr)

## HISTORY

**Department Description**

Our goal is to promote the understanding of the historical past. Studying history gives individuals the skills and perspective needed to think about and understand the complex world in which we live. Courses in history will ask and answer questions about why and how the world's people, institutions, ideas, economies and cultures developed and changed over time. History students will read current scholarship, engage in discussions, view films and documentaries, and research topics of interest.

**Special Department Information**

College-level reading and writing skills will help students be more successful in all history courses.

**Department Learning Outcomes**

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

**Transfer Opportunities**

History courses fulfill a number of requirements for the Minnesota Transfer Curriculum, as well as Central Lakes College graduation requirements. Students who plan on majoring in History at a four year institution would be well-advised to take both the US and World History survey courses. This will be good preparation for upper division work in whatever area of history you might choose to make your area of concentration.

**Career Opportunities**

A liberal arts degree in history can open the door to a multitude of careers. Education, Journalism, Business and Law are just a few of the professions employing individuals with history degrees. Listed below are some of the possible career categories. Visit [www.historians.org/jobs/index](http://www.historians.org/jobs/index) for more information.

**Career Titles**

Educator, Researcher/Writer, Archivist, Records Manager, Information Manager, Legislative Staff, Foundation Staff, Editing and Publishing, Lawyers and Paralegal, Museum Curator.

**Department Course Offerings**

HIST 1406 Western Civilization, Pre-history to 1500 .....	(3 cr)
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HIST 1407 Western Civilization, 1500 to Present .....	(3 cr)
HIST 1412 World History I, From the Beginning to 1500 .....	(3 cr)
HIST 1413 World History II, 1500 to the Present .....	(3 cr)
HIST 1472 United States History to 1865 .....	(3 cr)
HIST 1473 U.S. History Since 1865 .....	(3 cr)
HIST 1475 Honors: U.S. History 1865 to Present .....	(3 cr)
HIST 2404 Minnesota History .....	(3 cr)
HIST 2406 Ojibwe History .....	(3 cr)
HIST 2411 American Indian History .....	(3 cr)
HIST 2420 History of Women in the U.S. ....	(3 cr)
HIST 2570 Topics in History .....	(1-6 cr)

# MATHEMATICS

## Department Description

Mathematics is an essential tool for understanding other disciplines and the world around us. Courses in mathematics will help students develop logical reasoning and problem solving skills, forming a basis for success in their careers and future study. The mathematics department offers pre-college mathematics courses to prepare students for college level courses as well as the necessary courses to complete the mathematics requirement for a four year degree.

## Special Program Requirements

Students should consult with a counselor to determine their specific degree or program requirements in mathematics.

## Department Learning Outcomes

- Demonstrate sequential reasoning.
- Communicate mathematically.
- Exhibit proficiency in using technology.

## Transfer Opportunities

The suggested curriculum for students interested in obtaining a four-year degree in mathematics or mathematics education is the following: MATH 1477 Calculus I, MATH 2459 Differential Equations, MATH 1478 Calculus II, MATH 2457 Linear Algebra, MATH 2458 Multivariable Calculus.

## Career Opportunities

Most careers require a strong background in mathematics. Courses in mathematics greatly benefit anyone pursuing a career in mathematics or science education, accounting, engineering, pharmacy, actuarial science, computer science, finance, management, and sales and marketing.

## Department Course Offerings

MATH 0800 Fundamentals of Math.....	(3 cr)
MATH 0810 Math Pathways .....	(3 cr)
MATH 0820 Intermediate Algebra .....	(4 cr)
MATH 1441 Concepts in Mathematics .....	(3 cr)
MATH 1460 Introduction to Statistics .....	(4 cr)
MATH 1461 Honors Introduction to Statistics .....	(4 cr)
MATH 1470 College Algebra .....	(3 cr)
MATH 1472 Precalculus.....	(5 cr)
MATH 1477 Calculus I .....	(5 cr)
MATH 1478 Calculus II .....	(5 cr)
MATH 1480 Honors Calculus I .....	(5 cr)
MATH 1500 Applied Mathematics.....	(3 cr)
MATH 1510 Math for Elementary Teachers I .....	(3 cr)
MATH 1512 Math for Elementary Teachers II .....	(3 cr)
MATH 1520 Introduction to College Algebra .....	(3 cr)
MATH 1580 Topics in Math .....	(1-6 cr)
MATH 2457 Linear Algebra .....	(3 cr)

MATH 2458 Multivariable Calculus .....	(4 cr)
MATH 2459 Differential Equations .....	(4 cr)

# MUSIC

## Department Description

Students may take basic musicianship classes in voice, piano, brass, woodwinds and guitar as well as basic music theory, appreciation, jazz and pop music history and world music. Vocal and instrumental performing groups such as Concert Choir, Chamber Singers, Jazz Band, Concert Band and Brass Ensemble afford students the opportunity to maintain and develop musical skills. The instrumental groups are also open to public participation offering musicians of all ages a chance to keep up the skills.

## Special Department Information

Performing groups require a basic level of musical knowledge and a desire to raise that level.

## Department Learning Outcomes

- Demonstrate knowledge of specific areas of music.
- Demonstrate proficiency in preparing and performing musical works (performing groups).
- Demonstrate proficiencies in applied music (instrumental, vocal, guitar, piano, audio recording).

## Transfer Opportunities

Applied music classes in voice, piano, brass, woodwinds, and the performing group credits transfer as music classes and will apply toward the requirements of a music majors at most 4-year institutions.

## Career Opportunities

The offerings of the CLC Music Department serve to enrich the lives of the students at CLC through the performing groups, applied music lessons, and appreciation classes. They also afford the student who has not made up his or her mind about a music major the opportunity to see if a degree in music is what one wishes to pursue. The Music Industry class gives the students a taste of several possible careers in music including radio broadcasting, performing, recording, retail management and education. The Audio Recording class trains students on digital software which is the standard platform for the recording industry. Several of our students have gone on to find employment in these fields through contacts made during their time at CLC.

## Career Titles

Music Teacher, Church Choir Director, Church Organist, Performing Musician, Recording Engineer, Radio Broadcaster, Music Retail Worker, Worship Band Leader/Musician.

## Department Course Offerings

MUSC 1403 American Popular Music	(3cr)
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MUSC 1405 Jazz Band .....	(1cr)
MUSC 1408 Community Band .....	(1cr)
MUSC 1415 Brass Ensemble .....	(1cr)
MUSC 1418 Woodwind Ensemble .....	(1cr)
MUSC 1421 Cantare' Concert Chorale .....	(1cr)
MUSC 1431 Chamber Singers .....	(1cr)
MUSC 1441 Applied Music - Guitar .....	(1cr)
MUSC 1450 Music in World Cultures .....	(3cr)
MUSC 1452 Intro to Music Industry .....	(3cr)
MUSC 1453 Audio Recording I .....	(3cr)
MUSC 1455 Voice Training .....	(2cr)
MUSC 1457 Music Appreciation .....	(3cr)
MUSC 1459 Fundamentals of Music .....	(3cr)
MUSC 1464 Applied Music - Brass .....	(1cr)
MUSC 1475 Applied Music - Woodwind .....	(1cr)
MUSC 1481 Applied Music - Piano .....	(1cr)
MUSC 1485 Applied Music - Instrumental .....	(1cr)
MUSC 1491 Applied Music - Voice .....	(1cr)
MUSC 2401 Evolution of Jazz .....	(3cr)
MUSC 2580 Topics in Music.....	(1-3cr)

# PHILOSOPHY

## Department Description

Courses in Philosophy cover life's fundamental questions, such as what do we know, and how do we know it? What is the source and function of moral behavior? What is the nature of logic and correct reasoning? Students of Philosophy learn how history's most profound thinkers have attempted to answer these questions; students also learn the thinking and reasoning skills that will allow them to answer these questions for themselves.

## Special Department Information

Because courses in Philosophy often require students to express themselves in writing, it is suggested that students complete ENGL 1410 Composition I prior to taking a Philosophy course.

## Department Learning Outcomes

- Demonstrate an ability to recognize and critically evaluate issues that arise when people think about the nature of truth, life, the universe, morality, mind, God, and other issues of philosophical interest.
- Become more aware and reflective individuals capable of independently assessing commonly held clichéd social assumptions and articulating informed and well-reasoned evaluations.
- Become self-motivated thinkers possessing the ability to rationally determine their beliefs and values for themselves.

## Transfer Opportunities

The analytical skills honed in Philosophy courses enhance a student's chance for success in any major. Students looking beyond a major, or considering a future specialization in philosophy, should know that Philosophy majors consistently register higher LSAT, GRE, and GMAT scores than students from other disciplines. The University of Virginia Law School found that Philosophy majors averaged 15 points higher on the Law School entrance exam than students from other majors. Courses in Philosophy greatly benefit anyone interested in law school, seminary, medicine, journalism, or attaining any graduate degree.

## Career Opportunities

While there are few jobs with the title "Philosopher," Philosophy's focus on thinking skills provides students with a valuable asset in the rapidly changing job market. Not all philosophers become professors. Consider this partial list of philosophers (majored in Philosophy): Woody Allen, William Bennett, Bill Clinton, David Duchovny, Umberto Eco, John Elway, Harrison Ford, Vaclav Havel, Bruce Lee, Steve Martin, Pope John Paul

II, Susan Sontag, George Soros, and Alex Trebeck. Some employers look for skills, but all employers value thinking.

## Career Titles

Lawyer, Journalist, Professor.

## Department Course Offerings

PHIL 1417 Immortality and the Afterlife.....	(3 cr)
PHIL 1411 World Religions .....	(3 cr)
PHIL 1415 Philosophy and Popular Culture .....	(3 cr)
PHIL 1417 Immortality and the Afterlife .....	(3 cr)
PHIL 1421 Critical Thinking .....	(3 cr)
PHIL 1460 Logic .....	(3 cr)
PHIL 2410 Introduction to Philosophy .....	(3 cr)
PHIL 2420 Ethics.....	(3 cr)
PHIL 2421 Honors Ethics.....	(3 cr)
PHIL 2422 Medical Ethics.....	(3 cr)
PHIL 2430 Contemporary Moral Problems.....	(3 cr)

# PHYSICAL EDUCATION

## Department Description

Today's students will represent the first generation ever to have a lifespan shorter than that of their parents, unless current diet and exercise habits change. So says the President's Council on Physical Fitness and Sports. Courses in Physical Education provide co-educational opportunities to advance one's fitness as well as acquire knowledge and skills associated with athletics, athleticism, and team sports. The schedule endeavors to afford students season-oriented activities that are able to make use of facilities and outdoor environments, from weight rooms and dance floors to our area's magnificent golf courses and cross-country ski trails. Varsity sports, which earn the participant one credit per season, provide intercollegiate athletic competition as a higher education platform to further one's competitive abilities and, in some cases, pursuit of professional athletic status.

## Special Department Information

Entrance to any of the college's intercollegiate athletics programs requires passage of a physical examination.

## Department Learning Outcomes

- Demonstrate understanding of how to improve their own level of fitness.
- Demonstrate understanding of the health benefits of exercise.
- Demonstrate skills related to the practice of a sport/activity.

## Career Opportunities

Some graduates from the two-year college continue studies as undergraduates in Physical Education degree programs of universities. They become professional athletes, athletic trainers, sports officials, administrators, adaptive PE instructors and coaches, sports facility managers, and certified fitness trainers. Median wage for athletic trainers is \$32,990 per year, for coaches and scouts: \$26,740 per year. College and professional coaches usually have a bachelor's degree, and some have a master's degree. In addition, most have many years of experience playing and then coaching their sport. Most have worked their way up through the coaching ranks.

## Career Titles

Personal Trainer, Corporate Fitness Instructor, Activities Director, Nutrition Specialist, Cardiovascular Fitness Instructor, Cruise Recreation Director, Health/Fitness Consultant, Occupation Exercise Scientist, Camp Director, Professional Sports Umpire, Professional Sports Scout, Spa/Health Club Manager

## Department Course Offerings

PHED 1502 Circuit Training .....	(2cr)
PHED 1503 Advanced Circuit Training .....	(1cr)
PHED 1505 Fitness Walking .....	(2cr)
PHED 1506 Aerobic Exercise .....	(2cr)
PHED 1507 Basic Horsemanship .....	(2cr)
PHED 1508 Bicycling .....	(2cr)
PHED 1510 Beginning Skiing/Snowboarding .....	(2cr)
PHED 1511 Advanced Skiing/Snowboarding .....	(2cr)
PHED 1512 Beginning Yoga .....	(2cr)
PHED 1513 Aerobic Conditioning .....	(2cr)
PHED 1514 Cardio Sampler .....	(2cr)
PHED 1516 Yoga For Stress Relief .....	(2cr)
PHED 1520 Vinyasa (Flow) Yoga .....	(2cr)
PHED 1521 Body Conditioning .....	(2cr)
PHED 1522 Weight Training .....	(2cr)
PHED 1523 Strength Training for Women .....	(2cr)
PHED 1524 Recreational Sampler .....	(2cr)
PHED 1525 Personal Protection Awareness .....	(2cr)
PHED 1530 Beginning Swimming .....	(1cr)
PHED 1531 Intermediate & Advanced Swimming .....	(1cr)
PHED 1534 Beginning Golf .....	(2cr)
PHED 1536 Advanced Golf .....	(2cr)
PHED 1541 Bowling .....	(2cr)
PHED 1544 Basketball - Coed .....	(1cr)
PHED 1553 Power Volleyball .....	(2cr)
PHED 1570 Theory of Coaching .....	(2cr)
PHED 1572 Theory of Basketball .....	(2cr)
PHED 1573 Officiating .....	(1cr)
PHED 1583 Athletic Training .....	(2cr)
PHED 1594 Fitness for Life .....	(2cr)
PHED 1599 Topics in Physical Education.....	(1-6cr)
PHED 2501 Varsity Sports - Football .....	(1cr)
PHED 2502 Varsity Sports - Volleyball .....	(1cr)
PHED 2503 Varsity Sports - Men's Basketball .....	(1cr)
PHED 2504 Varsity Sports - Women's Basketball .....	(1cr)
PHED 2505 Varsity Sports - Baseball .....	(1cr)
PHED 2506 Varsity Sports - Softball .....	(1cr)
PHED 2507 Varsity Sports - Golf .....	(1cr)
PHED 2511 Varsity Sports - Football II .....	(1cr)
PHED 2512 Varsity Sports - Volleyball II .....	(1cr)
PHED 2513 Varsity Sports - Men's Basketball II .....	(1cr)
PHED 2514 Varsity Sports - Women's Basketball II .....	(1cr)
PHED 2515 Varsity Sports - Baseball II .....	(1cr)
PHED 2516 Varsity Sports - Softball II .....	(1cr)
PHED 2517 Varsity Sports - Golf II.....	(1cr)

# PHYSICS

## Department Description

Courses in Physics cover the physical laws that govern the natural world in which we live, from the smallest particles that make up matter to the structure of the universe. All physics courses include a laboratory component that is designed to reinforce theoretical concepts with hands-on experiences and physical measurements. All physics courses use computer-based data acquisition and simulations to help students visualize and understand abstract concepts.

## Special Department Information

College Physics is designed for students in a pre-professional track such as pre-pharmacy, architecture, pre-medicine, and pre-veterinary and requires a math competency at the level of Precalculus (Math 1472). Engineering Physics is designed for students majoring in physics, engineering, or students wanting a challenge consistent with their mathematical skill level and requires a math competency at the level of Calculus (Math 1477).

## Department Learning Outcomes

- Accurately use mathematical functions that apply to physics.
- Use graphing technologies to help explain physical phenomena and discuss them orally or in writing.
- Correctly use unit analysis to solve problems collaboratively.

## Transfer Opportunities

All Minnesota and area universities offer Bachelor's and advanced degrees in physics. Physics is also required for anyone interested in engineering, medical technology, medicine, pharmacy, and veterinary fields. Because of their need for strong math skills, physicists often have dual degrees in Physics and Mathematics.

## Career Opportunities

Physics majors are a rare breed. In a world of high technology, a physicist is a generalist in a world of specialists. Many students majoring in physics will teach in high school or go on for advanced degrees, allowing them to teach at the post-secondary and university level where they can also engage in scientific research. Physicists also find jobs in government or industry as researchers and analysts. Physicists tend to have very interesting careers. Physicists with advanced degrees must choose a specialty. A partial list of more common areas of expertise include astrophysics, atomic and nuclear physics, solid state physics, high energy and plasma physics, spectroscopy, biological physics, and computational physics.

## Career Titles

Physicist, Professor, Researcher, Scientific Analyst.

## Department Course Offerings

PHYS 1401 College Physics I .....	(4 cr)
PHYS 1402 College Physics II .....	(4 cr)
PHYS 1407 Principles of Physics .....	(3 cr)
PHYS 1411 Classical Physics I .....	(5 cr)
PHYS 1412 Classical Physics II .....	(5 cr)
PHYS 1425 Honors Astronomy/Physics.....	(4 cr)
PHYS 1430 Concepts of Physics: A Universe of Hidden Charm	(3 cr)

# PSYCHOLOGY

## Department Description

Psychology is the study of behavior and mental processes. People sometimes think of psychology as the study of mental and emotional problems, or as psychotherapy, but the field is actually much broader than this. We use the scientific method to study human behavior in all its many forms, from the genetic level and the biological basis of behavior, to understanding how individuals and groups behave in everyday activities. Psychology includes the study of what we have in common with other human beings, such as how we learn and remember, along with what makes us unique individuals – our personalities.

We study what makes people thrive and grow, as well as what might lead to problems. The Psychology Department faculty has a wealth of experience in the teaching of psychology as well as practical experience working in the field, and they use this to enrich the classroom. Faculty members also maintain memberships in professional psychology organizations to stay up to date with research findings and developments in the field. The Psychology Club is a student organization that takes on service projects on campus and in the community, and holds regular social events. Central Lakes College also has a chapter of Psi Beta, the national honor society for psychology students at two-year colleges.

## Special Department Information

General Psychology is a survey course that provides a broad introduction to the field of psychology. This course is also a prerequisite for some of the other psychology courses, such as Human Development and Abnormal Psychology.

## Department Learning Outcomes

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

## Transfer Opportunities

Psychology courses fulfill several goal areas of the Minnesota Transfer Curriculum. Many students at CLC take courses in psychology, as the study of psychology is an excellent preparation for further study in numerous fields such as teaching, health care, social service, criminal justice and business.

## Career Opportunities

Psychology is an appropriate background for any job that involves working with other people. Psychology is also great for understanding and changing your own behavior, so personal interest often brings students to psychology classes.

## Career Titles

Psychologist, Counselor, Behavior Analyst, Case Worker, Human Resources Director, Social Services Director, Customer Relations Worker, Research Analyst, Probation Officer, Manager.

## Department Course Offerings

PSYC 1411 Personal Growth & Behavior .....	(3 cr)
PSYC 1420 Psychology & Modern Life .....	(3cr)
PSYC 1423 Positive Psychology: The Science of Well-Being .....	(3cr)
PSYC 2421 General Psychology .....	(4cr)
PSYC 2423 Honors General Psychology .....	(4cr)
PSYC 2425 Conflict, Trauma, and Post Traumatic Stress Disorder .....	(3cr)
PSYC 2431 Human Development .....	(3cr)
PSYC 2435 Educational Psychology .....	(3cr)
PSYC 2470 Abnormal Psychology .....	(3cr)
PSYC 2570 Topics in Psychology .....	(1-6cr)

# POLITICAL SCIENCE

## Department Description

Are you interested in American politics; international affairs; critical issues such as health, the environment, and civil rights; theories concerning the ideal government and how power and resources are allocated in society? If so, you should consider studying political science. Politics affects the air we breathe, the way we're educated, the jobs we do, the communities we live in and the taxes we pay. By studying Political Science, you'll learn the principles at work behind the decisions that affect very aspect of our lives. Political science students study the systems people set up to organize their societies, from neighborhoods to nations.

## Special Department Information

Courses in Political Science require students to read and understand written material, and to express themselves in writing and class discussion. Therefore it is suggested that students have college level study and communication skills.

## Department Learning Outcomes

- Identify and apply alternative explanatory systems or theories.
- Identify and communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

## Transfer Opportunities

The analytical, critical thinking, and communications skills honed in Political Science courses enhance a student's chance for success in any major. Most 4-year colleges and universities have degree programs in Political Science, and it is the most frequent undergraduate major for law students.

## Career Opportunities

Political science students enjoy a versatility of skills and a wide range of exciting careers in federal, state, and local governments; law; business; international organizations; nonprofit organizations; campaign management and polling; journalism; education; electoral politics; research; and university and college teaching. In fact, any field that requires analytical and communication skills offers potential employment opportunities for Political Science students.

## Department Course Offerings

POLS 1430 Introduction to Political Science .....(3 cr)

POLS 1435 American Government and Politics .....(3 cr)  
 POLS 1439 State and Local Government .....(3 cr)  
 POLS 1440 Society and Law .....(3 cr)  
 POLS 2401 Federal Indian Policy .....(3 cr)  
 POLS 2402 Tribal Government .....(3 cr)  
 POLS 2450 International Relations .....(3 cr)  
 POLS 2581 Topics in Political Science I .....(1-6 cr)

# READING

## Department Description

The Reading Department at Central Lakes College offers a variety of classes in reading comprehension improvement, critical reading and thinking, vocabulary building, and study methods. It provides a range of class levels based on academic need, and the classes are designed to help students succeed personally, academically, and professionally.

## Special Department Information

To guide our students to be independent readers and thinkers, the Reading Department uses a variety of instructional activities including individual, collaborative, and whole class learning. At Central Lakes college, we recognize the various reading experiences and skill levels our students have. Therefore, we attempt to provide an atmosphere that fosters encouragement and acceptance of different ideas and opinions for optimum success.

## Department Learning Outcomes

- Select reading strategies appropriate to the purpose and text structure.
- Independently read and respond to text in critical, creative, and emotional ways.
- Understand and identify the general sense/main idea of a paragraph or passage, supporting details, and author's patterns.
- Develop effective vocabulary-building techniques for reading fluency.

## Department Course Offerings

READ 0591 Reading I .....(5 cr)  
 READ 0592 Reading II .....(3 cr)  
 READ 1401 College Reading..... (3 cr)  
 READ 1598 Topics in Reading..... (1-6 cr)

# SOCIOLOGY

## Department Description

Sociologists address the most pressing issues of our time: the gap between rich and poor, the breakup of families, crime, warfare, human migration and environmental challenges. Our scientific study of the groups and culture that we belong to is actually a study of ourselves...but from the outside-in! Sociological research often becomes social policy as local, state and federal governments seek to better organize their piece of our social world.

## Special Department Information

Although no prerequisites exist for sociology classes at CLC, students are strongly encouraged to begin their adventure in sociology in an Introduction to Sociology course. This is the perfect jumping-off point to the higher-level sociology courses. A class or two in English Composition is also very helpful.

## Department Learning Outcomes

- Identify and apply alternative Explanatory systems or theories.
- Identify and Communicate alternative explanations for contemporary social issues.
- Identify the methods and data that historians and social and behavioral sciences use to investigate the human condition.
- Examine social institutions and processes across a range of historical periods or cultures.

## Transfer Opportunities

The understanding of humanity gained in sociology adds a unique insight to almost any field of study or occupation. In fact, sociology offerings are often required for degrees in several major disciplines. CLC sociology majors have a great reputation at our region's 4 year colleges like St. Cloud State University and Bemidji State University where our students have won high honors.

## Career Opportunities

A sociology degree is one of the most useful for students who enter the job market in middle management positions. High school social studies teachers often hold 4-year sociology degrees. Specialists in sociology are also employed in planning at all levels of government and at the United Nations. Several Nobel Prize winners in American history have been sociologists including Martin Luther King Jr., Jane Addams and Emily Balch. Many famous social activists earned sociology degrees: Saul Alinsky, Roy Wilkins, and Jesse Jackson. Popular artists and entertainers with sociology degrees include actor Robin Williams, novelist Saul Bellow, comedian

Dan Aykroyd and sportscaster Ahmad Rashad. A substantial number of senators, congresspersons, mayors of major cities and other elected officials have held sociology degrees.

## Career Titles

College Professor, Teacher, City/State Planner, Demographer, Personnel Manager, Probation Officer, Police Chief, Social Worker, Advocate.

## Department Course Offerings

SOCL 1401 Introduction to Sociology.....	(3 cr)
SOCL 1403 Honors Introduction to Sociology .....	(3 cr)
SOCL 1472 Sociology of the Family .....	3 cr
SOCL 2405 Criminology.....	(3 cr)
SOCL 2411 Social Problems .....	(3 cr)
SOCL 2422 Culture & Environment .....	(3 cr)
SOCL 2480 Sociology of Death and Dying .....	(3 cr)
SOCL 2481 Race, Ethnicity & Oppression.....	(3 cr)
SOCL 2599 Topics in Sociology .....	(1-6 cr)

# SPANISH

## Department Description

Learning a second language has become a key educational component for career and personal enhancement in the global economy. Regardless of the major that you choose, adding Spanish will enhance your job opportunities and add to your scope of intercultural understanding as our country evolves demographically and linguistically. The CLC Spanish Department offers beginning and intermediate level language classes. Students are encouraged to meet with instructors or inquire about the CLEP test if uncertain about entry level of study.

## Special Department Information

Students may elect to complete a certificate in Latin American Studies that will enrich their understanding and appreciation of Latin American culture, communication, language, music, and art. This program is appropriate for citizens in an increasingly diverse society and for individuals entering or currently employed in positions in education, business, criminal justice, and other occupations where an understanding of Hispanic culture enhances their abilities in the workplace. Students will have an opportunity to study the cultural, historical, political, economic, religious, and social realities of Mexico, Central, and South America to gain a better understanding of the Hispanic impact on the United States and the growing Latino population in Minnesota.

## Department Learning Outcomes

- Demonstrate appropriate class level oral or expressive World Language skills.
- Demonstrate knowledge and appreciation of cultural values, norms and traditions per specific World Language, and will demonstrate basic understanding that these differences have an impact on group relationships and interactions.
- Demonstrate appropriate class level receptive and/or written World Language skills.
- Demonstrate appropriate cultural rules of interaction when conversing in the target language.

## Career Opportunities

Spanish is the second language of this country. Therefore, being bilingual will be a major asset in any career you choose to pursue.

## Department Course Offerings

SPAN 1401 Beginning Spanish I .....	(4 cr)
SPAN 1402 Beginning Spanish II .....	(4 cr)
SPAN 1597 Topics in Spanish .....	(1-6 cr)
SPAN 1598 Topics in Spanish.....	(1-6 cr)
SPAN 2401 Intermediate Spanish I .....	(4 cr)

SPAN 2404 Intermediate Spanish II .....	(4 cr)
SPAN 2420 Many Faces of Mexico .....	(3 cr)
SPAN 2425 Cultures of Latin America .....	(3 cr)



# SPEECH

## Department Description

The expectation of a college education is the skill to communicate effectively. Speech courses form a foundation necessary to reach this goal. The ability to understand the human communication process, through knowledge of its theories and application of these theories, prepares a student in his or her individual quest for success. The Speech Department at Central Lakes College offers interesting and challenging classes in public speaking, interpersonal communication, intercultural communication, small group communication, and other additional speech courses. This coursework provides a framework that will benefit students in the pursuit of their present and future goals.

SPCH 1464 Creative Communication.....	(3 cr)
SPCH 1470 Blogging and Vlogging .....	(3 cr)
SPCH 1472 Online Social Networking.....	(3 cr)
SPCH 2421 Intercultural Communication.....	(3 cr)
SPCH 2431 Small Group Communication .....	(3 cr)
SPCH 2570 Topics in Speech .....	(1-6 cr)
SPCH 2590 Serving Learning.....	(1-3 cr)

## Department Learning Outcomes

- Demonstrate oral communication skills.
- Demonstrate an understanding of intercultural communication and effectively communicate within and across different contexts and cultures.
- Demonstrate an understanding of the manner in which communication creates, maintains, and transforms relationships, and engage in effective and productive relational communication.

## Transfer Opportunities

Speech courses fulfill a number of requirements for the Minnesota Transfer Curriculum, Central Lakes College graduation requirements, and readily transfer to four-year institutions.

## Career Opportunities

Learning more about the communication process can help you both professionally and personally. Communication is necessary in any career field. Effective communication skills will better prepare you for a more fulfilling work experience. These skills will also enhance your interpersonal relationships with friends, family, co-workers, and people in a variety of other contexts.

## Career Titles

Public Speaker, Speaking Coach, Script and Speech Writer, Speech Therapist, Communication Consultant, Public Relations Director, Broadcaster, Media Manager, Teacher, Administrator, Counselor.

## Department Course Offerings

SPCH 1410 Introduction to Communication Studies .....	(3 cr)
SPCH 1421 Interpersonal Communication.....	(3 cr)
SPCH 1431 Fundamentals of Public Speaking .....	(3 cr)
SPCH 1450 Introduction to Mass Communication .....	(3 cr)
SPCH 1451 Argumentation and Debate.....	(3 cr)

# Programs

# ADV. FARM BUSINESS MANAGEMENT CERT.

## Program Description

The primary emphasis of the Farm Business Management Program is to assist farm families in meeting their business and personal goals through quality farm records and sound business decisions. This program is primarily taught at the student's place of business, but classroom and group instruction are also very important. Individualized instruction is used to the fullest extent. Students are enrolled in the program on a continuous, part-time basis. Normal credit load is 10 credits per year, for the equivalent of 1/3 of a full-time college student. The instructor visits the farm on a regular basis and understands the strengths and weaknesses of each student's business. Developing a set of sound farm records is the basis for the program. Primarily, computerized accounting is used to handle the complex records, which must be kept in an efficient farm business. At the close of the calendar year, these records are summarized by the instructor and a computerized business analysis is prepared for each student to show how well his/her business did financially during the year. Each student also receives an area Farm Business Analysis Summary, which allows them to compare their information with averages of other Farm Business Management students (farmers) in their local area and around the state. The Farm Business Management Program offering consists of four certificate programs. The first three certificate programs are 30 credits in length. These three programs include Essentials of Farm Business Management, Applications in Farm Business Management, and Advanced Farm Business Management. The fourth certificate option is the Marketing Certificate, consisting of 25 credits.

## Program Outcomes:

Graduates will be able to:

- Maintain accurate records regularly;
- Complete business analysis annually;
- Complete accurate balance sheets annually or as needed;
- Complete business planning annually and strategically;
- Continue in business after completing award area(s).

## Special Program Requirements

The Farm Business Management Program is designed for business owners, managers, and key employees of farm and agricultural business. In addition, individuals in the process of starting a farm or agricultural business may also enroll.

## Admissions

The Farm Business Management Program is primarily offered as individualized instruction at the business. Classroom instruction is also offered on a limited basis.

Normal credit load is 10 credits per year, for the equivalent of 1/3 of a full-time college student.

## Career Opportunities

Students in this program are currently employed in the field, or in the process of starting a business.

## Advanced Farm Business Management Certificate

Required Courses

FBMA 3100\* Fund of Financial Mgmt Relates Risk Mgmt... (3 cr)  
 FBMA 3101\* Applied Financial Mgmt. Relates Risk Mgmt .(3 cr)  
 FBMA 3110\* Fund Finan Mgmt/Strategic Plan Emphasis... (3 cr)  
 FBMA 3111\* Applied Financial Mgmt/Strategic Plan Emp ..(3 cr)  
 FBMA 3120\* Fund Financial Mgmt/Bus Plan Emphasis ....(3 cr)  
 FBMA 3121\* Applied. Financial Mgmt/Bus Plan Emphasis .(3 cr)  
 Total 18 Credits

### Electives

Student must choose additional 12 credits from the Farm Business Management Master Course Listing. Electives can be identified when the second numerical placeholder is a "3". (i.e. FBMA 3330)

Total 12 Credits

GRADUATION REQUIREMENT 30 CREDITS

## Agricultural Commodities Marketing Certificate

Required Courses

FBMT 1170 Introduction to Farm Commodities Mktg .....(3 cr)  
 FBMT 1173 Directed Study - Introduction to Farm Commodity Marketing..... (2 cr)  
 FBMT 1180 Applying Commodity Mktg Fundamentals .....(3 cr)  
 FBMT 1183 Directed Study - Applying Commodity Marketing Fundamentals .....(2 cr)  
 FBMT 1190 Evaluating Farm Commodity Mktg Tools .....(3 cr)  
 FBMT 1193 Directed Study - Evaluating Farm Commodity Marketing Tools .....(2 cr)  
 FBMT 2170 Monitoring Farm Commodity Mktg Plans .....(3 cr)  
 FBMT 2173 Directed Study - Monitoring Farm Commodity Marketing Plans .....(2 cr)  
 FBMT 2180 Strategies in Farm Commodity Marketing .....(3 cr)  
 FBMT 2183 Directed Study- Strategies in Farm Commodity Marketing .....(2 cr)  
 Total 25 Credits

Total 25 Credits

GRADUATION REQUIREMENT 25 CREDITS

## Applications in Farm Business Management Certificate

Required Courses

FBMT 2141 Interpreting and Evaluating Financial Data .....(4 cr)  
 FBMT 2142 Interpreting Trends in Business Planning .....(4 cr)  
 FBMT 2151 Strategies in Farm System Data Management .(4 cr)

FBMT 2152 Integrating System Information for Financial Planning .....(4 cr)  
 FBMT 2161 Examination of the Context of Farm System Management .....(4 cr)  
 FBMT 2162 Refining Farm System Management .....(4 cr)  
 Total 24 Credits

## Electives

Student must choose an additional 6 credits from the Farm Business Management Master Course Listing. Electives can be identified when the second numerical placeholder is a "2". (i.e. FBMT 1211)

Total 6 Credits

GRADUATION REQUIREMENT 30 CREDITS

## Current Issues in Business Management Certificate

Required Courses

FBMA 2210 Current Issues in Farm Business Management .....(1-5 cr)  
 FBMA 2220 Directed Studies - Current Issues in Farm Bus Mgmt .....(1-5 cr)  
 FBMA 2211 Current Issues in Farm Business Management .....(1-5 cr)  
 FBMA 2221 Directed Studies - Current Issues in Farm Bus Mgmt .....(1-5 cr)  
 FBMA 2212 Current Issues in Farm Business Management .....(1-5 cr)  
 FBMA 2222 Directed Studies - Current Issues in Farm Bus Mgmt .....(1-5 cr)  
 Total 18-30 Credits

## Electives

Student must choose up to an additional 12 credits from the Farm Business Management Master Course Listing. Electives can be identified when the second numerical placeholder is a "2". (i.e. FBMA 2223)

Total 0-12 Credits

GRADUATION REQUIREMENT 30 CREDITS

## Essentials of Business Management Certificate

Required Courses

FBMT 1112 Foundations for Farm Business Management ..(4 cr)  
 FBMT 1121 Preparation for Farm Business Analysis .....(4 cr)  
 FBMT 1122 Implementing the System Management Plan ..(4 cr)  
 FBMT 1131 Managing and Modifying Farm System Data... (4 cr)  
 FBMT 1132 Interpreting and Using Farm System Data .....(4 cr)  
 Total 20 Credits

## Electives

Student must choose an additional 10 credits from the

Farm Business Management Master Course Listing. Electives can be identified when the second numerical placeholder is a "2". (i.e. FBMT 1211)  
 Total 10 Credits  
 GRADUATION REQUIREMENT 30 CREDITS

## Specialty Crops Management Diploma

Required Courses

SCMT 1110 System Goal Setting .....(1 cr)  
 SCMT 1111 Introduction to Specialty Crops .....(2 cr)  
 SCMT 1112 Intro to Financial Planning and Analysis .....(2 cr)  
 SCMT 1114 Marketing of Specialty Crops .....(2 cr)  
 SCMT 1116 Introduction to Soils and Plant Growth .....(2 cr)  
 SCMT 1117 Pest Identification and Control .....(2 cr)  
 SCMT 1119 Pesticide Safety and Handling .....(2 cr)  
 SCMT 1121 Fertilizer Selection, Handling and Application ..(2 cr)  
 SCMT 1124 Irrigation Planning and Management .....(2 cr)  
 SCMT 1135 Labor, Risk and Tax Management .....(2 cr)  
 SCMT 2125 Advertising and Customer Relations .....(2 cr)  
 SCMT 2127 Advanced Financial Planning and Analysis .....(2 cr)  
 SCMT 2131 Advanced Soils and Plant Nutrition .....(2 cr)  
 SCMT 2132 Advanced Marketing Strategies .....(2 cr)  
 SCMT 2136 Advanced Pest Identification and Control .....(2 cr)  
 SCMT 2000 Special Topics – Soil Management .....(1 cr)  
 SCMT 2200 Current Issues in Specialty Crop Marketing ....(1 cr)  
 SCMT 2234 Value Added Opp. for Specialty Crops.....(2 cr)  
 Total Required Courses 33 credits

## Electives

Choose 11 additional credits from SCMT-prefixed courses  
 Total Elective Courses 11 credits

GRADUATION REQUIREMENT 44 CREDITS

# AGRICULTURE SCIENCE A.S. DEGREE

## Program Information

The Agricultural Science degree is intended to be a broad-based curriculum leading to a 4-year degree in agriculture & agricultural education, food science, horticulture, and natural resources.

## Career Description

Students completing and transferring the Agricultural Science A.S. to a 4 year institution will have the opportunity to graduate with a degree related to agriculture or agricultural education, food science, horticulture or natural resources. The career description could include: wildlife and ecosystem management and consulting, greenhouse management and crop production, soil monitoring and consulting, agricultural education for producers, schools and the general public, animal science research, management of crop or animal production facilities, food safety research and inspection, technical and regulatory work within the USDA, Board of Animal Health or state Department of Agriculture, and agricultural finance and consulting.

## Special Program Requirements

Students must meet the following conditions in order to graduate:

- College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted at CLC must be at least 2.0;
- College Technical Core GPA Requirement: cumulative GPA of credits attempted towards the technical core of the diploma or degree must be at least 2.0; and
- Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Career Opportunities: According to the Bureau of Labor and Statistics Occupational Outlook Handbook, employment of agriculture and food scientists is expected to grow 9% from 2012 to 2022 and these scientists should have good job prospects overall. Nationally, according to the USDA, we will need approximately 33,000 graduates in agriculture over the next five years in excess of current projected supply. In 2015, USA Today listed agriculture as the #5 career opportunity field in the nation.

## Program Outcomes

Graduates will be able to:

- Develop as writers and speakers who use the English language effectively and who read, write, think, speak, and listen critically;
- Develop capacity to identify, discuss and reflect upon social, cultural, ethical, behavioral and environmental issues;
- Demonstrate comprehension of basic principles of

chemistry or physics and biological systems;

- Increase their knowledge of and ability to employ mathematical techniques and strategies to solve problems, manage accounts or analyze data;
- Demonstrate comprehension of how markets, prices, demand, profit maximization and other factors of production affect economic behavior of individual units of an economy;
- Increase their knowledge and understanding of techniques and practices utilized in the fields of agriculture, natural resources or horticulture; and
- Increase their awareness and understanding of careers available in the fields of agriculture, natural resources or horticulture.

Transfer Opportunities: Southwest Minnesota State University – 2 articulations pending Bemidji State University – articulation pending U of Minnesota Crookston – articulation pending U of Minnesota – Twin Cities North Dakota State University South Dakota State University

## Program Course Requirements

### Required Technical Courses

Students will select one group of courses in one of the following interest areas:

ANSI 1100 Introduction to Animal Science .....(4 cr)  
 ANSI 1110 Food Safety: From Farm to Fork .....(3 cr)  
 HORT 1106 Applied Plant Science Lab OR NATR 1280 Introduction to GPS & GIS .....(2 cr)  
 Total – 9 credits

HORT 1104 Plant Science .....(4 cr)  
 HORT 1106 Applied Plant Science Lab .....(2 cr)  
 NATR 1100 Introduction to Natural Resources .....(3 cr)  
 Total – 9 credits

NATR 1112 Land Measurement..... (3 cr)  
 NATR 1115 Plant Taxonomy..... (2 cr)  
 NATR 1280 Introduction to GPS & GIS .....(2 cr)  
 NATR 2170 Advanced GPS & GIS .....(2 cr)  
 Total – 9 credits

ANSI 1100 Introduction to Animal Science .....(4 cr)  
 NATR 2155 Soil Science .....(3 cr)  
 HORT 1106 Applied Plant Science Lab OR NATR 1115 Plant Taxonomy OR NATR 1280 Introduction to GPS & GIS .....(2 cr)  
 Total – 9 credits

### Required General Education

BIOL 1431 General Biology (Goal 3) .....(5 cr)  
 COMM 1430 Public Speaking (Goals 1 and 2) .....(3 cr)  
 COMM 2420 Intercultural Communication (Goals 1 and 7). (3 cr)  
 ECON 2402 Microeconomics (Goal 5)..... (3 cr)  
 MATH 1470 College Algebra (Goal 4) .....(3 cr)  
 PHIL 1421 Critical Thinking (Goal 2) OR PHIL 1421 Honors Critical Thinking (Goals 1 and 2) (3 cr)  
 Total – 20 credits  
 CHEM 1414 Fundamentals of Chemistry OR CHEM 1407 Life Science Chemistry OR PHYS 1401 College Physics I (Goal 3) (4 cr)  
 Total – 4 credits

ENGL 1410 Composition I OR ENGL 1420 Honors Composition I .....(4 cr)  
 Total – 4 credits  
 ENGL 1411 Composition II OR ENGL 1421 Honors Composition II (Goal 1) .....(4 cr)  
 Total – 4 credits  
 MATH 1460 Introduction to Statics (Goal 4) OR ACCT 2011 Principals of Accounting I .....(4 cr)  
 Total – 4 credits

# ENOLOGY A.A.S. Degree

## Program Information

The program provides the knowledge required to produce wines of the highest quality. Students learn the science, agriculture, and business skills necessary to enhance Minnesota's rapidly growing wine industry. Included is a foundation in chemistry and biology along with specific courses related to cultivar selection, soil preparation, cellar maintenance and marketing. The program is specifically designed to include fieldwork and laboratory practicums at local wineries.

## Career Description

Enologists oversee the production of wine. They inspect grapes and evaluate the crops to determine when to harvest and start wine production. They ensure proper crushing methods and techniques. Responsibilities depend on the size of the winery. The enologist is heavily involved in quality control. One may work with a laboratory technician if employed by a larger winery. Another may develop new wines or specialize in a specific wine in a larger winery.

## Program Outcomes

Graduates will be able to:

- Examine grape samples to ascertain sweetness and acidity of crop, and determine harvest time based off of this information;
- Select yeasts for fermentation and barrels for aging;
- Communicate with vineyard manager regarding crop load, harvest time, and other issues related to crop quality;
- Correct sugar and acid levels of must and wine if necessary;
- Oversee primary fermentation by punching down the grape skin cap, regulating fermentation temperature and the amount of time the skins are in contact with the must, and initiating malolactic fermentation;
- Supervise workers in crushing and pressing processes, or perform those duties themselves;
- Supervise cellar operations during secondary fermentation with tasks such as aging, topping off barrels, and clearing wine of fermentation residue;
- Direct and coordinate blending and bottling of wine, or perform those duties themselves.

## Transfer Opportunities

Viticulture and Enology Science and Technology Alliance (VESTA) is a consortium of colleges, including Central Lakes College, Northeast Iowa Community College, Missouri State University, Rend Lake (Ill.) Community College, and Redlands (Okla) Community College. VESTA Consortium.

## Career Opportunities

Job opportunities in enology are tied to trends in the wine industry. Growing grapes in Minnesota is becoming increasingly popular. In 1975, Minnesota had two wineries. By 2007 there were 26. The Minnesota Department of Agriculture reports an increase in both the number of farms growing grapes and total acreage. Employment opportunities are available locally, regionally and nationwide.

## Career Titles

Winemaker, winemaking director, assistant winemaker, cellar master, cellar worker 2, enologist, lab technician, lab manager, tasting room manager.

## Enology A.A.S. Curriculum

### Program Course Requirements

#### First Year – Fall Semester

COMP 1101 Computer Fundamentals .....	(3 cr)
BIOL 1431 General Biology I .....	(5 cr)
MATH 1506 Beginning College Algebra .....	(4 cr)
VITI 1146 Introduction to Enology .....	(3 cr)
<b>Total – 15 Credits</b>	

#### Spring Semester

CHEM 1414 Fundamentals of Chemistry.....	(4 cr)
SPCH 1431 Fundamentals of Public Speaking .....	(3 cr)
VITI 1148* Winery Sanitation .....	(3 cr)
VITI 1160* Winery Equipment Operation .....	(2 cr)
VITI 1210 Introduction to Wine Microorganisms .....	(3 cr)
<b>Total – 15 Credits</b>	

#### Second Year – Fall Semester

BIOL 2457* Microbiology .....	(4 cr)
ENGL 1410 Composition I.....	(4 cr)
POLS 1435 American Government and Politics .....	(3 cr)
VITI 1246* Intermediate Enology .....	(3 cr)
<b>Total – 14 Credits</b>	

#### Spring Semester

BUSN 1166 Business Communication .....	(3 cr)
VITI 1259* Cellar Operations Technology.....	(2 cr)
VITI 1266* Sensory Evaluation .....	(3 cr)
VITI 1268* Wine and Must Analysis .....	(3 cr)
Elective .....	(2 cr)
<b>Total – 13 Credits</b>	

#### Third Year – Fall Semester

VITI 1257* Fall Wine Production Internship.....	(3 cr)
<b>Total 3 Credits</b>	
<b>GRADUATION REQUIREMENT 60 CREDITS</b>	
*Denotes Prerequisites	

## Enology Diploma Curriculum

### Program Course Requirements

#### First Year – Fall Semester

CHEM 1414 Fundamentals of Chemistry .....	(4 cr)
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VITI 1146 Introduction to Enology .....	(3 cr)
VITI 1210 Introduction to Wine Microorganisms .....	(3 cr)
Elective.....	(2 cr)
<b>Total 12 Credits</b>	

#### Spring Semester

VITI 1148* Winery Sanitation .....	(3 cr)
VITI 1160* Winery Equipment Operation .....	(2 cr)
VITI 1246* Intermediate Enology .....	(3 cr)
VITI 1259* Cellar Operations Technology .....	(2 cr)
VITI 1266* Sensory Evaluation .....	(3 cr)
VITI 1268* Wine and Must Analysis .....	(3 cr)
<b>Total – 16 Credits</b>	

#### Second Year – Fall Semester

VITI 1257* Fall Wine Production Internship .....	(3 cr)
<b>Total – 3 Credits</b>	

**GRADUATION REQUIREMENT 31 CREDITS**

\*Denotes Prerequisites

# ENVIRONMENTAL STUDIES CERTIFICATE

## Program Information

Environmental Studies is the interdisciplinary field of study concerned with problems in the relationship between humanity, society, and the natural environment. Of particular concern is the impact of technology on the natural environment and its implications for human welfare. Courses are designed to enrich students' knowledge of biological, physical and social aspects of the environment and their awareness of environment related issues.

## Special Program Requirements

In addition to the program requirements listed, students must meet the following conditions in order to graduate:

- College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0
- Residency Requirement: students must complete one third (5) of their credits at Central Lakes College.

## Environmental Studies Certificate

Course Requirements

Choose 15 credits from the following:

- BIOL 1415 Environmental Biology .....(3 cr)
- BIOL 2415 General Ecology .....(4 cr)
- CHEM 1410 Environmental Chemistry .....(3 cr)
- ENVR 1400 Intro to Environmental Studies .....(3 cr)
- ESCI 1444 Natural Disasters .....(3 cr)
- ESCI 1451 Oceanography .....(3 cr)
- ESCI 1452 Oceanography Lab.....(1 cr)
- ESCI 1454 Earth Science and the Environment ....(4 cr)
- SOCL 2422 Culture and Environment .....(3 cr)
- GRADUATION REQUIREMENT 15 CREDITS

# FLORAL DESIGN DIPLOMA

## Career Description

Floral designers provide a variety of products and services to the public. Products include floral arrangements for all occasions, blooming and foliage plants, and accessory gift items. Services include the care of plants and flowers, interior decorating, and providing consultation for weddings and other special occasion. People who enjoy art, working with and serving others, as well as those who enjoy growing and working with living plants and flowers will benefit from the Floral Design Program.

## Program Information

The Floral Design Program prepares students for a wide variety of challenging and profitable careers. Students will learn to design traditional and contemporary flower arrangements; work with fresh, silk, and dried flowers; and identify and care for flowering plants, foliage plants, and fresh flowers and greens.

## Program Outcomes

Graduates will be able to:

- Identify and practice safe use of tools, equipment and supplies used in horticulture careers;
- Identify regional and Minnesota plants by common name, genus and species;
- Identify and prescribe sustainable options in horticulture which benefit the environment while maintaining productivity and economic viability;
- Design and apply principles of design and color theory to create floral arrangements used in retail floral trade such as wedding decor, sympathy tributes, window display, permanent botanicals and event designs;
- Apply effective communication and interpersonal skills with co-workers, supervisors, suppliers and customers.

## Admissions

The Floral Design Program is offered as a full-time day program. Because of the sequencing of courses, it is best to begin this program Fall semester.

## Transfer Opportunities

Many horticulture courses can be transferred to a variety of four-year colleges and universities. Because each college has its own requirements, always check with an advisor or counselor about transferability of specific courses to these other colleges.

## Career Opportunities

Job opportunities include employment in retail flower shops, wholesale floral supply companies, and interior landscaping firms.

## Career Titles

This program will help students prepare for a wide range of careers, including floral designer, flower shop sales, wholesale flower sales, flower broker, flower shop owner/manager, plant rental, interior plant maintenance, free-lance designer, and floral supply representative.

## Floral Design Diploma

Course Requirements

Fall Semester

- HORT 1104 Plant Science .....(4 cr)
- HORT 1106 Applied Plant Science Lab .....(2 cr)
- HORT 1108 Fundamentals of Floral Design .....(4 cr)
- HORT 2112 Sustainable Greenhouse Production .....(5 cr)
- Electives .....(1 cr)
- Total 16 Credits

Spring Semester

- HORT 1110\* Advanced Floral Design .....(4 cr)
- HORT 1118 Indoor Flowering & Foliage Plants .....(4 cr)
- HORT 2125\* Special Occasion/Wedding Design .....(4 cr)
- Electives .....(4 cr)
- Total 16 Credits

GRADUATION REQUIREMENT 32 CREDITS

\*Denotes Prerequisites

# HORTICULTURE A.A.S. DEGREE

## Program Information

The A.A.S. in Horticulture covers a broad spectrum of the horticulture industry. Most students who receive their A.A.S. in Horticulture also select one (or two) of the diploma programs of interest to them. Students may select topics from landscaping, greenhouse production, and/or floral design to meet the technical elective requirement of this program.

## Career Description

An Associate of Applied Science (A.A.S.) in Horticulture is the gateway to a wide variety of careers in the huge and ever-growing horticulture industry. Depending on the emphasis chosen by the graduate, ornamental and edible plant production, greenhouse production, landscaping, floriculture and golf course maintenance are all occupations that are available to a graduate in this field.

## Program Outcomes

Graduates will be able to:

- Identify and practice safe use of tools, equipment and supplies used in horticulture careers;
- Identify regional and Minnesota plants by common name, genus and species;
- Propagate, grow, and maintain plants in horticultural production systems;
- Identify and prescribe sustainable options in horticulture which benefit the environment while maintaining productivity and economic viability;
- Design, construct and install plants for landscape projects;
- Apply effective communication and interpersonal skills with co-workers, supervisors, suppliers and customers.

## Admissions

The Horticulture Program is offered as a full-time day program. Because of the sequencing of courses, it is best to begin this program Fall semester. However, many students begin in the spring and successfully complete the degree.

## Transfer Opportunities

Articulation agreements are currently in place with the University of Minnesota. You may attend your first two years of college at Central Lakes College and transfer your credits to further your degree in Agricultural Education or Horticulture at the University of Minnesota Twin Cities or Crookston Campuses. Courses can also be transferred to many other four-year colleges such as North Dakota State University. It is important to check with advisors or counselors about transferability to these or other colleges before your first semester to take full advantage of current agreements.

## Career Opportunities

Employment opportunities can be found in greenhouse production, landscaping, floral design, and sales, as well as horticulture therapy, interior plantscaping, and plant and flower brokering.

## Career Titles

Careers available are largely dependent on your goals. It is best to discuss your goals with a counselor for proper course selection. Some common career titles in this field include landscape designer, landscape salesperson, landscape installation foreman, propagator, plant consultant, greenhouse supply representative, pest control coordinator, landscape business owner/manager, and lawn maintenance business owner/manager. Other career areas include ornamental plant pest control, irrigation/sprinkler installation foreman, nursery/garden center sales, wholesale nursery sales, nursery supply sales, floral design, flower shop sales, wholesale flower sales, flower broker, interior plant rental, interior plant maintenance, and free-lance design.

## Horticulture A.A.S. Curriculum

### First Year – Fall Semester

HORT 1104 Plant Science.....	(4 cr)
HORT 1106 Applied Plant Science Lab.....	(2 cr)
HORT 2112 Sustainable Greenhouse Production.....	(5 cr)
Choose one (1) course from the following:	
HORT 1108 Fundamentals of Floral Design.....	(4 cr)
HORT 1110 Advanced Floral Design.....	(4 cr)
HORT 2125 Special Occasion/Wedding Design.....	(4 cr)
<b>Total 15 Credits</b>	

### Spring Semester

HORT 1196 Sustainable Greenhouse Management.....	(4 cr)
HORT 1180 Sustainable Landscaping.....	(3 cr)
Choose additional HORT course.....	(3 cr)
General Education.....	(6 cr)
<b>Total 16 Credits</b>	

### Second Year – Fall Semester

HORT 1113 Annuals and Perennials.....	(4 cr)
HORT 2140 Arboriculture.....	(4 cr)
HORT 2165 Landscape Design.....	(4 cr)
General Education.....	(3 cr)
<b>Total 15 Credits</b>	

### Spring Semester

HORT 1118 Indoor Flowering & Foliage Plants.....	(4 cr)
HORT 2116 Integrated Pest Management.....	(4 cr)
General Education.....	(6 cr)
<b>Total 14 Credits</b>	
<b>GRADUATION REQUIREMENT 60 CREDITS</b>	

\* Denotes Prerequisites

# LANDSCAPE TECHNOLOGY DIPLOMA

## Program Information

This two-year Landscape Technology Diploma Program provides students with a broad knowledge of the landscaping profession through real life situations in a practical, hands-on atmosphere. The courses are designed to provide knowledge for all phases of a landscape project. This knowledge includes in-depth information about the plants and products used in the landscaping industry, proper landscape design principles, up-to-date installation and construction practices, and procedures for estimating and bidding landscape projects.

## Career Description

Landscape technology graduates find careers in a variety of positions related to landscape design, landscape construction, landscape installation, golf course maintenance, and nursery production. The demand for qualified individuals with good skills and work habits is very high. People who enjoy creating beautiful surroundings, working outside, and improving the environment will benefit from the Landscape Technology Program.

## Program Outcomes

Graduates will be able to:

- Identify and practice safe use of tools, equipment and supplies used in horticulture careers;
- Identify regional and Minnesota plants by common name, genus and species;
- Propagate, grow, and maintain plants in horticultural production systems;
- Identify and prescribe sustainable options in horticulture which benefit the environment while maintaining productivity and economic viability;
- Design, construct and install landscape projects which include plants, patios, retaining walls and ponds;
- Apply effective communication and interpersonal skills with co-workers, supervisors, suppliers and customers.

## Admissions

The Landscape Technology Program is offered as a full-time day program. Because of the sequencing of courses, it is best to begin this program Fall semester.

## Transfer Opportunities

Many horticulture courses can be transferred to a variety of four-year colleges and universities. Because each college has its own requirements, always check with an advisor or counselor about transferability of specific courses to other colleges.

## Career Opportunities

Job opportunities include landscape design, construction, and installation, garden center sales and positions

in the greenhouse and nursery industry.

## Career Titles

Some common career titles for people in this field are landscape designer, landscape salesperson, landscape installation foreman, landscape business owner/manager, lawn maintenance business owner/manager, ornamental plant pest control, irrigation/sprinkler installation, nursery/garden center sales, wholesale nursery sales and nursery supply sales.

## Landscape Technology Diploma

### First Year – Fall Semester

HORT 1104 Plant Science.....	(4 cr)
HORT 1106 Applied Plant Science Lab.....	(2 cr)
HORT 2165 Landscape Design.....	(4 cr)
NATR 1120 Dendrology.....	(3 cr)
HORT 2150 Retaining Wall Construction.....	(3 cr)
or HORT 2155 Deck, Patio, and Pond Construction.....	(4 cr)
<b>Total 16 Credits</b>	

### First Year – Spring Semester

HORT 1103* Ornamental Trees and Shrubs.....	(4 cr)
HORT 1180 Sustainable Landscaping.....	(3 cr)
HORT 1196 Sustainable Greenhouse Management.....	(4 cr)
HORT 2180* Computer Assisted Landscape Design.....	(4 cr)
<b>Total 15 Credits</b>	

### Second Year – Fall Semester

HORT 1113 Annuals and Perennials.....	(4 cr)
HORT 2140 Arboriculture.....	(4 cr)
General Education.....	(4 cr)
HORT 2150 Retaining Wall Construction.....	(3 cr)
or HORT 2155 Deck, Patio, and Pond Construction.....	(4 cr)
<b>Total 16 Credits</b>	

### Second Year – Spring Semester

HORT 1150 Turf Management.....	(3 cr)
HORT 2116 Integrated Pest Management.....	(4 cr)
HORT 2170* Advanced Landscape Design.....	(4 cr)
General Education.....	(2 cr)
Elective.....	(2 cr)
<b>Total 15 Credits</b>	

**GRADUATION REQUIREMENT 62 CREDITS**

\* Denotes Prerequisites

# NATURAL RESOURCES TECH A.A.S. DEG.

## Program Information

The Natural Resource Program prepares students for work in the natural resource field by providing a well-rounded background of course work and the opportunity to work with specialists in the field through internships. Credits can be transferred to a four-year college with which we have special transfer agreements, including the University of Minnesota at Crookston and the University of Wisconsin at Stevens Point.

## Career Description

People in the natural resource field often become involved with issues like biodiversity, environmental pollution, endangered species, and the future quality of human life. To prepare for this field, students will gain the skills needed for assessing, implementing and evaluating land and water practices as part of an integrated wildlife program. Graduates in natural resources use their knowledge and develop skills in forestry, fisheries, wildlife, and parks and recreation. They have learned the identification of organisms, methods for collecting data, and resource management principles.

## Program Outcomes

Graduates will be able to:

- Demonstrate field identification of regionally important plants, mammals, birds and fish and their communities;
- Use a broad range of technological tools to research, document, map, measure, record and analyze data relevant to natural resources;
- Interpret how ecological relationships influence plants, mammals, birds and fish distribution, succession and biodiversity in ecosystems;
- Analyze land characteristics and create land management plans;
- Communicate in oral and written forms with supervisors, peers, area visitors and natural resource agencies;
- Navigate and safely function in an outdoor workplace.

## Special Program Requirements

This is generally an outdoor program with some physical activity, such as walking, hiking, and working in forests and streams. Most of our equipment is light, but fire training certification to fight fires requires a 3 mile walk with a 45 pound pack in 45 minutes. In order to graduate from the Natural Resources Program, students must earn a cumulative GPA of 2.0 in the credits attempted and completed towards the technical core of the degree.

## Accreditation

We are part of the Minnesota State Colleges and University System and accredited by the Higher Learning

Commission.

## Transfer Opportunities

Students have the opportunity to transfer to colleges like University of Wisconsin at Stevens Point, WI and the University of Minnesota at Crookston, MN with this degree.

## Career Opportunities

Employment opportunities include seasonal and part-time work and internships while in school. The best opportunities for full-time work will require a bachelor's degree from a four-year university in one of the natural resource areas or from a more holistic natural resource management degree.

## Career Titles

This program will help students prepare for a wide range of careers, including the following: forester, forestry technician, wildlife manager, wildlife technician, fisheries manager, fisheries technician, parks manager, parks technician, naturalist, hydrologist, soils scientist, non-game wildlife personnel, natural resource conservation personnel, biologist, and plant taxonomist.

## Natural Resources A.A.S. Degree

First Year – Fall Semester

NATR 1112 Land Measurement .....	(3 cr)
NATR 1120 Dendrology .....	(3 cr)
NATR 1115 Plant Taxonomy .....	(2 cr)
NATR 1200 Introduction to Natural Resources .....	(3 cr)
NATR 1280 Introduction to GPS & GIS (Arc View) .....	(2 cr)
<b>Total 13 Credits</b>	

First Year – Spring Semester

NATR 1130 Mammalogy .....	(3 cr)
NATR 1135 Ornithology .....	(3 cr)
NATR 1140 Limnology.....	(3 cr)
NATR 1125 Ichthyology .....	(3 cr)
NATR 2170 Advanced GPS & GIS .....	(2 cr)
BIOL 2416 General Ecology .....	(4 cr)
<b>Total 18 Credits</b>	

Second Year – Fall Semester

NATR 2120* Wetland Ecology .....	(3 cr)
NATR 2130* Wildlife Management .....	(3 cr)
NATR 2155 Soil Science .....	(3 cr)
General Education.....	(7 cr)
<b>Total 16 Credits</b>	

Second Year – Spring Semester

NATR 2110 Herpetology .....	(2 cr)
NATR 2140* Fisheries Management.....	(3 cr)
NATR 2161* Ecosystem Management .....	(2 cr)
NATR 2201 Intro to Parks & Interpretation .....	(2 cr)
NATR 2235* Silviculture & Forest Management .....	(3 cr)
General Education .....	(4 cr)
<b>Total 16 Credits</b>	

GRADUATION REQUIREMENT 63 CREDITS

\*Denotes Prerequisites

## Wildlife Tourism Certificate

Required Courses:

NATR 1130 Mammalogy .....	(3 cr)
NATR 1135 Ornithology .....	(3 cr)
NATR 1360 Animal Behavior.....	(3 cr)
NATR 2110 Herpetology .....	(2 cr)
NATR 2130 Wildlife Management .....	(3 cr)
NATR 2201 Intro to Parks & Interpretation.....	(2 cr)
Choose one (1) of the following:	
SPCH 1410 Introduction to Communication Studies .....	(3 cr)
SPCH 1421 Interpersonal Communications .....	(3 cr)
SPCH 1431 Fundamentals of Public Speaking .....	(3 cr)
<b>Total 19 Credits</b>	

GRADUATION REQUIREMENT 19 CREDITS

# SUSTAINABLE GREENHOUSE PRODUCTION

## Program Information

Students enrolled in the one-year Sustainable Greenhouse Production Program will learn how to schedule, produce, and care for a wide variety of plants grown commercially in the Upper Midwest as well as how to properly construct and manage a greenhouse production facility. A state-of-the-art greenhouse and laboratory provide the opportunity to learn in real-life situations.

## Career Description

Sustainable greenhouse production graduates help produce a variety of ornamental plants such as bedding plants, holiday plants (Easter Lilies, Poinsettias, etc.), and plants for special occasions. The greenhouse facilities range from small, family run operations to large commercial production greenhouses. The greenhouse industry is quickly becoming a high-tech industry with computers, robotics, and other exciting innovations. People who appreciate natural beauty, enjoy caring for plants and flowers, and have an attention for detail are particularly well suited for this career.

## Program Outcomes

Graduates will be able to:

- Identify and practice safe use of tools, equipment and supplies used in horticulture careers;
- Identify regional and Minnesota plants by common name, genus and species;
- Propagate, grow, and maintain plants in horticultural production systems;
- Identify and prescribe sustainable options in horticulture which benefit the environment while maintaining productivity and economic viability;
- Design greenhouse production structures and systems;
- Apply effective communication and interpersonal skills with co-workers, supervisors, suppliers and customers.

## Admissions

The Sustainable Greenhouse Production Program is offered as a full-time day program. Because of the sequencing of courses, it is best to begin this program Fall semester.

## Transfer Opportunities

Many horticulture courses can be transferred to a variety of four-year colleges and universities. Because each college has its own requirements, always check with an advisor or counselor about transferability of specific courses to these other colleges.

## Career Opportunities

Career opportunities include greenhouse production, plant propagation, greenhouse management and plant brokering.

## Career Titles

This program will help students prepare for a wide range of careers, including greenhouse owner/manager, greenhouse foreman, propagator, pest control, coordinator, plant sales, plant and supply buyer, greenhouse supply, representative, and plant consultant.

## Sustainable Greenhouse Production Diploma

Fall Semester	
HORT 1104 Plant Science .....	(4 cr)
HORT 1106 Applied Plant Science Lab .....	(2 cr)
HORT 1113 Annuals and Perennials.....	(4 cr)
HORT 2112 Sustainable Greenhouse Production .....	(5 cr)
Electives .....	(1 cr)
Total 16 Credits	

Spring Semester	
HORT 1118 Indoor Flowering & Foliage Plants .....	(4 cr)
HORT 1196 Sustainable Greenhouse Management.....	(4 cr)
HORT 2116 Integrated Pest Management.....	(4 cr)
Electives .....	(4 cr)
Total 16 Credits	
GRADUATION REQUIREMENT 32 CREDITS	
*Denotes Prerequisites	

# VITICULTURE

## Program Information

The Viticulture Technology program provides a comprehensive examination of the field of viticulture (grape growing). The program provides the knowledge required to maintain vineyards in Minnesota and the Midwest, with specific attention given to varietal selection, soil preparation, pest management and marketing, as well as the science, agriculture and business skills necessary to succeed in Minnesota's rapidly growing viticulture business. The program includes fieldwork and practicums at local vineyards.

## Career Description

Vineyard managers oversee the growing and care of grapes. They develop a system of grape management that is appropriate for each vineyard. They decide how to manage planting, fertility, harvesting and pruning. They are heavily involved in varietal selection, site preparation, equipment maintenance and safety, first season establishment, vine growth development, trellis systems and pruning.

## Program Outcomes

Graduates will be able to:

- Manage all part-time and seasonal vineyard workers;
- Maintain records of all vineyard operation activities;
- Assist wine maker in crop load management, harvest coordination and execution;
- Monitor the vineyard regarding nutrient status, grape diseases, insect, fungus, weeds, and other pests;
- Maintain records of all viticultural monitoring activities;
- Practice IPM (Integrated Pest Management);
- Recommend and plan any large scale changes in vineyard plantings, specifically cultivars and selection of the site;
- Plan and assist in irrigation scheduling and operation;
- Plan and assist in general property maintenance;
- Operate vineyard machinery safely.

## Transfer Opportunities

Viticulture and Enology Science and Technology Alliance (VESTA) is a consortium of colleges, including Central Lakes College, Northeast Iowa Community College, Missouri State University, and Rend Lake (Ill.) Community College, and Redlands (Okla) Community College.

## Career Opportunities

Job opportunities in vineyard management are tied to trends in grape production. Growing grapes in Minnesota is becoming increasingly popular. Statistics from the Minnesota Department of Agriculture show an increase in both the number of farms growing grapes and the total acreage.

## Viticulture A.A.S. Degree

First Year – Fall Semester	
BIOL 1431 General Biology I .....	(5 cr)
COMP 1101 Computer Fundamentals .....	(3 cr)
MATH 1506 Beginning College Algebra .....	(4 cr)
VITI 1111 Introduction to Viticulture and Vineyard Establishment .....	(3 cr)
Total – 15 Credits	

Spring Semester	
CHEM 1414 Fundamentals of Chemistry .....	(4 cr)
ENGL 1410 Composition I .....	(4 cr)
SPCH 1431 Fundamentals of Public Speaking .....	(3 cr)
VITI 1113* Winter Viticulture Technology.....	(2 cr)
VITI 1293 Soils for Viticulture .....	(3 cr)
Total – 16 Credits	

Summer Semester	
VITI 1115* Summer/Fall Viticulture Technology .....	(2 cr)
Total – 2 Credits	

Second Year – Fall Semester	
BIOL 1134 General Botany .....	(4 cr)
MATH 1460 Intro to Statistics .....	(4 cr)
VITI 1190 Viticulture Safety .....	(1 cr)
VITI 1211 Integrated Pest Management .....	(2 cr)
VITI 1213* Midwest Vineyard Management .....	(2 cr)
Total – 13 Credits	

Spring Semester	
AGR 157 Principles of Agriculture Mechanization.....	(3 cr)
BUSN 116 Business Communication .....	(3 cr)
POLS 1435 American Government and Politics .....	(3 cr)
VITI 1114* Spring Viticulture Technology .....	(2 cr)
Elective .....	(3 cr)
Total – 14 Credits	
GRADUATION REQUIREMENT 60 CREDITS	
*Denotes Prerequisites	

## Viticulture Diploma

First Year – Fall Semester	
BIOL 1134 General Botany .....	(4 cr)
VITI 1111 Introduction to Viticulture and Vineyard Establishment .....	(3 cr)
VITI 1211 Integrated Pest Management .....	(2 cr)
VITI 1293 Soils for Viticulture.....	(3 cr)
VITI 1190 Viticulture Safety .....	(1 cr)
Total – 13 Credits	

Spring Semester	
CHEM 1414 Fundamentals of Chemistry .....	(4 cr)
COMP 1101 Computer Fundamentals (3 cr)	
VITI 1113* Winter Viticulture Technology.....	(2 cr)
VITI 1213* Midwest Vineyard Management .....	(2 cr)
VITI 1114* Spring Viticulture Technology .....	(2 cr)
Elective.....	(3 cr)
Total – 16 Credits	
Summer Semester	
VITI 1115* Summer/Fall Viticulture Technology.....	(2 cr)
Total 2 Credits	
GRADUATION REQUIREMENT – 31 CREDITS	
*Denotes Prerequisite	



# ACCOUNTING

## Program Information

Central Lakes College offers a 60-credit, two-year Accounting Associate in Applied Science (A.A.S.) Degree. The A.A.S. degree prepares students by teaching the analytical and technical skills needed for an accounting or financial management career. Students gain experience recording transactions, preparing and analyzing financial reports, and doing realistic simulations on the most popular accounting computer systems. CLC also offers a one-year Accounting Diploma (32 credits) that includes most courses from the first year of the A.A.S. degree. Graduates of this program will have the background to perform entry-level accounting duties such as accounts payable, accounts receivable or payroll.

## Career Description

Many accountants and accounting technicians work in certified public accounting firms that perform tax and auditing services, but the majority work as management or “private” accountants. Many accountants operate their own businesses. The role of the accounting department has expanded greatly. Accountants and accounting technicians help organizations make informed decisions by preparing and analyzing a variety of financial and non-financial information. They help management safeguard and control the assets of the business and ensure the records of the business comply with applicable laws. Accounting staff are critical in the fight to cut waste and fraud, and “forensic accountants” work directly with law enforcement to keep financial systems clean. Accountants use special accounting and finance software, and in small businesses, the accountant is often the computer expert.

## Program Outcomes

Graduates will be able to:

- Complete the accounting cycle, and prepare classified general purpose financial statements in good form
- Possess the tools needed to analyze financial and business information that support planning and decision making
- Apply accounting principles to business transactions in both a manual and a computerized environment
- Demonstrate a fundamental understanding of employment laws, earnings calculations, payroll tax compliance, and records maintenance
- Prepare federal and state individual tax forms with accompanying schedules in proper form
- Measure and prepare financial and non-financial information used to support strategic management and internal decision making
- Apply ethical principles in decision making
- Demonstrate effective communication skills

## Certifications

**Certified Bookkeeper:** A Certified Bookkeeper exam is offered by the American Institute of Professional Bookkeepers. This exam covers normal accounting practices of the typical business. This exam can be taken after a 2-year Accounting Degree. **Fundamental Payroll Certification (FPC)** and **Certified Payroll Professional (CPP):** The FPC and CPP are two payroll certifications that 2-year degree accounting students can pursue. The FPC has no experience requirement. The CPP exam’s minimum employment requirement ranges from 18 months to 3 years depending on which eligibility criteria option is chosen. Graduates achieving these certifications often gain an edge over other applicants during the hiring process and advance more quickly along their career paths. The State of Minnesota offers 2 levels of licensure for Accountants. **Registered Accounting Practitioner: The (RAP)** certification requires a 2-year Accounting Degree and authorizes the licensee to perform but not supervise all accounting services on a formal audit. **Certified Public Accountant: The (CPA)** license requires 5 years of college education (130 semester credits). CPA’s are authorized to perform all accounting services and can supervise audits.

## Admissions

The two-year accounting degree is offered as a full-time day program. If desired, 100% of the two-year degree can be obtained through a combination of online and hybrid courses.

## Transfer Opportunities

All students planning to pursue a bachelor’s degree in accounting are strongly encouraged to consult with the Accounting Faculty about transfer opportunities and with the Advising Department about transfer information for specific four-year colleges. There are several colleges that have committed to articulation agreements and accept Central Lakes College’s ACCT courses. The A.A.S. two-year degree in accounting is not generally intended for transfer. Associate of Applied Science graduates often go directly to work.

## A.A.S. Curriculum

First Year – Fall Semester

ACCT 2011 Accounting Principles I .....	(4 cr)
ACCT 2114 Payroll Accounting .....	(3 cr)
BUSN 1131 Business Math .....	(3 cr)
General Education .....	(4 cr)
<b>Total 14 Credits</b>	

Spring Semester

ACCT 2012* Accounting Principles II .....	(4 cr)
ACCT 2138* Computerized Accounting Software .....	(3 cr)
ACCT 2140 Accounting Applications .....	(3 cr)

Additional Related Course Credits .....	(3 cr)
General Education .....	(3 cr)
<b>Total 16 Credits</b>	

Second Year – Fall Semester

ACCT 2121* Intermediate Accounting I .....	(4 cr)
ACCT 2161* Cost Accounting I .....	(3 cr)
ACCT 2165* Income Tax .....	(4 cr)
General Education .....	(5 cr)
<b>Total 16 Credits</b>	

Spring Semester

ACCT 2123* Intermediate Accounting II .....	(4 cr)
ACCT 2137* Accounting for Governmental and Not-for-Profit Entities .....	(3 cr)
ACCT 2170* Federal & State Tax Updates Using Software (1 cr)	
BUSN 1166 Business Communications .....	(3 cr)
General Education .....	(3 cr)
<b>Total 14 Credits</b>	

GRADUATION REQUIREMENT – 60 CREDITS

\*Denotes Prerequisites

## Diploma Curriculum

Fall Semester

ACCT 2011 Accounting Principles I .....	(4 cr)
ACCT 2111 Accounting Principles I Lab .....	(1 cr)
ACCT 2114 Payroll Accounting .....	(3 cr)
BUSN 1131 Business Math .....	(3 cr)
BUSN 2541 Legal Environment of Business .....	(3 cr)
COMP 1120 Intro to Computer Applications .....	(3 cr)
<b>Total 17 Credits</b>	

Spring Semester

ACCT 2012* Accounting Principles II .....	(4 cr)
ACCT 2112 Accounting Principles II Lab .....	(1 cr)
ACCT 2138* Computerized Accounting Software .....	(4 cr)
ACCT 2140 Accounting Applications .....	(3 cr)
BUSN 1166 Business Communications .....	(3 cr)
<b>Total 15 Credits</b>	

GRADUATION REQUIREMENT 32 CREDITS

\*Denotes Prerequisites

## Bookkeeping Certificate Curriculum

Fall Semester

ACCT 2011 Accounting Principles I .....	(4 cr)
ACCT 2114* Payroll Accounting .....	(3 cr)
BUSN 1131 Business Math .....	(3 cr)
<b>Fall Semester Total 11 credits</b>	

Spring Semester

ACCT 2012* Accounting Principles II .....	(4 cr)
ACCT 2140 Accounting Applications .....	(3 cr)
ACCT 2138* Computerized Accounting Software .....	(3 cr)
<b>Spring Semester Total 9 credits</b>	

GRADUATION REQUIREMENT 20 CREDITS

\*Denotes Prerequisites

# ADMINISTRATIVE ASSISTANT

## Program Information

The Administrative Assistant Associate in Applied Science (A.A.S) Degree program prepares graduates by introducing them to a wide variety of subjects that will prepare them to manage and organize themselves and their workplace environment. In addition this program prepares the student to acquire comprehensive skills and assume responsibilities in the workplace. Students will have advanced training with computer technology that will prepare the student for the constantly changing and increasingly automated business environment. The A.A.S. degree combines expert technical and business instruction with a well-balanced academic background. The program will prepare the student in skill sets such as computer applications, communication, teamwork and collaboration, customer focus, problem-solving and critical thinking, professionalism, productivity, ethics, and leadership along with business qualities. Students are also prepared to train and supervise lower-level support staff. The 33-credit Administrative Support diploma prepares students for support staff positions position such as a receptionist or other office or clerical jobs.

## Career Description

Administrative assistants perform a variety of administrative tasks in support of managers and others in an organization including duties once reserved solely for managers. Successful administrative assistants must be highly organized and possess excellent computer, writing and communication skills. Knowledge of a variety of office equipment and 21st century office procedures is vital. Administrative assistants may perform research, create spreadsheets, compose correspondence, manage databases, generate reports, and create presentations. Various positions may also require handling travel arrangements, maintaining inventories and planning and scheduling meetings and appointments. Administrative assistants will also manage electronic and paper communications and files.

## Program Outcomes:

Graduates will be able to:

- Apply the principles of grammar, punctuation, spelling and vocabulary.
- Apply computer skills efficiently and accurately to office tasks using a variety of computer application programs.
- Conduct research and electronically retrieve information.
- Demonstrate effective interpersonal and human relations skills in a business environment in order to lead and complete individual and team projects.
- Perform appropriate office procedures as related to records information management, electronic communi-

cations, and mail management.

- Demonstrate critical-thinking, organization, prioritization and problem-solving skills.
- Identify unethical workplace behaviors and steps for working ethically and professionally.

## Certification

This program would help prepare students for the Microsoft Office Specialist (MOS) certificates Microsoft Word, Excel, Powerpoint, Outlook and Access. Other certifications and memberships are available, including those through the International Association of Administrative Professionals (IAAP).

## Admissions

The program is offered on the Brainerd Campus, but a portion of the courses can be completed online.

## Career Opportunities

Administrative Assistants are employed in organizations of every type, but most are employed in service providing industries ranging from education and health care to government and retail trade. Others may work in firms engaged in manufacturing or construction.

## Career Titles

Administrative Assistant, Executive Assistant, Office Assistant, Secretary, Administrative Clerk, Receptionists, Human Resource Assistants.

## Administrative Assistant A.A.S

First Year - Fall Semester

BUSN 1131 Business Math .....	(3 cr)
COMP 1109 Introduction to Operating Systems.....	(3 cr)
COMP 1131 Microsoft Word Comprehensive .....	(4 cr)
COMP 1135 Microsoft Excel Comprehensive .....	(4 cr)
Fall Semester Total 14 Credits	

Spring Semester

ADMN 1120 Administrative Support Applications.....	(3 cr)
ADMN 1125 Business English Skills .....	(3 cr)
ADMN 1156 Championship Keyboarding .....	(3 cr)
BUSN 1166 Business Communications .....	(3 cr)
COMP 1133 Microsoft PowerPoint Comprehensive .....	(3 cr)
COMP 1134 Microsoft Outlook Comprehensive .....	(1 cr)
Spring Semester Total 16 Credits	

Second Year - Fall Semester

BUSN 1102 Accounting for Non-accountants .....	(3 cr)
MGMT 1110 Frontline Leadership.....	(3 cr)
General Education .....	(9 cr)
Fall Semester Total 15 Credits	

Spring Semester

ADMN 2110 Administrative Assistant Capstone (3 cr) or ADMN 2150 Internship .....	(3 cr)
MGMT 1114 Human Resource Management .....	(3 cr)

MKTG 1162 Customer Relations .....	(3 cr)
General Education.....	(6 cr)
Spring Semester Total 15 Credits	
GRADUATION REQUIREMENT 60 CREDITS	

## Administrative Support Diploma

Fall Semester

BUSN 1102 Accounting for Non-accountants .....	(3 cr)
BUSN 1131 Business Math .....	(3 cr)
COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1131 Microsoft Word Comprehensive .....	(4 cr)
COMP 1135 Microsoft Excel Comprehensive .....	(4 cr)
Total 17 Credits	

Spring Semester

ADMN 1120* Administrative Support Applications .....	(3 cr)
ADMN 1125* Business English Skills .....	(3 cr)
ADMN 1156 Championship Keyboarding .....	(3 cr)
BUSN 1166 Business Communications.....	(3 cr)
COMP 1134 Microsoft Outlook Comprehensive .....	(1 cr)
MKTG 1162 Customer Relations .....	(3 cr)
Total 16 Credits	

GRADUATION REQUIREMENT 33 CREDITS

\*Denotes Prerequisite

# BUSINESS MANAGEMENT A.A.S DEGREE

## Program Information

Business management degrees continue to lead the nation as the number one choice of study in higher education. Students in the Associate of Applied Science Business Management Program receive hands-on, skill-based business training.

## Career Description

All businesses need effective leadership to succeed. The management team is responsible for providing that leadership. Managers must plan, organize, direct, and control the business operations with the ongoing challenge of earning a profit in a highly competitive global marketplace. Strong communication, problem solving, and team building skills are critical traits of successful managers.

## Program Outcomes

Graduates will be able to:

- Recognize ethical, legal, and socially responsible business practices;
- Perform financial management tasks;
- Demonstrate effective written and oral business communications;
- Utilize software for business applications;
- Develop interpersonal leadership skills; and
- Access, analyze, and interpret relevant information specific to business strategies.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0
2. Residency Requirement: students must complete one-fourth (15) of their credits at Central Lakes College.

## Career Opportunities

Business management graduates have found employment opportunities in financial institutions, retail and commercial trade, marketing, professional sales, restaurants, hotels/resorts, insurance, healthcare, and manufacturing. In addition, graduates have started their own businesses or managed family businesses.

## Business Management A.A.S. Degree

Required Courses

BUSN 1102 Accounting for Non-Accountants.....	(3 cr)
BUSN 1110 Marketing Principles .....	(3 cr)

BUSN 1131 Business Math .....	(3 cr)
BUSN 1162 Customer Relations.....	(3 cr)
BUSN 1164 International Business .....	(3 cr)
BUSN 1166 Business Communications .....	(3 cr)
BUSN 2541 Legal Environment of Business .....	(3 cr)
COMP 1120 Intro to Computer Applications .....	(3 cr)
COMP 1121* Advanced Computer Applications .....	(3 cr)
MGMT 1011 Management Principles .....	(3 cr)
MGMT 1101 Entrepreneurship .....	(3 cr)
MGMT 1108 Quality & Performance Management .....	(3 cr)
MGMT 1110 Frontline Leadership .....	(3 cr)
MGMT 1114 Human Resource Management .....	(3 cr)
MGMT 1126 Financial Management .....	(3 cr)
Total Required	45 Credits

### GENERAL EDUCATION

Student must complete the requirements listed in the AAS Degree/General Education Transfer Curriculum document.  
Total General Education – 15 Credits

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisites

# ENTREPRENEURSHIP

## Program Information

This program emphasizes the innovative and entrepreneurial skills required to success in the current business environment of continuous and unprecedented change. The ability to be responsive, flexible and creative lies at the heart of both new venture creation and ongoing businesses because each must anticipate, innovate and adapt in a rapidly changing world. The Entrepreneurism Certificate program is designed for those who are considering starting a business or current entrepreneurs who need the vital skills required to be a successful entrepreneur. Students experience all aspects of planning a new venture, from determining their personal vision to conducting market analysis to testing financial feasibility, drawing from the whole spectrum of business and management. The Entrepreneurship Certificate demonstrates why good planning leads to successful business performance. Students gain insight in how the various pieces of the business puzzle fit together for the venture to operate successfully.

## Career Description

The opportunity to own a small business has been the American dream for many over the past century. Small businesses employ over half of all private sector employees and have generated 64 percent of net new jobs over the past 15 years. Small businesses have a presence in virtually every industry and occupation. Owners of small businesses often apply both technical knowledge and skills along with business management knowledge to create and operate a successful business venture. The Minnesota Department of Employment and Economic Development's recent data show a higher increase in new business starts in non-urban and rural areas of the state. Several initiatives promote and create growth of entrepreneurial activity in Greater Minnesota. Investing in small business development promotes the economic growth and vitality of the region.

## Program Outcomes

Graduates will be able to:

- Perform financial management tasks;
- Demonstrate effective written and oral business communications;
- Access, analyze, and interpret relevant information specific to business strategies;
- Create a business plan.

## Career Opportunities

Completion of the program will provide the knowledge and skills necessary to successfully start and operate a small business. Students will also have the opportunity to work with the Small Business Development Center located on campus to develop successful business plans.

## Entrepreneurship Certificate

Required Core Courses:

BUSN 1102 Accounting for Non-Accountants .....	(3cr)
BUSN 1166 Business Communications .....	(3cr)
MGMT 1101 Entrepreneurship.....	(3cr)
MGMT 1150* Entrepreneurship Capstone .....	(1cr)
MKTG 1011 Marketing Principles .....	(3cr)
Total 13 Credits	

Elective:

Student must choose an additional 3 credits from any of the courses with a BUSN, COMP, MKTG, or MGMT prefix.

Total 3 Credits

GRADUATION REQUIREMENT 16 CREDITS

# HEALTHCARE ACCOUNTING A.A.S. DEGREE

## Program Information

Central Lakes College offers a 60-credit, two-year Healthcare Accounting Associate in Applied Science (A.A.S.) Degree. The A.A.S. degree prepares students by teaching the analytical and technical skills needed for an accounting career in the healthcare field. Students gain experience recording transactions, analyzing revenue cycle transactions, and doing realistic simulations on the most popular accounting and healthcare computer systems.

## Career Description

Many accountants work in certified public accounting firms that perform tax and auditing services, but the majority work as management or “private” accountants. The role of the accounting and/or finance department has expanded greatly. Accountants and healthcare accountants help organizations make informed decisions by preparing and analyzing a variety of financial and non-financial information. They help management safeguard and control the assets of the business and ensure the transactions and records of the business comply with applicable laws. Accounting and finance staff are critical in the fight to cut waste and fraud, analyzing revenue cycle data to identify new or additional revenue sources, and ensuring timely, relevant data is provided when business decisions are being made. Accountants use specialized accounting and finance software; in small businesses the accountant is often the computer expert.

## Program Outcomes

Graduates will be able to:

- Complete the accounting cycle, and prepare classified general purpose financial statements in good form;
- Possess and utilize the tools needed to analyze financial and business information that support planning and decision making in prospective payment systems;
- Apply accounting principles to business transactions in both a manual and a computerized environment;
- Demonstrate a fundamental understanding of employment laws, earnings calculations, payroll tax compliance, ICD and CPT coding, and HIPPA as they related to healthcare rules and regulations;
- Measure and prepare financial and non-financial information used to support strategic management and internal decision making;
- Apply ethical principles in decision making;
- Demonstrate effective communication skills;
- Describe the current reimbursement processes, forms, and support practices for healthcare reimbursement; and
- Explain medical billing/collection regulations and standards that apply to systems such as Medicare,

Medicaid, HIPPA, and the Affordable Care Act.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0;
3. Residency Requirement: students must complete 25% (15) of their credits at Central Lakes College; and
4. Accounting courses in the program must be completed within seven (7) years.

## Certification

**Certified Revenue Cycle Representative (CRCR):** The CRCR credential is a certification granted by the Healthcare Financial Management Association (HFMA) professional organization. HFMA members and non-members are eligible to take the CRCR exam. Recertification must be obtained every two years. The CRCR credential is valuable for those that work within a hospital revenue cycle or work in a department that supports the hospital revenue cycle such as Patient Access, Financial Representative, Health Information Management, Finance, Compliance etc. **Certified Technical Specialist: Accounting & Finance:** The CTS credential is a certification granted by the Healthcare Financial Management Association (HFMA) professional organization. HFMA members and non-members are eligible to take the CTS exam. Recertification must be obtained every two years. This certification is designed for accounting professionals in the healthcare finance management profession. The credential is obtained by completing self-study materials and passing the online exam. **Certified Bookkeeper:** A Certified Bookkeeper exam is offered by the American Institute of Professional Bookkeepers. This exam covers normal accounting practices of the typical business. This exam can be taken after a 2-year Accounting Degree. **Fundamental Payroll Certification (FPC) and Certified Payroll Professional (CPP):** The FPC and CPP are two payroll certifications that 2-year degree accounting students can pursue. The FPC has no experience requirement. The CPP exam’s minimum employment requirement ranges from 18 months to 3 years depending on which eligibility criteria option is chosen. Graduates achieving these certifications often gain an edge over other applicants during the hiring process and advance more quickly along their career paths. Advanced certifications within the healthcare accounting profession would include Certified Healthcare Financial

Professional (CHFP) and Fellow of the Healthcare Financial Management Association (FHFMA). These certifications require additional education, work experience, and membership to professional organization(s). The State of Minnesota offers 2 levels of licensure for Accountants. Registered Accounting Practitioner: The (RAP) certification requires a 2-year Accounting Degree and authorizes the licensee to perform but not supervise all accounting services on a formal audit. Certified Public Accountant: The (CPA) license requires 5 years of college education (150 semester credits). CPA’s are authorized to perform all accounting services and can supervise audits.

## Transfer Opportunities

All students planning to pursue a bachelor’s degree in accounting or healthcare administration are strongly encouraged to consult with the Accounting or Healthcare Admin. faculty about transfer opportunities and with the Advising Department about transfer information for specific four-year colleges. The A.A.S. two-year degree in Healthcare Accounting is not intended for transfer. Our graduates often go directly to work.

## Career Opportunities

Accountants and healthcare accountants are highly employable graduates who qualify for a wide variety of jobs. More career opportunities exist in accounting today than ever before. Businesses are being held to a higher standard of financial reporting due to recent corporate scandals and financial crises. In healthcare, the onset of Electronic Health Records (EHR) has generated an increased ability to gather data to assist in the reimbursement and revenue management of healthcare organizations. As a result, the demand for accountants, revenue analysts, and auditors has expanded. Because accounting has always been considered the language of business, demand for bookkeeping, payroll, accounting, and auditing technicians remains strong. An accounting degree is versatile and allows graduates to pursue many different career paths. The Bureau of Labor Statistics projects a 15.7% change in employment growth for accountants between 2010 and 2020. For these reasons, accounting may be the best route to a successful business career. The CLC accounting staff receives many notices of job openings that result in job placement for our accounting students.

## Healthcare Accounting A.A.S. Degree

First Year – Fall Semester  
 ACCT 2011 Accounting Principles I .....(4 cr)  
 ACCT 2114 Payroll Accounting .....(3 cr)  
 BIOL 1404 Human Biology .....(3 cr)

HINS 1163 Medical Office Procedures .....(3 cr)  
 Total – 13 Credits

Spring Semester  
 ACCT 2012\* Accounting Principles II .....(4 cr)  
 ACCT 2138\* Computerized Accounting Software .....(3 cr)  
 ACCT 2140 Accounting Applications .....(3 cr)  
 HINS 1150\* Intro to DX and Procedure Coding .....(3 cr)  
 HINS 1360 Medical Terminology .....(3 cr)  
 Total – 16 Credits

Second Year – Fall Semester  
 ACCT 2121\* Intermediate Accounting I .....(4 cr)  
 ACCT 2161\* Cost Accounting I .....(3 cr)  
 BUSN 1166 Business Communications .....(3 cr)  
 HINS 2144 Legal Aspects of Health Care .....(2 cr)  
 MATH 1441 Concepts in Math (3 cr) OR MATH 1470 College Algebra .....(3 cr)  
 Total – 15 Credits

Spring Semester  
 ACCT 2123\* Intermediate Accounting II .....(4 cr)  
 HINS 2172\* Reimbursement Methodologies .....(3 cr)  
 General Education .....(9 cr)  
 Total – 16 Credits  
**GRADUATION REQUIREMENT 60 CREDITS**  
 \*Denotes Prerequisites

# HEALTHCARE ADMINISTRATIVE SPECIALIST

## Program Information

The 60-credit Healthcare Administrative Specialist Associate of Applied Science (A.A.S.) program graduate is prepared to assume duties in the field including basics of ICD and CPT coding, reimbursement methodologies, quality assessment, legal, accreditation, and electronic health record systems. In addition to the diploma skills, graduates of the A.A.S. program will be able to use and maintain electronic applications and work processes to support healthcare business procedures, workflow, and reform; identify and prevent fraud and abuse while maintaining corporate compliance including HIPAA and HITECH; conduct analysis to ensure the documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status; and to support physician reimbursement and revenue cycle management.

## Career Description

Healthcare Administrative Specialist is ideal for individuals who would like a career in healthcare, but are not interested in the hands-on patient care. The medical community depends on educated staff to collect, interpret, analyze, protect and organize medical information so that it may be used for continuity of care, reimbursement, and quality improvement. Health administrative professionals work closely with providers, nurses, researchers, and other healthcare staff to contribute to the quality of patient care behind the scenes.

## Program Outcomes

Graduates will be able to:

- Demonstrate understanding of how their role fits into and affects their department, other departments, and the organization;
- Identify and utilize appropriate technologies used to capture, retrieve, and maintain information from internal and external sources;
- Apply knowledge of human structure and function, diseases and disorders, and medical terminology as it relates to their healthcare role;
- Apply policies, procedures, and regulation standards surrounding issues of access and disclosure of protected health information and organizational compliance;
- Evaluate the revenue cycle management process (emphasis on billing procedures);
- Analyze the documentation in the health record to ensure it supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status;
- Demonstrate effective verbal and written communication within the healthcare environment;
- Describe positive work behaviors, personal traits and attitudes desirable in members of a healthcare team; and

- Understand accepted ethical practices with respect to cultural, social, religious and ethnic differences within the healthcare environment.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0
2. College Technical Core GPA Requirement: The cumulative GPA of credits in the technical core of the diploma or degree must be at least 2.0
3. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

## Admissions

The A.A.S. degree and diploma are offered as full-time programs. Students can start at the beginning of fall or spring. This program is a combination of in-class room, hybrid (both in-class and online), and online formats. Students pursuing the A.A.S. degree will find the second year courses are offered in an online format to allow for employment while completing the degree.

## Transfer Opportunities

Contact an admissions representative for information regarding transfer opportunities.

## Career Opportunities

Employment opportunities exist in hospitals, clinics, long-term facilities, nursing homes, physician offices, medical group practices, behavioral health facilities, insurance agencies, home health agencies, consulting firms, government agencies, insurance based healthcare companies, and medical supply organizations. According to the U.S. Bureau of Labor Statistics: \* 2012 Median Pay: \$32,618 per year or \$15.68 per hour \* Website: <http://www.bls.gov/oes/current/oes436013.htm>

## Career Titles

This program will help students prepare for a wide range of careers including the following: Admitting Clerk, Patient Service Representatives, Registrar, Release of Information Clerk, Scheduler, Patient Accounts Representative, Insurance Claims Analyst, Clinical Data Specialist, Medical Coder, Quality Data Analyst, Quality Improvement Technician, Reimbursement Specialist, Compliance Technician, and Health Information Technician.

## Healthcare Administrative Specialist A.A.S.

Fall Semester – First Year

BIOL 1510 Essentials of Human Biology (3 cr) OR BIOL 1404 Human Biology .....(3 cr)  
 COMP 1120 Introduction to Computer Applications .....(3 cr)  
 ENGL 1501 Writing Fundamentals for Healthcare Professionals (1 cr)  
 HINS 1148 Introduction to Healthcare Technology and Biomed (1 cr)  
 HINS 1163 Medical Office Procedures .....(3 cr)  
 HINS 1165 Medical Records Management .....(3 cr)  
 HINS 1360 Medical Terminology .....(3 cr)  
 Total – 17 Credits

Spring Semester

BUSN 1166 Business Communications .....(3 cr)  
 HINS 1120 Introduction to Healthcare Information and Security (1 cr)  
 HINS 1140 Healthcare Delivery Systems .....(3 cr)  
 HINS 1142 Healthcare Information Systems .....(3 cr)  
 HINS 1144\* Healthcare Pharmacotherapy.....(2 cr)  
 HINS 1150\* Introduction to DX and Procedure Coding .....(3 cr)  
 Total – 15 Credits

Fall Semester – Second Year

HINS 2144 Legal Aspects of Healthcare .....(2 cr)  
 Additional Required Core Course .....(3 cr)  
 General Education .....(9 cr)  
 Total – 14 Credits

Spring Semester

HINS 2148 Healthcare Management and Organization .....(2 cr)  
 HINS 2172\* Reimbursement Methods .....(3 cr)  
 Additional Required Core Course .....(3 cr)  
 General Education .....(6 cr)  
 Total – 14 Credits

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisites

## Healthcare Administrative Specialist Diploma

Fall Semester – First Year

BIOL 1510 Essentials of Human Biology (3 cr) OR BIOL 1404 Human Biology .....(3 cr)  
 COMP 1120 Introduction to Computer Applications .....(3 cr)  
 ENGL 1501 Writing Fundamentals for Healthcare Professionals (1 cr)  
 HINS 1148 Introduction to Healthcare Technology & Biomed (1 cr)  
 HINS 1163 Medical Office Procedures .....(3 cr)  
 HINS 1165 Medical Records Management.....(3 cr)  
 HINS 1360 Medical Terminology .....(3 cr)  
 Total – 17 Credits

Spring Semester

BUSN 1166 Business Communications .....(3 cr)  
 HINS 1120 Introduction to Healthcare Information and Security (1)  
 HINS 1140 Healthcare Delivery Systems.....(3 cr)

HINS 1142 Healthcare Information Systems .....(3 cr)  
 HINS 1144\* Healthcare Pharmacotherapy .....(2 cr)  
 HINS 1150\* Introduction to DX and Procedure Coding .....(3 cr)  
 Total – 15 Credits  
 GRADUATION REQUIREMENT 32 CREDITS  
 \*Denotes Prerequisites

## Healthcare Administrative Specialist Certificate

Fall Semester

BIOL 1510 Essentials of Human Anatomy .....(3 cr)  
 ENGL 1501 Writing Fundamentals for Healthcare Professionals (1 cr)  
 HINS 1163 Medical Office Procedures .....(3 cr)  
 HINS 1165 Medical Records Management .....(3 cr)  
 Total - 10 credits

Spring Semester

BUSN 1166 Business Communications.....(3 cr)  
 HINS 1360 Medical Terminology .....(3 cr)  
 HINS 2190 Professional Practicum .....(2 cr)  
 Total - 8 credits  
 GRADUATION REQUIREMENT 18 CREDITS

# OFFICE ASSISTANT

## Career Description

The Office Assistant Certificate program enhances the entry level skills of individuals performing administrative duties. The certificate includes instruction in accounting for non-accountants, business communications, business math, customer relations, and computer operation systems and applications.

## Program Outcomes

Graduates will be able to:

- Read, understand, and prepare standard types of business documents
- Use appropriate office procedures as related to records information management, telephone communications, and mail management
- Produce accurate business documents and reports using computer technology and applying appropriate editing and language skills

## Special Program Requirements

In addition to the program requirements, students must meet the following conditions in order to graduate: 1. The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0; 2. Students must complete one third (6) of their credits at Central Lakes College.

## Career Opportunities

Office Assistants are employed in organizations of every type, but most are employed in service providing industries ranging from education and health care to government and retail trade. Others may work in firms engaged in manufacturing or construction.

## Office Assistant Certificate

BUSN 1102 Accounting for Non-Accountants.....	(3 cr)
BUSN 1166 Business Communications .....	(3 cr)
BUSN 1131 Business Math .....	(3 cr)
COMP 1109 Intro to OPerating Systems .....	(3 cr)
COMP 1120 Introduction to Computer Applications.....	(3 cr)
MKTG 1162 Customer Relations.....	(3 cr)

# CHILD DEVELOPMENT

## Program Information

Subjects covered in this program include child guidance, health, safety, nutrition, child development, parent relations, introduction to special education and professional leadership.

## Career Description:

The Child Development Program prepares individuals to independently provide a healthy, safe, developmentally appropriate learning environment in support of families and children. The program meets current hiring standards of center-based childcare programs, Head Start, family childcare and paraprofessional job positions.

## Program Outcomes

Graduates will be able to:

- Integrate child development theory with appropriate practice in early care and education settings
- Plan and prepare effective instruction
- Demonstrate effective oral and written communications with families, coworkers, agencies, and early childhood partners
- Incorporate diverse teaching methods and strategies appropriate to addressing the needs of children and families
- Plan culturally relevant activities to nurture cognitive, physical, language, social and emotional development
- Demonstrate the skills of observation and record keeping of child development and learning
- Apply professional behavior in daily work with children, families, co-workers and the community
- Create and consistently maintain an appropriate, safe, healthy learning environment for children
- Recognize ethical, legal and professional responsibilities

## Admissions

Child development courses are scheduled during the day with at least one additional course offered in the evening each semester. Some courses are offered online. This program is a member of E-LECT (e-learning for early childhood teachers), which offers an associate in applied science (A.A.S.) degree online. Talk with an advisor or admissions counselor for more details.

## Accreditation

The program is a member of the ELECT agreement between 15 colleges which allows students to complete the entire A.A.S. degree online.

## Transfer Opportunities

The Associate of Arts (A.A.) degree with a Child Development Certificate transfers to any MnSCU institution.

## Career Opportunities

Graduates of this program are prepared to work at childcare centers, Head Start programs, school districts, preschools, family childcare and after school programs. Selected employers of recent graduates include: Tri-County Head Start in Brainerd, Precious Years Childcare Center, Pillager Family Fun Stop, Step-in-Go Childcare in Crosby and Emily Charter School.

## Career Titles

This program will help students prepare for a wide range of careers, including the following: school-age caregiver, early care and education assistant teacher, childcare giver, family childcare provider, Head Start teacher, nanny, and elementary school paraprofessional. Assistant teacher in childcare centers, family childcare provider, Head Start teacher, elementary school paraprofessional, school-age care provider, school district, private preschool teacher.

## Child Development Care & Guidance A.A.S.

First Year – Fall Semester	
CDEV 1100 Foundations of Child Development .....	(3 cr)
CDEV 1105 Child Safety, Health & Nutrition .....	(4 cr)
or all four (4) of these courses:	
CDEV 1305 Child Abuse & Neglect .....	(1 cr)
CDEV 1306 Child Safety.....	(1 cr)
CDEV 1307 Child Health.....	(1 cr)
CDEV 1308 Child Nutrition .....	(1 cr)
CDEV 1110 Guidance: Managing Physical/Social Environ. ....	(4 cr)
CDEV 1150 Childcare Business Strategies (3 cr) OR CDEV 2342 School Age Development .....	(4 cr)
Total 14-15 Credits	

Spring Semester	
CDEV 1115 Planning & Implementing Curriculum (3 cr) OR CDEV 2340 Professional Leadership .....	(3 cr)
CDEV 1130 Infant/Toddler Development & Learning.....	(4 cr)
CDEV 1133 Creative Developmental Experiences.....	(3 cr)
CDEV 1135 Profiles of Exceptional Child .....	(3 cr)
CDEV 1160 Internship .....	(4 cr)
Total 17 Credits	

Second Year – Fall Semester	
CDEV 1120 Professional Relations Early Childhood Careers (3 cr)	
CDEV 2343 School Age Development & Learning Exp. ....	(4 cr)
OR CDEV 1150 Childcare Business Strategies .....	(3 cr)
CDEV 2350 Practicum I .....	(3 cr)
General Education .....	(4 cr)
Total 13-14 Credits	

Spring Semester	
CDEV 2340 Professional Leadership (3 cr) OR Or CDEV 1115 Planning & Implementing Curriculum.....	(3 cr)
Elective .....	(1 cr)
General Education .....	(11 cr)

# CHILD DEVELOPMENT CONT.

Total 15 Credits  
GRADUATION REQUIREMENT 60 CREDITS

## Child Development Certificate

Fall Semester  
CDEV 1100 Foundations of Child Development .....(3 cr)  
CDEV 1105 Child Safety, Health & Nutrition..... (4 cr)  
CDEV 1110 Guidance: Managing Physical/Social Environment (4 cr)  
Total 11 Credits

Spring Semester  
CDEV 1115 Planning and Implementing Curriculum (3 cr) OR  
CDEV 2340 Professional Leadership..... (3 cr) OR  
CDEV 1160 Internship .....(3 cr)  
CDEV 1135 Profiles of the Exceptional Child .....(3 cr)  
Total 9 Credits  
GRADUATION REQUIREMENT 20 CREDITS

## Child Development Assistant Diploma

Fall Semester  
CDEV 1100 Foundations of Child Development..... (3 cr)  
CDEV 1105 Child Safety, Health & Nutrition .....(4 cr)  
or all four (4) of these courses:  
CDEV 1305 Child Abuse & Neglect .....(1 cr)  
CDEV 1306 Child Safety..... (1 cr)  
CDEV 1307 Child Health .....(1 cr)  
CDEV 1308 Child Nutrition .....(1 cr)  
CDEV 1110 Guidance: Managing Physical/Social Environment (4 cr)  
CDEV 1120 Professional Relations Early Childhood Careers (3 cr)  
Total 14 Credits

Spring Semester  
CDEV 1115 Planning & Implementing Curriculum (3 cr) OR  
CDEV 2340 Professional Leadership..... (3 cr)  
CDEV 1130 Infant/Toddler Development & Learning .....(4 cr)  
CDEV 1133 Creative Developmental Experiences .....(3 cr)  
CDEV 1135 Profiles of Exceptional Child .....(3 cr)  
CDEV 1160 Internship .....(4 cr)  
Total 17 Credits  
GRADUATION REQUIREMENT 31 CREDITS

## Child Development - American Sign Language A.A.S.

First Year – Fall Semester  
AMSL 1410 American Sign Language .....(4 cr)  
CDEV 1100 Foundations of Child Development..... (3 cr)  
CDEV 1105 Child Safety, Health & Nutrition .....(4 cr)  
CDEV 1110 Guidance: Managing Physical/Social Environment (4 cr)  
Total 15 Credits

Spring Semester  
AMSL 1412\* American Sign Language .....(4 cr)  
CDEV 1115 Planning & Implementing Curriculum (3 cr) OR  
CDEV 2340 Professional Leadership .....(3 cr)  
CDEV 1130 Infant/Toddler Development and Learning..... (4 cr)

CDEV 1135 Profiles of Exceptional Child..... (3 cr)  
Total 14 Credits

Second Year – Fall Semester  
AMSL 2410\* American Sign Language .....(4 cr)  
AMSL 2420 Deaf Culture .....(3 cr)  
CDEV 1120 Professional Relations Early Childhood Careers (3 cr)  
CDEV 1160 Internship .....(4 cr)  
Total 14 Credits

Spring Semester  
AMSL 2412\* American Sign Language .....(4 cr)  
CDEV 1115 Planning & Implementing Curriculum (3 cr) OR  
CDEV 2340 Professional Leadership .....(3 cr)  
CDEV 1133 Creative Developmental Experiences .....(3 cr)  
CDEV 2350 Practicum I .....(3 cr)  
COMM 2420 Intercultural Communication .....(3 cr)  
General Education .....(1 cr)  
Total 17 Credits  
GRADUATION REQUIREMENT 60 CREDITS

# SPECIAL EDUCATION

Mayville State University.

## Career Opportunities

DEED shows occupational growth projections of 12% in Central MN, and 18%, nationwide, in addition to the significant needs for replacement of retiring Special Education teachers. OSDS information projects 753 annual openings in MN with 686 of these coming from replacement needs. That same source also projects just 65 graduates per year for this period.

## Career Titles

Special Education paraprofessional

## Special Education A.A.S. Degree

First Year – Fall Semester  
CDEV 1100 Foundations of Child Development .....(3 cr)  
CDEV 1110 Guidance: Managing the Physical and Social Environment .....(4 cr)  
CDEV 1120 Professional Relations .....(3 cr)  
General Education .....(6 cr)  
Total 16 Credits

First Year – Spring Semester  
CDEV 1130 Infant/Toddler Development .....(4 cr)  
CDEV 2110 Characteristics of Learning & Behavioral Disorders (3 cr)  
CDEV 2112 Collaboration Skills and Transition Training .....(3 cr)  
General Education .....(4 cr)  
Total 14 Credits

Second Year – Fall Semester  
AMSL 1410 American Sign Language I .....(4 cr)  
CDEV 1135 Profiles of Exceptional Child .....(3 cr)  
CDEV 1160 Internship .....(4 cr)  
General Education .....(4 cr)  
Total 15 Credits

Second Year – Spring Semester  
CDEV 1162 Internship in a Specialized Setting .....(2 cr)  
CDEV 1398 Special Topics .....(1 cr)  
CDEV 2114 Introduction to Autism Spectrum Disorder .....(2 cr)  
CDEV 2343 School Age Development .....(4 cr)  
General Education .....(6 cr)  
Total 15 Credits  
GRADUATION REQUIREMENT 60 CREDITS  
\* Denotes Prerequisites

## Special Education Certificate

CDEV 1100 Foundations of Child Development .....(3 cr)  
CDEV 1110 Guidance: Managing Physical/Social Environment (4 cr)  
CDEV 1115 Planning & Implementing Curriculum .....(3 cr)  
CDEV 1135 Profiles of Exceptional Child .....(3 cr)  
CDEV 1162 Internship in Specialized Setting..... (2 cr)  
CDEV 2110 Characteristics of Learning & Behavioral .....(3 cr)  
CDEV 2114 Intro to Autism Spectrum Disorder .....(2 cr)  
GRADUATION REQUIREMENTS 20 CREDITS

## Career Description

Graduates will be qualified to seek immediate employment as paraprofessionals in public or private schools and will be particularly qualified to work with students with special needs, which is the largest segment of paraprofessional needs.

## Program Information

The Special Education A.A.S. degree is designed to meet the needs of individuals seeking employment as a special education paraprofessional. The program is also beneficial to anyone working in family or center-based childcare, as a nanny, or preschool teacher.

## Program Outcomes

Graduates will be able to:

- Integrate child development theory with appropriate practice in early care and education settings;
- Plan and prepare effective instruction;
- Demonstrate effective oral and written communications for families, coworkers, agencies, and early childhood partners;
- Plan culturally relevant activities to nurture cognitive, physical, language, social and emotional development;
- Recognize ethical, legal, and professional responsibilities; and
- Summarize and demonstrate understanding of special education laws and regulations, the needs of special education students and the special education working environment.

## Special Program Requirements

A MN DHS background check must be obtained before the student is admitted to the degree program. In addition to the program requirements listed, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative GPA of credits in the technical core of the diploma or degree must be at least 2.0; and
3. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

## Accreditation

The CLC Child Development program is currently involved in the National Association for the Education of Young Children accreditation process for the A.A.S. Child Care & Guidance degree. This degree does include portions of the A.A.S. Special Education degree.

## Transfer Opportunities

Students can transfer credits to Concordia- St. Paul and

# INDIVIDUALIZED STUDIES

## Program Information

The Individualized Studies program is a flexible program where the student gets to design a set of classes that meets their specific needs. With the help on an advisor, students develop a course plan to upgrade work-related skills and knowledge, or to prepare for new occupations and/or transfer degree programs.

## Special Department Information

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0
2. Residency Requirement: students must complete one third (3) of their credits at Central Lakes College.

## Individualized Studies Diploma

### Program Course Requirements

#### Required Courses:

Choose one of the following:

CCST 1520 Career Planning .....(2 cr)

CCST 1558 Introduction to E-Learning ..... (1 cr)

COMP 1101 Introduction to Computer Fundamentals ..... (3 cr)

Total – 1 to 3 credits

#### General Education:

Students must complete at least one class from Minnesota Transfer Curriculum Goal Area 1 – Communications.

Total – 3 to 4 credits

#### Electives:

Students must work with an academic advisor to identify and complete 24-27 additional credits from technical or liberal arts disciplines.

GRADUATION REQUIREMENTS 31 CREDITS

# OCCUPATIONAL SKILLS

## Career Description

The Occupational Skills Program (OSP) is a technical college program that offers work-based training and classroom instruction for persons with disabilities with the outcome of competitive entry-level employment. Students in OSP actively participate in opportunities in the workplace and the classroom to expand their work experience background and increase their employability in the entry-level skilled work market. Experiences in OSP also promote social, physical and emotional growth in the college setting.

## Program Information

OSP is a nine-month diploma program, staffed by one coordinator/instructor and two laboratory assistants. Specific skills needed for employment are taught at the business, college or community where students receive training. Coursework in the classroom reinforces basic work skills learned at the employment site, which increases student success at any workplace. Other skill outcomes for students in OSP taught in the classroom include communication skills (verbal, nonverbal and written,) problem-solving skills (goal-setting, self advocacy and relationship building, etc.) and decision-making skills (i.e. citizenship skills, budgeting, self management.) Students can also participate in an elective summer internship course which provides follow-up services at their place of employment following graduation.

## Program Outcomes

Graduates will be able to:

- Communicate with supervisors and peers;
- Maintain employment in supervised settings;
- Follow specified procedures and timelines;
- Exhibit self-advocacy skills in personal and work settings;
- Set appropriate short term and long term goals.

## Special Program Requirements

Students in OSP have documented disabilities and the ability to compete for entry-level job positions in the community in which they reside. All afterschool services required for independent living are secured by the student and family before the onset of Fall semester. Students can apply for OSP in the fall, beginning on Sept. 1, the year preceding attendance in the program. Student interviews for applicants meeting program criteria begin in January. Interviews and acceptance of students are completed from January to April with new students attending OSP orientation in late spring.

## Career Opportunities

According to the MN Department of Employment and Economic Development, entry-level career availability is

expected to continue to rise. Some examples of entry-level employment that students in the Occupational Skills Program obtain following graduation are food preparation, janitorial, retail, cashier and stock clerks, and entry-level health care positions. Placement data results from OSP show a great majority of students obtain gainful employment after graduation.

## Career Titles

Common job titles for graduates include stock person, line worker, housekeeping, waitress, ride operator, dishwasher and dietary aide.

## Occupational Skills Diploma

### Fall Semester

COMP 1103 Computer Basics I .....(1 cr)

OSKL 1142 Communication I .....(3 cr)

OSKL 1144 Critical Reasoning Skills I .....(4 cr)

OSKL 1148 Employability Skills I .....(3 cr)

OSKL 1154 Supervised Pre-Internship I .....(4 cr)

OSKL 1162 Study Skills I .....(1 cr)

Elective .....(1 cr)

Total 17 credits

### Spring Semester

COMP 1104 Computer Basics II .....(1 cr)

OSKL 1146 Critical Reasoning Skills II .....(3 cr)

OSKL 1150 Employability Skills II .....(4 cr)

OSKL 1156 Supervised Pre-Internship I .....(4 cr)

OSKL 1164 Study Skills II .....(1 cr)

OSKL 1166 Communication II .....(3 cr)

Elective .....(1 cr)

Total 17 credits

GRADUATION REQUIREMENT 34 CREDITS



# COMPUTER INFORMATION TECHNOLOGY

## Career Description

Information technology (IT) specialists work together to improve existing computer systems and support end user technologies in an organizational setting. They help plan and develop new systems, install hardware, install software, support end user training and troubleshoot systems. Computers are not “one size fits all,” especially when it comes to business. Different companies have different needs. An IT specialist uses skills from multiple areas to plan, configure, repair or troubleshoot end user systems and even server-based systems. IT specialists work closely with network administrators and engineers in larger organizations and carry out the day to day troubleshooting, upgrading and repair of client systems. In smaller organizations, IT specialists will likely be responsible for all of these functions.

## Program Information

IT specialists are in high demand. The Information Technology Specialist Program will help prepare graduates by introducing them to a wide variety of subjects in information and emerging technologies that they will encounter in the field. Subjects covered include computer troubleshooting and repair, basic networking, operating systems, supporting common end user applications, as well as soft skills like oral and written communication and customer service. The curriculum is delivered using currently released industry software including OS, NOS and applications. This program teaches skills needed to work for companies with small to mid-size help desks or large corporate user support centers. Instructors are industry certified professionals with years of experience in the classroom and industry. There is 100% placement of our graduates within the IT field.

## Program Outcomes

Graduates will be able to:

- Perform computer information technology practices and procedures required for entry to mid-level employment;
- Perform computer information technology entry to mid-level skill sets and apply theoretical principles;
- Install, manage, configure and use functions and features of current releases of operating systems, network operating systems and applications;
- Install, troubleshoot and repair computer equipment and peripherals;
- Test successfully on competencies required to pass industry certification exams;
- Locate, evaluate and properly utilize the tools and resources appropriate to a computer technology professional;
- Evaluate, identify and apply appropriate security standards;
- Communicate effectively with technical and non-technical audiences.

## Certification

This program will help students prepare for the following certifications: Microsoft MCP, MCITP, and MCSA; Comp TIA A+, Network+, Server+, Security+, Project +, Help Desk 2000 CHDP, Help Desk Institute CSS and HDA, and others. Central Lakes College is a Prometric, VUE, and Certiport Authorized Test Center. All certification exams can be delivered onsite.

## Career Titles

This program will help students prepare for a wide range of careers in the IT field, including the following: computer support technician, computer technologist, help desk technician, information technology specialist, IT analyst, Microsoft certified professional, network support technician, PC support specialist.

## Note

Central Lakes College is a Prometric, VUE, and Certiport Authorized Test Center. All certification exams can be delivered on site.

## Computer Information Technology A.A.S.

First Year – Fall Semester

COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1120 Introduction to Computer Applications .....	(3 cr)
COMP 1204 Computer Repair I – A+ Hardware .....	(4 cr)
COMP 1230 Network Essentials .....	(4 cr)
General Education .....	(1 cr)
<b>Total – 15 credits</b>	

Spring Semester

COMP 1121* Advanced Computer Applications .....	(3 cr)
COMP 1206* Computer Repair II – A+ Operating Systems (3 cr)	
COMP 1253* Client Operating Systems Administration .....	(4 cr)
COMP Course Elective .....	(1 cr)
General Education .....	(4 cr)
<b>Total – 15 credits</b>	

Second Year – Fall Semester

COMP 2153* Client Operating Systems Management .....	(4 cr)
COMP 2160* Ethics in Information Technology .....	(2 cr)
COMP 2202* Computer User Support .....	(3 cr)
General Education .....	(6 cr)
<b>Total – 15 credits</b>	

Spring Semester

COMP 2111* Security Essentials .....	(4 cr)
COMP 2116* IT Project Management.....	(3 cr)
COMP 2170* Linux Systems .....	(4 cr)
General Education .....	(4 cr)
<b>Total – 15 credits</b>	

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisite or Co-requisite

# COMPUTER NETWORK ADMINISTRATION

## Career Description

Computer network administrators design, install, and support an organization’s network infrastructure. They may also plan, coordinate, and direct the computer-related activities of an organization, making sure all parts of a computer network work to meet the organization’s goals. Finally, computer network administrators provide day-to-day support for software users and direct the work of other computer specialists such as analysts, programmers, and technicians.

## Program Information

The Associate of Applied Science (A.A.S.) Computer Network Administration Program is an exciting track offered by Central Lakes College. Coursework includes general networking technologies, network troubleshooting, operating system technologies, disaster recovery, computer repair, and security fundamentals. This program covers an overview of networking technologies that graduates can expect to work with in small to mid-size organization settings and delivers curriculum using current industry software, including Operating System (OS), Network Operating System (NOS) and other applications. CLC’s information technology (IT) instructors are industry certified professionals with multiple years of experience in their respective disciplines both in the classroom and in industry. There is 100% placement of our graduates within the IT field.

## Program Outcomes

Graduates will be able to:

- Perform computer information technology practices and procedures required for entry to mid-level employment;
- Perform computer information technology entry to mid-level skill sets and apply theoretical principles;
- Install, manage, configure and use functions and features of current releases of operating systems, network operating systems and applications;
- Install, troubleshoot and repair computer equipment and peripherals;
- Test successfully on competencies required to pass industry certification exams;
- Locate, evaluate and properly utilize the tools and resources appropriate to a computer technology professional;
- Evaluate, identify and apply appropriate security standards;
- Communicate effectively with technical and non-technical audiences.

## Certification

This program will help students prepare for the following certifications: Microsoft Certified Systems Engineer (MCSE), Microsoft Certified Systems Administrator (MCSA), Microsoft Certified Professional (MCP), Mi-

crosoft Certified Desktop Support Technician (MCDST), CompTIAA+, Network+, Server+, Security+, and others. Central Lakes College is a Prometric, VUE, and Certiport Authorized Test Center. All certification exams can be delivered on-site.

## Career Titles

This program will help students prepare for careers in networking such as MCSE, MCSA, network administrator, network engineer, systems analyst, location area network (LAN) administrator, wide area network (WAN) administrator, network security specialist and systems engineer.

## Computer Network Administration A.A.S.

First Year – Fall Semester

COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1120 Introduction to Computer Applications .....	(3 cr)
COMP 1204 Computer Repair I – A+ Hardware .....	(4 cr)
COMP 1230 Network Essentials .....	(4 cr)
General Education .....	(1 cr)
<b>Total – 15 credits</b>	

Spring Semester

COMP 1206* Computer Repair II – A+ Operating Systems (3 cr)	
COMP 1253* Client Operating Systems Administration ....	(4 cr)
COMP 2150* Windows Server Administration I .....	(5 cr)
General Education (3 cr)	
<b>Total – 15 credits</b>	

Second Year – Fall Semester

COMP 2115* Command Line and PowerShell Administration (4 cr)	
COMP 2151* Windows Server Administration II .....	(5 cr)
General Education .....	(6 cr)
<b>Total – 15 credits</b>	

Spring Semester

COMP 2111* Security Essentials .....	(4 cr)
COMP 2152* Windows Server Administration III .....	(5 cr)
COMP Course Elective .....	(1 cr)
General Education .....	(5 cr)
<b>Total – 15 credits</b>	

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisite or Co-requisite

# COMPUTER NETWORK ADMIN. - CISCO

## Career Description

Cisco network administrators install, configure, test, secure and support an organization's network infrastructure. They may also plan, coordinate, and direct the computer-related activities of an organization, making sure all parts of a computer network work to meet the organization's goals. Finally, they provide day-to-day support for software users and direct the work of other computer specialists such as analysts, programmers, and technicians.

## Program Information

The Associate of Applied Science (A.A.S.) Cisco Networking Program is a highly-rigorous track with heavy emphasis on industry certification. Coursework includes general networking technologies, network troubleshooting, operating system technologies, project management, computer repair, routing and switching, VoIP and security. This program covers an overview of networking technologies that graduates can expect to work with in small to mid-size organization settings and delivers curriculum using Cisco hardware and current industry software, including Operating System (OS), Network Operating System (NOS) and other applications.

## Program Outcomes

Graduates will be able to:

- Perform computer information technology practices and procedures required for entry-level to mid-level employment and apply theoretical principles;
- Install, manage, configure and use functions and features of current releases of networking equipment, operating systems, network operating systems and applications;
- Install, troubleshoot and repair computer equipment and peripherals;
- Test successfully on competencies required to pass industry certification exams;
- Locate, evaluate and properly utilize the tools and resources appropriate to a computer technology professional;
- Evaluate, identify and apply appropriate security standard;
- Communicate effectively with technical and non-technical audiences.

## Special Program Requirements

In order to graduate from this program, students must earn a cumulative GPA of 2.0 in the credits attempted and completed towards the technical core of the degree.

## Certification

This program will help students prepare for the following certifications: Cisco Certified Network Associate (CCNA) Switching & Routing, CCNA Security, CCNA VoIP, Microsoft Certified Systems Administrator (MCSA), Microsoft

Certified Professional (MCP), CompTIA A+, Network+, Server+, Security+, Project+, Linux+, and others. Central Lakes College is a Prometric and VUE Authorized Test Center. All certification exams can be delivered on-site.

## Career Opportunities

This program will help students prepare for careers in networking such as CCNA, MCTA, MCSA, network administrator, network engineer, systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, network security specialist and systems engineer.

## Faculty Biography

All of CLC's information technology (IT) instructors are industry certified professionals with multiple years of experience in their respective disciplines both in the classroom and in industry.

## Computer Network Administration - Cisco A.A.S.

First Year – Fall Semester

COMP 1109 Introduction to Operating Systems.....	(3 cr)
COMP 1122 IT Essentials .....	(3 cr)
COMP 1123 Introduction to Networks (CCNA-I) .....	(3 cr)
General Education .....	(6 cr)
<b>Total 15 Credits</b>	

Spring Semester

COMP 1124* Routing and Switching Essentials (CCNA II) ..	(3 cr)
COMP 1253* Client Operating Systems Administration .....	(4 cr)
COMP 2150* Windows Server Administration I .....	(5 cr)
General Education .....	(3 cr)
<b>Total 15 Credits</b>	

Second Year – Fall Semester

COMP 2115* Advanced OS – Command Line and PowerShell (4 cr)	
COMP 2130* Scaling Networks .....	(3 cr)
COMP 2131* Connecting Networks .....	(3 cr)
General Education .....	(6 cr)
<b>Total 16 Credits</b>	

Spring Semester

COMP 2116* IT Project Management.....	(3 cr)
COMP 2132* Implementing Cisco IOS Network Security ..	(3 cr)
COMP 2133* Fundamentals of Voice Over IP.....	(3 cr)
COMP 2170* Linux Systems .....	(4 cr)
COMP Course Elective.....	(1 cr)
<b>Total 14 Credits</b>	

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisites or Co-requisites

# COMPUTER NETWORK ADMIN. CYBERSECURITY

## Career Description

CyberSecurity network administrators install, configure, test, and support an organization's network infrastructure as well as plan and implement the organization's security policy. They install and configure security hardware and software products, perform ethical hacking and penetration testing techniques to determine and eliminate any possible security risks (such as malware, phishing, viruses, denial-of-service attacks, information warfare and hacking), and investigate cyber-crime that is committed against the organization. Given the increasing amount of cyber-crime and the severity of the threats, CyberSecurity specialists are in high demand.

## Program Information

The Associate of Applied Science (A.A.S.) CyberSecurity Networking Program is a highly-rigorous track with heavy emphasis on industry certification. Coursework includes general networking technologies, network troubleshooting, operating system technologies, project management, computer repair, routing and switching, and security. This program covers an overview of security and networking technologies that graduates can expect to use in industry and delivers curriculum using Cisco hardware and current industry software, including Operating System (OS), Network Operating System (NOS) and other applications.

## Program Outcomes

Graduates will be able to:

- Perform computer information technology practices and procedures required for entry-level to mid-level employment and apply theoretical principles;
- Install, manage, configure and use functions and features of current releases of networking equipment, operating systems, network operating systems and applications;
- Install, troubleshoot and repair computer equipment and peripherals;
- Test successfully on competencies required to pass industry certification exams;
- Locate, evaluate and properly utilize the tools and resources appropriate to a computer technology professional;
- Evaluate, identify and apply appropriate security standards;
- Communicate effectively with technical and non-technical audiences.

## Special Program Requirements

In order to graduate from this program, students must earn a cumulative GPA of 2.0 in the credits attempted and completed towards the technical core of the degree.

## Certification

This program will help students prepare for the following certifications: Cisco Certified Network Associate (CCNA) Switching & Routing, GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GCIA), Security Certified Network Professional (SCNP), Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Technology Associate (MCTA), CompTIA A+, Network+, Server+, Security+, Project+, and others. Central Lakes College is a Prometric, VUE, and Certipoint Authorized Test Center. All certification exams can be delivered on-site.

## Career Opportunities

The Computer Tech Department consistently has a high job placement rate for program graduates. Job demand in this area will remain high in the future according to labor market forecasts.

## Computer Network Administration - CyberSecurity

First Year – Fall Semester

COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1122 IT Essentials .....	(3 cr)
COMP 1123 Introduction to Networks (CCNA – I) .....	(3 cr)
General Education .....	(6 cr)
<b>Total 15 Credits</b>	

First Year – Spring Semester

COMP 1124* Routing and Switching Essentials (CCNA – II) (3 cr)	
COMP 1253* Client Operating System Administration .....	(4 cr)
COMP 2111* Security Essentials.....	(4 cr)
COMP 2150* Windows Server Administration I .....	(5 cr)
<b>Total 16 Credits</b>	

Second Year – Fall Semester

COMP 2115* Advanced OS – Command Line & PowerShell (4 cr)	
COMP 2130* Scaling Networks (CCNA – III) .....	(3 cr)
COMP 2154* Advanced Network Defense .....	(3 cr)
General Education .....	(5 cr)
<b>Total 15 Credits</b>	

Second Year – Spring Semester

COMP 2116* IT Project Management .....	(3 cr)
COMP 2155* Network Intrusion.....	(3 cr)
COMP 2156* Security Capstone .....	(3 cr)
COMP Elective.....	(1 cr)
General Education .....	(4 cr)
<b>Total 14 Credits</b>	

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisite or Co-requisite

# COMPUTER SUPPORT SPECIALIST

## Career Description

Computer support specialists are in high demand. They help people solve problems with their computer hardware and software. They help coworkers or people who bought their company's products troubleshoot the problem to determine whether to make repairs or make changes to the computer setup. Computer support specialists may read technical manuals to help determine the problem, test computers to make sure they work, and help determine a company's computer needs. At larger companies, specialists may teach staff how to use new software. A computer support specialist who works with customers may teach customers how to install software or hardware or how to use the software purchased.

## Program Information

The Computer Support Specialist Program will help prepare graduates by introducing them to a wide variety of subjects in information and emerging technologies that they will encounter in the field. Subjects covered include computer troubleshooting and repair, basic networking, operating systems, supporting common end-user applications, as well as soft skills like oral and written communication and customer service. This program teaches skills needed to work for companies with small to mid-size help desks or large corporate user support centers. Our program delivers curriculum using currently released industry software, including Operating System (OS) and Network Operating System (NOS), and the instructors are industry certified professionals with years of experience in the classroom and industry. There is 100% placement of our graduates within the information technology (IT) field.

## Program Outcomes

Graduates will be able to:

- Perform computer information technology practices and procedures required for entry to mid-level employment;
- Perform computer information technology entry to mid-level skill sets and apply theoretical principles;
- Install, manage, configure and use functions and features of current releases of operating systems, network operating systems and applications;
- Install, troubleshoot and repair computer equipment and peripherals;
- Evaluate, identify and apply appropriate security standards;
- Communicate effectively with technical and non-technical audiences.

## Certification

This program will help students prepare for the following certifications: Microsoft Certified Professional (MCP)

and Microsoft Certified IT Professional (MCITP), Microsoft Certified Solutions Associate (MCSA), Comp TIA A+, and others. Central Lakes College is a Prometric, VUE and Certipoint Authorized Test Center. All certification exams can be delivered on-site.

## Career Opportunities

The need for qualified IT professionals continues to grow. Computer support specialist careers are the fastest growing occupations in Minnesota and across the country.

## Career Titles

The studies in this program will help students prepare for careers in computer support, including computer support specialist, computer repair technician, computer operator, and help desk worker.

## Note

Central Lakes College is a Prometric, VUE, and Certipoint Authorized Test Center. All certification exams can be delivered on site.

## Computer Support Specialist Diploma

Fall Semester	
COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1120 Introduction to Computer Applications .....	(3 cr)
COMP 1204 Computer Repair I – A+ Hardware .....	(4 cr)
COMP 1230 Network Essentials .....	(4 cr)
COMP 2202 Computer User Support .....	(3 cr)
<b>Total</b>	<b>17 credits</b>

Spring Semester	
COMP 1121* Advanced Computer Applications .....	(3 cr)
COMP 1206* Computer Repair II – A+ Operating Systems .....	(3 cr)
COMP 1253* Client Operating Systems Administration .....	(4 cr)
Choose 5 or more credits from COMP courses .....	(5 cr)
<b>Total</b>	<b>15 credits</b>
<b>GRADUATION REQUIREMENT 32 CREDITS</b>	

\*Denotes Prerequisite or Co-requisite

## Help Desk Specialist Certificate

Required Courses	
COMP 2214* Help Desk Internship I .....	(5 cr)
COMP 2216* Help Desk Internship II .....	(5 cr)
<b>Total</b>	<b>10 credits</b>

**GRADUATION REQUIREMENT 10 CREDITS**

\*Denotes prerequisites

# HEALTHCARE TECHNOLOGY

## Career Description

Healthcare Technology is an emerging profession within the industry of healthcare. This entry level degree demonstrates professional knowledge in healthcare information and health IT. The medical community depends on individuals who have a knowledge of the healthcare processes, state and federal compliance rules and computer information systems to create and maintain the health IT infrastructure. Healthcare technology professionals, as part of the information technology and information systems staff, work closely with providers of care, administration, vendors and other healthcare staff to ensure compliance, security, and functionality for health organizations.

## Program Outcomes

Graduates will be able to:

- Apply project management and change management principles to create and assist in implementation project plans to achieve the project goals;
- Install hardware, and configure and use software to meet practice needs and implementation projects;
- Confirm usability principles into design and implementation;
- Test software against performance specifications;
- Conduct user analysis to facilitate workflow design and integrate information technology into the functions of the workflow;
- Work with providers, departments to design processes and information flows;
- Interact with end users to diagnose IT problems and implement solutions;
- Support network and application systems security and standards;
- Communicate both health and IT concepts appropriately; and
- Support customers by resolving hardware and software issues.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: Cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: Cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0;
3. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

## Certification

This program will help students prepare for the follow-

ing certifications: Microsoft MCP and MTA; Comp TIA A+, Network+, Security+, and Project+, and AHIMA CHTS (CP and IS). Central Lakes College is a VUE and Prometric Authorized Test Center. All certification exams can be delivered onsite.

## Career Opportunities

Opportunities exist in hospitals, clinics, long-term care facilities, physician offices, medical group practices, integrated health systems, consulting firms, and government agencies.

## Career Titles

Clinical Helpdesk EHR Revenue Cycle Service Technician  
Application System Analyst Network Analyst Implementation Support Clinical Data Analyst Application Specialist.

## Healthcare Technology A.A.S.

Fall Semester – First Year	
COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1120 Introduction to Computer Applications .....	(3 cr)
COMP 1204 Computer Repair I – A+ Hardware .....	(4 cr)
COMP 1230* Network Essentials .....	(4 cr)
HINS 1148 Introduction to Healthcare Technology.....	(1 cr)
MEDA 1128 Medical Terminology.....	(1 cr)
<b>Total</b>	<b>16 Credits</b>

Spring Semester	
COMP 1253* Client Operating System Administration .....	(4 cr)
HINS 1120 Introduction to Health Information and Security .....	(1 cr)
HINS 1142 Healthcare Information Systems .....	(3 cr)
General Education .....	(6 cr)
<b>Total</b>	<b>14 Credits</b>

Fall Semester – Second Year	
COMP 2113* Advanced OS – Command Line and Powershell .....	(4 cr)
COMP 2202* Computer User Support .....	(3 cr)
HINS 1165 Medical Records Management.....	(3 cr)
HINS 2144 Legal Aspects of Healthcare .....	(2 cr)
General Education.....	(3 cr)
<b>Total</b>	<b>15 Credits</b>

Spring Semester	
COMP 2111* Security Essentials .....	(4 cr)
COMP 2116* IT Project Management .....	(3 cr)
HINS 2148 Healthcare Management and Organization .....	(2 cr)
General Education .....	(6 cr)
<b>Total</b>	<b>15 Credits</b>

**GRADUATION REQUIREMENT 60 CREDITS**

\*Denotes Prerequisites

# MICROSOFT OFFICE PROFESSIONAL

## Career Description

This program is designed to teach students to become proficient and expert users in the Microsoft Office Suite of application programs including Word, Access, Excel, PowerPoint and Outlook. The skills learned are designed to help office managers, technicians, administrative support personnel, and organization users of the Microsoft Office Suite become application specialists using the above software packages. Students will learn desktop application operating skills to meet globally recognized standards.

Students will learn advanced skills using Word, Access, Excel, PowerPoint and Outlook. A synopsis of skills learned in this program include the following: Word 2010 – Creating, Formatting, and Editing Word Documents; Research Papers with Citations and References; Business Letters with a Letterhead and Tables; Documents with a Title Page, Table, and Watermark; Using Templates to Create a Resume and Sharing the Finished Documents; Generating Form Letters, Mailing Labels, and a Directory for a Cover Letter; Creating a Newsletter with a Pull-Quote and Graphics; Using Document Collaboration and Integration Tools; Creating a Master Document with a Table of Contents and an Index; Creating a Template for an Online Form; Enhancing an Online Form and Working with Macros, Document Security, and XML; Using Project Planning Guidelines; Publishing Office 2010 Web Pages Online; Saving to the Web Using Windows Live SkyDrive; and Creating APA Research Papers. Access 2010 – Creating Databases and Database Objects – An Introduction to table structure; Querying a Database; Maintaining a Database; Creating Reports and Forms; Creating Multiple Table Forms; Advanced Report Techniques; Using SQL; Advanced Form Techniques; Macros, Navigation Forms, PivotTables, and PivotCharts; Administering a Database System; and Database Design. PowerPoint 2010 – Create and Edit a Basic Presentation; Enhance a Presentation with Pictures and Shapes; Reuse a Presentation and Add Multimedia; Work with Information Graphics; Deliver and Collaborate on Presentations; Add Emphasis with Text Boxes; Create a Self-Running Presentation Containing Animation; Enhance Presentations with Hyperlinks and Action Buttons; Develop a Presentation from an Outline; Create a Photo Album Presentation with Shapes; Customize a Template and Handouts Using Masters; Use Project Planning Guidelines; Publishing Office 2010 Web Pages Online; and Save to the Web Using Windows Live SkyDrive. Outlook 2010 – Student will format message content by using character and paragraph formatting, use graphic elements such as charts and tables, and create contact records, tasks, and appointments from incoming messages.

Students will create contact groups, schedule meetings, and share schedules to facilitate communication with

other Outlook users. Excel 2010 – Create charts, create analytical, financial, etc. reports, optimize data entry, create a family budget, format numerical (financial, statistical, etc.) reports, create forms, create graphing, process data using what-if analyses, design reports, provide technical support, and creating trending data. Students will learn expert-level Microsoft Office Excel 2010 skills to efficiently and confidently use Excel 2010 software at the feature and functionality levels. Students will learn to be proficient with advanced formulas, functions, and data analysis tools.

Students will also learn to manipulate data for analysis, presentation, and collaboration. In addition, will learn to manipulate Excel options to customize their environment to meet varying needs and enhance their productivity.

## Program Information

This program is designed to teach students to become proficient and expert users in the Microsoft Office Suite of application programs including Word, Access, Excel, PowerPoint and Outlook. The skills learned are designed to help office managers, technicians, administrative support personnel, and organization users of the Microsoft Office Suite become application specialists using the above software packages.

Students will learn desktop application operating skills to meet globally recognized standards. Students will learn advanced skills using Word, Access, Excel, PowerPoint and Outlook. A synopsis of skills learned in this program include the following: Word 2010 – Creating, Formatting, and Editing Word Documents; Research Papers with Citations and References; Business Letters with a Letterhead and Tables; Documents with a Title Page, Table, and Watermark; Using Templates to Create a Resume and Sharing the Finished Documents; Generating Form Letters, Mailing Labels, and a Directory for a Cover Letter; Creating a Newsletter with a Pull-Quote and Graphics; Using Document Collaboration and Integration Tools; Creating a Master Document with a Table of Contents and an Index; Creating a Template for an Online Form; Enhancing an Online Form and Working with Macros, Document Security, and XML; Using Project Planning Guidelines; Publishing Office 2010 Web Pages Online; Saving to the Web Using Windows Live SkyDrive; and Creating APA Research Papers. Access 2010 – Creating Databases and Database Objects – An Introduction to table structure; Querying a Database; Maintaining a Database; Creating Reports and Forms; Creating Multiple Table Forms; Advanced Report Techniques; Using SQL; Advanced Form Techniques; Macros, Navigation Forms, PivotTables, and PivotCharts; Administering a Database System; and Database Design. PowerPoint 2010 – Create and Edit a Basic Presentation; Enhance a Presentation

with Pictures and Shapes; Reuse a Presentation and Add Multimedia; Work with Information Graphics; Deliver and Collaborate on Presentations; Add Emphasis with Text Boxes; Create a Self-Running Presentation Containing Animation; Enhance Presentations with Hyperlinks and Action Buttons; Develop a Presentation from an Outline; Create a Photo Album Presentation with Shapes; Customize a Template and Handouts Using Masters; Use Project Planning Guidelines; Publishing Office 2010 Web Pages Online; and Save to the Web Using Windows Live SkyDrive. Outlook 2010 – Student will format message content by using character and paragraph formatting, use graphic elements such as charts and tables, and create contact records, tasks, and appointments from incoming messages.

Students will create contact groups, schedule meetings, and share schedules to facilitate communication with other Outlook users. Excel 2010 – Create charts, create analytical, financial, etc. reports, optimize data entry, create a family budget, format numerical (financial, statistical, etc.) reports, create forms, create graphing, process data using what-if analyses, design reports, provide technical support, and creating trending data. Students will learn expert-level Microsoft Office Excel 2010 skills to efficiently and confidently use Excel 2010 software at the feature and functionality levels. Students will learn to be proficient with advanced formulas, functions, and data analysis tools. Students will also learn to manipulate data for analysis, presentation, and collaboration. In addition, will learn to manipulate Excel options to customize their environment to meet varying needs and enhance their productivity.

## Program Outcomes

Graduates will be able to:

- Use the Microsoft Word 2010 software application to effectively create documents, newsletters, research papers, and create mail merge functions;
- Use the Microsoft Access 2010 software application to effectively create databases, database objects, reports, queries, forms, and macros;
- Use the Microsoft PowerPoint 2010 software application to effectively create advanced graphic presentations and handouts;
- Use the Microsoft Office 2010 software application to effectively create and format message content by using character and paragraph formatting, use graphic elements such as charts and tables, and create contact records, tasks, create appointments from incoming messages, create contact groups, schedule meetings, and share schedules to facilitate communication with other Outlook users;
- Use the Microsoft Excel 2010 software application to effectively create advanced spreadsheets, charts, graphs,

and analyses using multiple advanced formulas and functions.

## Special Program Requirements

Students entering this program must also take the prerequisite course COMP1109 – Introduction to Operating Systems.

## Certification

MOS – Microsoft Office Specialist	
Microsoft Office Professional Certificate Curriculum	
COMP 1109 Introduction to Operating Systems .....	(3 cr)
COMP 1131 Microsoft Word Comprehensive .....	(4 cr)
COMP 1132 Microsoft Access Comprehensive .....	(4 cr)
COMP 1133 Microsoft PowerPoint Comprehensive .....	(3 cr)
COMP 1134 Microsoft Outlook Comprehensive .....	(1 cr)
COMP 1135 Microsoft Excel Comprehensive .....	(4 cr)
GRADUATION REQUIREMENT	19 CREDITS

# MOBILE APPLICATION DEVELOPMENT

## Career Description

Application Developers support an organization's goals by providing solutions to business issues. They support the mission of a business by being able to take a common business process and, with the use of technology and programming skills, create solutions that are streamlined and efficient. Additionally, they also interact with cross-sectional teams in order to create, test, revise, and implement technology solutions.

## Program Information

The Mobile Application Development, Associate of Applied Science (A.A.S.) degree is a rigorous program with an emphasis on modern computer application development frameworks and technologies. Coursework includes application development in several key technologies including multi-platform mobile app development, program development, web programming, and database interaction. This program is designed with multi-platform learning objectives keying on Windows development, Android development and iOS development. This program contains an overview of those key technologies, with an in-depth emphasis on an object-oriented application development technology.

## Program Outcomes

Graduates will be able to:

- Proficiently use software programming techniques and skills to create applications, mobile apps, and web pages;
- Evaluate, design, and implement applications with the support of current programming and development tools;
- Design structured programs using C# and .Net technologies, Java, HTML5, ASP.net, and Objective C;
- Design and implement normalized database design given project requirements;
- Test successfully on competencies required to pass industry certification exams;
- Design and use advanced programming techniques in C# and .Net technologies, Java, HTML5, ASP.net, and Objective C;
- Communicate effectively with technical and non-technical audiences; and
- Use relevant methodologies, policies, and standards to develop secure program code.

## Special Program Requirements

In addition to the program requirements listed, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative grade point average (GPA) of the credits attempted and completed towards the technical component of the

diploma or degree must be at least a 2.0; and

3. Residency Requirement: students must complete one-fourth (15) of their credits at Central Lakes College.

## Career Opportunities

This program will help students prepare for careers in application development fields, such as Application Developer, Computer Programmer, Mobile Application Developer, Web Programmer, Business Analyst and Database Analyst.

## Career Titles

Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst, Database Analyst

## Mobile Application Development

### A.A.S.

Fall Semester – Year 1

APPD 1110 Programming in C# .....	(3 cr)
APPD 1111 Problem Solving Using Logic.....	(3 cr)
APPD 1115 Database Design Fundamentals .....	(3 cr)
General Education .....	(6 cr)
<b>Total – 15 credits</b>	

Spring Semester – Year 1

APPD 1113* Programming in HTML5 with JavaScript and CSS3 (3 cr)	
APPD 1120* Android Application Development Fundamentals (3 cr)	
APPD 1125* Advanced Database Design..... (3 cr)	
General Education .....	(6 cr)
<b>Total – 15 credits</b>	

Fall Semester – Year 2

APPD 2114* Developing Windows Apps Using C#..... (3 cr)	
APPD 2116* Developing Windows Apps Using HTML5 and JavaScript .....	(3 cr)
APPD 2120* Advanced Android Development .....	(3 cr)
APPD 2122* iOS Development Fundamentals .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

Spring Semester – Year 2

APPD 2111* Android/Server Interaction .....	(3 cr)
APPD 2124* Software Development Methodology .....	(3 cr)
APPD 2126* Advanced Windows Application Development Using HTML5 and JavaScript .....	(3 cr)
APPD 2128* Advanced Windows Application Development Using C# .....	(3 cr)
APPD 2132* Advanced iOS Development .....	(3 cr)
<b>Total – 15 credits</b>	

GRADUATION REQUIREMENT 60 CREDITS

\*Denotes Prerequisites

# CRIMINAL JUSTICE

## Career Description

A criminal justice degree is part of the Professional Peace Officer Education Program requirement for Minnesota Peace Officer licensing standards. All course work is certified by the Minnesota Board of Peace Officer Standards and Training and meets the Board's learning objectives. The degree applies for those interested in other areas of the justice system.

## Program Information

Mandated training and education leading to state licensure as a peace officer.

## Program Outcomes

Graduates will be able to:

- Demonstrate knowledge of structure, process and relationships between law enforcement, the courts and correctional systems;
- Apply tactical skills, weapon safety, defense and arrest tactics, vehicle operation, crisis management and force options;
- Process crime scenes from preliminary stage through disposition;
- Function in a multicultural society as a mature, adaptable citizen, while meeting the needs and challenges of clients and communities;
- Interpret and apply theory, law, policy and practice as it relates to juvenile delinquency and deviant behavior;
- Demonstrate an understanding of the roles of the legislative, judicial and executive branches and how they relate to criminal law;
- Apply knowledge of criminal law, constitutional law and Minnesota traffic code;
- Demonstrate strong and effective written and oral communication skills;
- Understand the importance of ethics and ethical behavior in law enforcement.

## Special Program Requirements

Students must have a valid Emergency Medical Responder certification (or higher) card at the time of the Post Board Exam.

Students must meet the following conditions in order to graduate:

1. At a minimum, students must achieve a "C" or higher in courses listed in the program.
2. Cumulative Grade Point Average Requirement: 2.0 GPA or higher.
3. Residency Requirement: For programs exceeding 60 credits, students must complete 25% of their credits at Central Lakes College.

## Admissions

Program Admissions Requirements:

- Background Check: Students must complete and pass a background check prior to being officially admitted into the program. This background check must be completed prior to the first day of classes.
- MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a psychologist approved by the Program Coordinator prior to admission into the program. Please see the Criminal Justice Coordinator for further information on these requirements.

## Transfer Opportunities

Central Lakes College has an Articulation Agreement with Bemidji State University for transfer of Criminal Justice courses. Other colleges and universities conduct a student-by-student evaluation regarding transfer of courses and degree.

## Career Opportunities

95% of our graduates are employed in the field within nine months of passing the licensing examination.

## Criminal Justice A.A.S.

REQUIRED CORE COURSES

CRJU 1101 Criminal Justice .....	(3 cr)
CRJU 1104 Juvenile Justice.....	(3 cr)
CRJU 2101** Criminal Law .....	(3 cr)
CRJU 2102* Criminal Procedures .....	(4 cr)
CRJU 2108 Criminal Investigations.....	(3 cr)
CRJU 2114** Traffic Law (3 cr)	
CRJU 2124 General Evidence and Identification Preparation (4 cr)	
CRJU 2140 Law Enforcement & Behavioral Science .....	(3 cr)
<b>Total 26 credits</b>	

## Law Enforcement Pathway

Students must choose a minimum of 30 credits from the following list:

CRJU 1106 Corrections & Probation .....	(3 cr)
CRJU 1109 Report Writing .....	(3 cr)
CRJU 1112 Police and the Community .....	(3 cr)
CRJU 2106** Fitness for Law Enforcement .....	(2 cr)
CRJU 2116* Science of Fingerprints.....	(4 cr)
CRJU 2118 Criminal Justice Photography .....	(4 cr)
CRJU 2135 Internship .....	(4-8 cr)
CRJU 2160 Use of Force .....	(2 cr)
CRJU 2162 Firearms.....	(3 cr)
CRJU 2164 Patrol Practicals.....	(5 cr)
CRJU 2166 Tactical Communications/Relations .....	(2 cr)
CRJU 2311 Basic Firearms.....	(1 cr)
CRJU 2315 Post Prep.....	(1 cr)
PHED 1525 Personal Protection Awareness .....	(2 cr)

## Criminal Justice Pathway

Students must choose a minimum of 30 credits from the following list:

## CRIMINAL JUSTICE CONT.

CRJU 1106 Corrections & Probation .....	(3 cr)
CRJU 1108 Community Corrections.....	(3 cr)
CRJU 1109 Report Writing.....	(3 cr)
CRJU 1112 Police and the Community.....	(3 cr)
CRJU 2106** Fitness for Law Enforcement.....	(2 cr)
CRJU 2112 Ballistic and Firearms Identification .....	(4 cr)
CRJU 2116* Science of Fingerprints.....	(4 cr)
CRJU 2118 Criminal Justice Photography .....	(4 cr)
CRJU 2135 Internship .....	(4-8 cr)
CRJU 2311 Basic Firearms .....	(1 cr)
CRJU 2315 Post Prep .....	(1 cr)
PHED 1525 Personal Protection Awareness .....	(2 cr)
TOTAL REQUIRED – 56 credits	

## REQUIRED GENERAL EDUCATION COURSES

COMM 2420 Intercultural Communications .....	(3 cr)
ENGL 1410 Composition I .....	(4 cr)
SOCL 2405 Criminology.....	(3 cr)
SOCL 2481 Race, Ethnicity & Oppression .....	(3 cr)
Choose one (1) of the following:	
AMSL 2420 Deaf Culture.....	(3 cr)
SPAN 2420 Many Faces of Mexico .....	(3 cr)

Total General Education – 16 credits

## GRADUATION REQUIREMENT 72 CREDITS

\*These courses required for Minnesota P.O.S.T. licensing must be completed within 3 years of starting the degree.

\*\*These courses must be completed prior to or within the first semester of SKILLS.

## Criminal Justice Certificate

## Required Courses

CRJU 1101* Criminal Justice .....	(3 cr)
CRJU 1104* Juvenile Justice .....	(3 cr)
CRJU 1112 Police and the Community.....	(3 cr)
CRJU 2101** Criminal Law .....	(3 cr)
CRJU 2102* Criminal Procedures.....	(4 cr)
CRJU 2106** Fitness for Law Enforcement .....	(2 cr)
CRJU 2108* Criminal Investigations.....	(3 cr)
CRJU 2114** Traffic Law .....	(3 cr)
CRJU 2140* Law Enforcement and Behavioral Science .....	(3 cr)
GRADUATION REQUIREMENT 27 CREDITS	

\*Denotes Prerequisite

\*\*Courses required for Minnesota P.O.S.T. licensing must be completed within three (3) years.

## LAW ENFORCEMENT SKILLS

## Career Description

Law Enforcement Professionals respond to emergency and non-emergency calls for service, perform traffic enforcement to include traffic crash response and investigation, and investigate crimes and enforce state and federal statutes.

## Program Outcomes

Graduates will be able to:

- Demonstrate physical restraints necessary during an arrest procedure;
- Operate an emergency vehicle safely when responding to emergency situations;
- Handle a variety of calls and react in accordance to criminal procedure;
- Recognize life-threatening situations and respond accordingly.

## Special Program Requirements

In addition to the program requirements listed, students must meet the following conditions in order to graduate:

1. Residency Requirement: students must complete one-third (5) of their credits at Central Lakes College.
2. College cumulative GPA of 2.0 or higher.
3. Must have approval from the CLC PPOE in order to graduate from this program.

## Accreditation

Peace Officer Standards and Training

## Admissions

Program Admissions Requirements: (Please see the Criminal Justice Coordinator for information.)

1. Background Check: Students must complete and pass a background check prior to being officially admitted into the program. This background check must be completed prior to the first day of classes.
2. MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a Psychologist approved by the Program Coordinator prior to admission into the program.
3. Students must have completed, or be concurrently enrolled in, an Associate in Arts, Bachelors, or Criminal Justice AAS Degree from an accredited institution for admission into this program.
4. Must have PPOE Coordinator Approval prior to being accepted into this program.

## Career Opportunities

Upon successful completion of this certificate program

students will be eligible to take the MN Peace Officers Standards and Training Exam (P.O.S.T.). Upon successful completion of the P.O.S.T. Exam, students will be qualified to apply to Minnesota Law Enforcement Agencies within the State of Minnesota.

## Career Titles

State Patrol Trooper, Police Officer, Sheriff's Deputy, Corrections Officer, Probation Officer, Department of Natural Resources Enforcement Officer, Criminal Investigator, Crime Scene Technician, Parole Officer, School Resource Officer, Chief of Police, Sheriff.

## Law Enforcement Skills Certificate

CRJU 2124 General Evidence and Identification Preparation (4 cr)

CRJU 2160 Use of Force .....

CRJU 2162 Firearms .....

CRJU 2164 Patrol Practicals .....

CRJU 2166 Tactical Communications/Relations .....

GRADUATION REQUIREMENT – 16 credits

# NATURAL RESOURCES LAW ENFORCEMENT

## Career Description

Students in the Natural Resources Law Enforcement Program learn skills that lead to becoming a conservation officer. Conservation officers work with fish and wildlife agencies, state parks, trails, forests, waters and wetlands, as well as work in educational activities within and throughout Minnesota. Conservation officers often work from 4x4 patrol vehicles, snowmobiles, ATV, and various watercrafts.

## Program Outcomes

Graduates will be able to:

- Demonstrate field identification of regionally important mammals, birds and fish and their communities;
- Use a broad range of technological tools to research, document, map, measure, record and analyze data relevant to natural resources;
- Navigate and safely function in an outdoor workplace;
- Demonstrate knowledge of structure, process and relationships between law enforcement, the courts and correctional systems;
- Apply tactical skills, weapon safety, defense and arrest tactics, vehicle operation, crisis management and force options;
- Process crime scenes from preliminary stage through disposition;
- Function in a multicultural society as a mature, adaptable citizen, while meeting the needs and challenges of clients and communities;
- Interpret and apply theory, law, policy and practice as it relates to juvenile delinquency and deviant behavior;
- Demonstrate an understanding of the roles of the legislative, judicial and executive branches and how they relate to criminal law;
- Apply knowledge of criminal law, constitutional law and Minnesota traffic code;
- Demonstrate strong and effective written and oral communication skills; and
- Understand the importance of ethics and ethical behavior in law enforcement.

## Special Program Requirements

Students must be able to complete skills portion of the program to become licensed. This involves several real-life crime-scene situations, firearms and physical proficiency, and law enforcement procedural practices. Students must have the Emergency Medical Responder certification (or higher) and the card must be valid at the time of the Post Board Exam.

- In addition to the program requirements listed, students must meet the following conditions in order to graduate:
1. At a minimum, students must achieve a grade of "C" or higher in courses listed in the above program.
  2. College Cumulative GPA Requirement: The cumulative

grade point average (GPA) must be at least 2.0  
3. College Technical Core GPA Requirement: The cumulative GPA of credits in the technical core of the diploma or degree must be at least 2.0

4. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

## Admissions

Program Admissions Requirements: (Please see the Criminal Justice Coordinator for further information.)

- Background Check: Students must complete and pass a background check prior to being admitted into the program. This background check must be completed prior to the first day of classes.
- MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a Psychologist approved by the Program Coordinator prior to admission into the program.

## Transfer Opportunities

Central Lakes College has an Articulation Agreement with Bemidji State University for transfer of Criminal Justice courses. Other colleges and universities conduct a student-by-student evaluation regarding transfer of courses and degree. Please see an advisor for further information.

## Career Opportunities

The selection process for being a conservation officer in Minnesota includes a written exam, division interview, background investigation, functional capacity exam, psychological assessment and a medical evaluation. In addition, conservation officers must be a United States Citizen, possess a valid Minnesota driver's license, have no felony convictions, have the ability to swim and possess a license or be eligible for licensing as a Minnesota peace officer at the time of hire.

## Career Titles

Conservation Officer

## Natural Resources Law Enforcement A.A.S.

REQUIRED CORE COURSES	
CRJU 1101 Criminal Justice .....	(3 cr)
CRJU 1104 Juvenile Justice .....	(3 cr)
CRJU 2101** Criminal Law .....	(3 cr)
CRJU 2102 Criminal Procedures .....	(4 cr)
CRJU 2108 Criminal Investigations.....	(3 cr)
CRJU 2140 Law Enforcement and Behavioral Science.....	(3 cr)
NATR 1106 Intro to Natural Resources Law Enforcement ..	(2 cr)
NATR 1125 Ichthyology .....	(3 cr)
NATR 1130 Mammalogy .....	(3 cr)
NATR 1135 Ornithology.....	(3 cr)

NATR 1360 Animal Behavior.....	(3 cr)
NATR 2110 Herpetology .....	(2 cr)
Total – 35 credits	

## ADDITIONAL REQUIRED CORE COURSES

Choose one of the following tracks:

Professional Peace Officer's License track:

CRJU 1112 Police and the Community .....	(3 cr)
CRJU 2106** Fitness for Law Enforcement .....	(2 cr)
CRJU 2114** Traffic Law.....	(3 cr)
CRJU 2124 General Evidence and Identification Preparation (4 cr)	
CRJU 2160* Use of Force .....	(2 cr)
CRJU 2162* Firearms.....	(3 cr)
CRJU 2164* Patrol Practicals .....	(5 cr)
CRJU 2166* Tactical Communications/Relations.....	(2 cr)
Total – 24 credits	

## Non-Licensure Track

NATR 1112 Land Measurement .....	(3 cr)
NATR 1120 Dendrology .....	(3 cr)
NATR 1140 Limnology .....	(3 cr)
NATR 1200 Introduction to Natural Resources .....	(3 cr)
NATR 1280 Introduction to GPS & GIS (Arc View) .....	(2 cr)
NATR 2130* Wildlife Management .....	(3 cr)
NATR 2140* Fisheries Management .....	(3 cr)
Total 20 credits	

## REQUIRED GENERAL EDUCATION

Students must complete the requirements listed in the AAS Degree/General Education Transfer Curriculum document.

BIOL 2415 General Ecology (Goals 3, 10) .....	(4 cr)
ENGL 1410 Composition I (Goal 1).....	(4 cr)
SOCL 2405 Criminology (Goal 5) .....	(3 cr)
SOCL 2481 Race, Ethnicity and Oppression (Goals 5, 7) ...	(3 cr)
Choose one (1) of the following:	
AMSL 2420 Deaf Culture (Goals 5, 7) .....	(3 cr)
SPAN 2420 Many Faces of Mexico (Goals 5, 8) .....	(3 cr)
Total 17 credits	

## GRADUATION REQUIREMENT 72 CREDITS

\*Denotes Prerequisites

\*\*These courses must be completed prior to SKILLS.

NOTE: Students must have the Emergency Medical Responder certification (or higher) and the card must be valid at the time of the Post Board Exam.

Individual semester plans are determined between instructor and student to best meet the student's needs.

# AUTOMATION TECHNOLOGIES CERTIFICATE

## Career Description

Professionals educated in automation technologies install and maintain complicated systems performing an array of functions through electronic equipment. Such equipment is used by power companies, manufacturers, air traffic and missile controllers to name a few organizations that depend upon transmitted communication and sophisticated monitoring devices.

## Program Information

This certificate provides introductory courses in production technologies and automation technologies to start students on a career pathway. Students engage in technical mathematics, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance, and safety. Course work also includes AC/DC power, digital electronics, analog circuits, and motor controls.

## Program Outcomes

Graduates will be able to:

- Gain a general knowledge of production technology processes;
- Gain knowledge and understanding of interpreting production prints;
- Apply technical mathematics skills to production processes;
- Demonstrate basic computer skills;
- Gain knowledge and understanding of AC/DC power, digital electronics, analog circuits, and motor controls;
- Graduates will be able to gain knowledge and understanding of AC/DC power, digital electronics, analog circuits, and motor controls.

## Transfer Opportunities

This certificate is offered collaboratively with Northland Community & Technical College, Northwest Technical College, Minneapolis Community and Technical College, Pine Technical College, Riverland Community College, St. Cloud Technical and Community College, and St. Paul College. Courses are transferable within all the listed colleges.

## Career Opportunities

With predicted 11 percent growth in job openings forecast to 2016, Minnesota career opportunities await the trained electrical and electronics repairer. Advanced manufacturing is identified as a high-demand, high-pay industry, with entry-level employment viewed as a path for advancing a career.

## Career Titles

Electronics repair technician, electronic testing technician, electrical and electronic installer.

## Automation Technology Certificate

CMAE 1502 Technical Mathematics .....	(3cr)
CMAE 1506 Introduction to Computer Applications .....	(2cr)
CMAE 1510 Print Reading .....	(2cr)
CMAE 1514 MSSC Safety .....	(2cr)
CMAE 1518 MSSC Manufacturing Processes & Production..	(2cr)
CMAE 1522 MSSC Quality Practice & Measurement .....	(2cr)
CMAE 1526 MSSC Maintenance Awareness .....	(2cr)
CMAE 1550 DC Power .....	(3cr)
CMAE 1552 AC Power .....	(3cr)
CMAE 1554 Digital Electronics .....	(3cr)
CMAE 1556 Analog Circuits .....	(3cr)
CMAE 1558 Motor Controls .....	(3cr)

Total - 30 Credits

GRADUATION REQUIREMENT 30 CREDITS

# CNC TECHNOLOGIES

## Career Description

Computer numerically controlled (CNC) machine tool programmers and operators develop and operate programs to control the machining or processing of metal or plastic parts by automatic machine tools, equipment, or systems. Most jobs are in manufacturing settings in a variety of industries including machine shops, aerospace, medical, automotive, and metalworking machining. Math, computer, and engineering skills are important in this field, but machinists also use a creative side to solve problems and make new designs.

## Program Information

In the Machine Tool Technology Program students learn how to use hand tools, laths and mills, computer-aided-drafting and design software, power machinery, and computerized equipment. The A.A.S. curriculum includes geometric tolerancing, advanced CAD/CAM, and advanced CNC milling and turning operations. Instruction takes place in a well-equipped shop for a hands-on, practical experience.

## Program Outcomes

Graduates will be able to:

- Read and interpret a mechanical working drawing;
- Perform precision measurement, layout, drilling, sawing, turning, milling, and precision grinding safely;
- Perform shop calculations;
- Program, setup, and operate a computer numerical control (CNC) turning center and machining center;
- Anticipate, choose, and troubleshoot the proper tooling based on manufacturing requirements;
- Manufacture assemblies to specification; and
- Apply effective communication and interpersonal skills in the machining industry.

## Career Opportunities

Employment of all machine occupations is projected to grow by 14% by 2020. One of the most important factors influencing employment growth is the use of labor saving machinery. Many companies are adopting new technologies, such as computer-controlled machines tools and robots, to improve quality, lower production costs, and remain competitive.

## CNC Technologies A.A.S.

Fall Semester – 1st Year

CMAE 1528 or CMAE 1529 Career Success Skills.....	(1 cr)
MATH 1500 Applied Mathematics.....	(3 cr)
MTTS 1110 Principles of Machine Operations I .....	(2 cr)
MTTS 1120 Machine Operations I .....	(3 cr)
MTTS 1121 Machine Operations II .....	(3 cr)
MTTS 1130 Print Reading .....	(2 cr)
RAST 1109 Computers in Industry .....	(2 cr)

Total – 16 credits

Spring Semester – 1st Year

MTTS 1111* Principles of Machine Operations II .....	(2 cr)
MTTS 1122* Machine Operations III .....	(3 cr)
MTTS 1124 Introduction to Engineering Graphics .....	(2 cr)
MTTS 1131* Print Applications .....	(2 cr)
MTTS 1134* CNC Operations .....	(3 cr)
MTTS 1135 CNC Programming and Process Planning .....	(2 cr)
MTTS 1140 CAD/CAM I .....	(2 cr)

Total – 16 credits

Fall Semester – 2nd Year

MTTS 2110 Geometric Dimensioning and Tolerancing .....	(1 cr)
MTTS 2112 Metallurgy .....	(1 cr)
MTTS 2116* Introduction to EDM .....	(2 cr)
MTTS 2118* Jigs and Fixtures .....	(1 cr)
MTTS 2130* CNC Milling and Turning .....	(4 cr)
MTTS 2134* CNC Operations Theory .....	(2 cr)
MTTS 2140* CAD/CAM II .....	(2 cr)
General Education .....	(3 cr)

Total – 16 credits

Spring Semester – 2nd Year

ENGL 1422 Practical Writing .....	(3 cr)
PHYS 1407* Principles of Physics .....	(3 cr)
General Education .....	(6 cr)

Total – 12 credits

GRADUATION REQUIREMENT 60 credits

\*Denotes Prerequisite

## CNC Technologies Diploma

Fall Semester – 1st Year

CMAE 1528 OR CMAE 1529 Career Success Skills .....	(1 cr)
MATH 1500 Applied Mathematics .....	(3 cr)
MTTS 1110 Principles of Machine Operations I .....	(2 cr)
MTTS 1120 Machine Operations I .....	(3 cr)
MTTS 1121 Machine Operations II .....	(3 cr)
MTTS 1130 Print Reading.....	(2 cr)
RAST 1109 Computers in Industry .....	(2 cr)

Total – 16 credits

Spring Semester – 1st Year

MTTS 1111* Principles of Machine Operations II .....	(2 cr)
MTTS 1122* Machine Operations III .....	(3 cr)
MTTS 1124 Introduction to Engineering Graphics .....	(2 cr)
MTTS 1131* Print Applications .....	(2 cr)
MTTS 1134* CNC Operations .....	(3 cr)
MTTS 1135 CNC Programming and Process Planning .....	(2 cr)
MTTS 1140 CAD/CAM I .....	(2 cr)

Total – 16 credits

Fall Semester – 2nd Year

MTTS 2110 Geometric Dimensioning and Tolerancing .....	(1 cr)
MTTS 2112 Metallurgy .....	(1 cr)
MTTS 2116* Introduction to EDM .....	(2 cr)
MTTS 2118* Jigs and Fixtures .....	(1 cr)
MTTS 2130* CNC Milling and Turning.....	(4 cr)
MTTS 2134* CNC Operations Theory.....	(2 cr)
MTTS 2140* CAD/CAM II .....	(2 cr)
General Education.....	(3 cr)

Total – 16 credits

GRADUATION REQUIREMENT 48 CREDITS

\*Denotes Prerequisites



# MACHINE OPERATIONS DIPLOMA

## Program Information

The Manufacturing Maintenance Technician Diploma Program at Central Lakes College provides a comprehensive foundation to get you started as a technician suited to work in any industrial plant where precision, efficiency, and safety are valued. You will learn skills in electronics, mechanical systems, and troubleshooting to become qualified to repair and maintain computerized equipment. Instruction takes place in a well-equipped shop for a hands-on, practical experience. The diploma you earn from CLC will signify your preparation for career opportunities.

## Program Outcomes

Graduates will be able to:

- Select correct testing equipment for troubleshooting machine malfunctions;
- Use and understand preventive maintenance procedures;
- Use and understand predictive maintenance procedures;
- Troubleshoot complex electrical control circuits and devices, and;
- Troubleshoot complex mechanical systems.

## Career Description

Maintenance machinists clean, oil, and maintain the machine tools. They also repair or make new parts for existing machinery. Skilled manufacturing maintenance technicians are needed to keep the complex industrial machinery of today's manufacturing facilities running smoothly. Their work keeps factories productive and makes sure that the final product is perfect. Their work assures that machine operators are safe. A manufacturing maintenance technician is often responsible for performing entry-level to complex troubleshooting and repair techniques on manufacturing equipment and electrical/electronic or mechanical systems. As a technician you will be responsible for analyzing, troubleshooting, maintaining, and repairing complex equipment. To advance in this career, maintenance machinists should gain proficiency with basic mechanical/hydraulic and pneumatic concepts related to machine tools.

## Career Titles

Some common career titles in this field include manufacturing maintenance technician, development mechanic, experimental and electrical mechanic, maintenance machinist, maintenance specialist, maintenance technician, and trouble shooter.

## Machine Operations Diploma

Program Course Requirements  
Fall Semester – 1st Year

CMAE 1528 OR CMAE 1529 Career Success Skills .....	(1 cr)
MATH 1500 Applied Mathematics .....	(3 cr)
MTTS 1110 Principles of Machine Operations I .....	(2 cr)
MTTS 1120 Machine Operations I .....	(3 cr)
MTTS 1121 Machine Operations II .....	(3 cr)
MTTS 1130 Print Reading.....	(2 cr)
RAST 1109 Computers in Industry.....	(2 cr)
Total – 16 credits	

Spring Semester – 1st Year	
MTTS 1111* Principles of Machine Operations II .....	(2 cr)
MTTS 1122* Machine Operations III .....	(3 cr)
MTTS 1124 Introduction to Engineering Graphics .....	(2 cr)
MTTS 1131* Print Applications .....	(2 cr)
MTTS 1134* CNC Operations.....	(3 cr)
MTTS 1135 CNC Programming and Process Planning .....	(2 cr)
MTTS 1140 CAD/CAM I .....	(2 cr)
Total 16 credits	

GRADUATION REQUIREMENT 32 CREDITS

\*Denotes Prerequisites

# MACHINE TECHNOLOGY CERTIFICATE

## Career Description

Production machinists work primarily in the production of large volumes of one single part, particularly parts that require strict adherence to specs and involve many complicated operations. Machinists decide what cutting tool is used and the speed the part is made, as well as the feed rate, while the programmer is in charge of setting up the path the cut will follow.

## Program Information

This certificate provides introductory courses to production and machining technology to obtain basic skills for other manufacturing career pathways. Training prepares the graduate for an entry-level machinist production position. Students engage in technical math, introductory computer skills, print interpretation, manufacturing processes, machine tool theory and lab, quality control, maintenance and safety.

## Program Outcomes

Graduates will be able to:

- Gain a general knowledge of production technology processes;
- Gain knowledge and understanding of interpreting production prints;
- Apply technical mathematics skills to production processes;
- Demonstrate basic computer skills;
- Gain knowledge and understanding of machine tool print reading, machine tool technology theory and lab principles, machining math, an introduction to computer numerical control, and geometric dimensioning and tolerancing.

## Transfer Opportunities

This certificate is offered collaboratively with Northland Community & Technical College, Northwest Technical College, Minneapolis Community and Technical College, Pine Technical College, Riverland Community College, St. Cloud Technical and Community College, and St. Paul College. Courses are transferable within all the listed colleges.

## Career Opportunities

The Minnesota Department of Employment and Economic Development long-term projections show the need for a number of replacement workers in the machinist occupation. Advanced manufacturing continues to be considered a high-demand, high-pay industry in Minnesota. The certificate program yields marketable skills and knowledge to entry-level employees.

## Career Titles

Machine tool operator, tool operator, production worker, machine setter or tender.

## Machine Technology Certificate

CMAE 1502 Technical Mathematics.....	(3 cr)
CMAE 1506 Introduction to Computer Applications .....	(2 cr)
CMAE 1510 Print Reading .....	(2 cr)
CMAE 1514 MSSC Safety .....	(2 cr)
CMAE 1518 MSSC Manufacturing Processes & Production .....	(2 cr)
CMAE 1522 MSSC Quality Practice & Measurement .....	(2 cr)

CMAE 1526 MSSC Maintenance Awareness .....	(2 cr)
CMAE 1530 Machining Math.....	(2 cr)
CMAE 1532 Machine Tool Print Reading .....	(2 cr)
CMAE 1534 Machine Tool Technology Theory.....	(2 cr)
CMAE 1536 Machine Tool Technology Lab I .....	(2 cr)
CMAE 1538 Machine Tool Technology Lab II .....	(2 cr)
CMAE 1540 Introduction to CNC .....	(3 cr)
CMAE 1542 Geometric Dimensioning & Tolerancing .....	(2 cr)
Total 30 Credits	

GRADUATION REQUIREMENT 30 CREDITS

# MANUFACTURING WELDING TECHNICIAN

## Career Description

Skilled welding, soldering, and brazing workers generally plan work from drawings or specifications, or they use their knowledge of fluxes and base metals to analyze the parts to be joined.

Highly skilled welders work with a wide variety of materials in addition to steel, such as titanium, aluminum, or plastics.

## Program Information

Students in the Manufacturing Welding Technician Diploma Program will earn credits at both the Brainerd and Staples campuses.

Courses in blueprint reading, shop mathematics, and mechanical drawing are among the essential requirements for obtaining skills sought by employers.

Central Lakes College offers a comprehensive foundation to get you started as a technician suited to work in any industrial plant where precision, efficiency, and safety are valued. Instruction takes place in a well-equipped shop for a hands-on, practical experience.

## Program Outcomes

Graduates will be able to:

- Read and interpret a mechanical and fabrication design and working drawing;
- Perform precision measurement, layout, drilling, sawing, cutting, welding, turning, milling, and precision grinding safely;
- Program, setup and operate a computer numerical control (CNC) turning center and machining center;
- Identify proper welding consumables and fluxes for a selected process;
- Perform a variety of welding processes using appropriate equipment and setup procedures for GMAW, SMAW, GTAW, and OAW;
- Apply principles of basic welding fundamentals, symbols, blueprints, and welding metallurgy; and
- Demonstrate effective written and oral communication skills.

## Special Program Requirements

Students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0; and
3. Residency Requirement: students must complete 25% (15) of their credits at Central Lakes College.

## Certification

Job opportunities and advancement can be enhanced by becoming certified in a particular machining skill. The National Institute for Metalworking Skills has developed

standards for machine setters, operators, and metal tenders.

After taking a course approved by the organization and passing a written exam and performance requirement, the worker is issued a credential that signifies competence in a specific machining operation.

## Career Opportunities

Job prospects should be excellent over the next ten years as employers report difficulty finding enough qualified people. In addition, many openings are expected to arise as a large number of workers retire over the next decade.

The construction industry is expected to have solid growth over the next decade and an increasing demand for welders. Government funding for shipbuilding as well as for infrastructure repairs and improvements are expected to generate additional welding jobs.

## Manufacturing Welding Technician Diploma

### Brainerd Courses

#### First Semester

CCST 1510 College Success Skills OR CCST 1530 Employment Strategies .....	(3 cr)
MATH 1500 Applied Math .....	(3 cr)
WELD 1100 Introduction to Welding .....	(2 cr)
WELD 1101 Shielded Metal ARC Welding .....	(4 cr)
WELD 1109 Shearing, Punching & Cutting Systems .....	(1 cr)
WELD 1111 Blueprint Reading .....	(2 cr)
<b>Total – 15 Credits</b>	

#### Second Semester

MASE 1106 Introduction to Electronics .....	(2 cr)
WELD 1115* Gas Tungsten ARC Welding .....	(4 cr)
WELD 1128* Metal Fabrication .....	(3 cr)
WELD 1130* Advanced Welding Processes .....	(4 cr)
WELD 1140 Trade Knowledge .....	(2 cr)
<b>Total – 15 Credits</b>	

### Staples Courses

#### First Semester

MTRD 1130 Introduction to Engineering Graphics .....	(2 cr)
MTRD 1133 Machine Theory I .....	(1 cr)
MTRD 1134 Blueprints I .....	(2 cr)
MTRD 1137 Surface Grinding I .....	(1 cr)
MTRD 1215 Introduction to Milling Operations .....	(3 cr)
MTRD 1221 Introduction to Lathe Operations .....	(2 cr)
MTRD 1265 CNC Programming & Process Planning .....	(2 cr)
RAST 1110 Introduction to Manufacturing .....	(2 cr)
<b>Total – 15 Credits</b>	

#### Second Semester

MTRD 1264 Introduction to Machining Processes OR RAST 2150 Introduction to Robot Operations .....	(2 cr)
MTRD 2133* Machine Theory II .....	(1 cr)
MTRD 2134* Blueprints II .....	(2 cr)
MTRD 2137* Surface Grinding II .....	(2 cr)
MTRD 2138 Conversational Programing.....	(1 cr)
MTRD 2160* CAD/CAM .....	(2 cr)
MTRD 2221* CNC Milling Operations .....	(6 cr)

MTRD 2223\* CNC Turning Operations .....(2 cr)

Total – 18 Credits

GRADUATION REQUIREMENT 63 CREDITS

\* Denotes Prerequisites

# MECHATRONICS DIPLOMA

## Career Description

Mechatronics combines the knowledge of mechanical technology with knowledge of electrical and electronic circuits. Electro-mechanical technicians install, troubleshoot, repair, and upgrade electronic and computer-controlled mechanical systems, such as robotic assembly machines. Technicians in this field must have skills in electricity, electronics, instrumentation, programmable logical controllers, microprocessors, automation and robotics.

## Program Information

In the Mechatronics Diploma program students prepare for entry-level technician positions in the areas of robotics, industrial manufacturing, instrumentation, electronics, and process control automation. Coursework covers industrial electronics, electrical motor control, AC/DC electronics, process control, computer-aided design, programmable controllers, computers, manufacturing, transducers, and fluid power. Instruction takes place in a well-equipped lab for a hands-on, practical experience.

## Program Outcomes

Graduates will be able to:

- Identify and apply appropriate safety procedures;
- Apply knowledge and skills in electrical systems;
- Apply knowledge and skills in mechanical systems;
- Apply knowledge and skills in creating program code;
- Test and debug complex automated equipment to machine specifications;
- Troubleshoot complex electrical circuits and machine control programs.

## Special Program Requirements

Students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted at CLC must be at least 2.0.
2. College Technical Core GPA Requirement: cumulative GPA of credits attempted towards the technical core of the diploma or degree must be at least 2.0.
3. Residency Requirement: students must complete one-third (13) of their credits at Central Lakes College.

## Career Opportunities

Employment of electro-mechanical technicians is expected to grow by 14% by 2020. Many of these technicians are employed in manufacturing industries. Mechatronics training has two advantages for electro-mechanical technicians. First, it is multidisciplinary, which gives technicians versatile training that is applicable across a broad

range of fields. Second, it allows a technician to contribute to a product in its entirety, from concept to design.

## Career Titles

Examples of career titles in this field include electro-mechanical technician, industrial automation technician, electronics technician, maintenance technician, field service technician, instrumentation and engineering technician and mechatronics engineer.

## Mechatronics Diploma

Fall Semester	
MATH 1500 Applied Mathematics .....	(3 cr)
MTTS 1264 Intro to Machining Process .....	(2 cr)
RAST 1101 Industrial Electronics I .....	(3 cr)
RAST 1104 Introduction to Automation .....	(2 cr)
RAST 1109 Computers in Industry .....	(2 cr)
RAST 1110 Intro to Manufacturing .....	(2 cr)
RAST 1111 Industrial Electronics Lab I .....	(2 cr)
Total – 16 Credits	

Spring Semester	
RAST 1102* Industrial Electronics II .....	(3 cr)
RAST 1103* Motors and Drives .....	(3 cr)
RAST 1109 Computers in Industry .....	(2 cr)
RAST 1113* Motors & Drives Lab .....	(3 cr)
RAST 1206* Programmable Logic Controllers I .....	(3 cr)
RAST 1212* Industrial Electronics Lab II .....	(2 cr)
RAST 2105* Transducers .....	(2 cr)
RAST 2165* Fluid Power.....	(2 cr)
Total – 20 Credits	

Summer Session	
RAST 2106* Industrial Electronics III .....	(2 cr)
RAST 2116* Industrial Electronics Lab III.....	(2 cr)
Total – 4 Credits	

GRADUATION REQUIREMENT 40 CREDITS

\* Denotes Prerequisites

# PRODUCTION TECHNOLOGIES CERTIFICATE

## Career Description

Trained in production technologies, a team assembler is part of a team responsible for assembling entire products or components of products. The assembler performs all tasks conducted by the team in the assembly process and rotates through all or most of them rather than being assigned a specific task on a permanent basis. As a team leader one may participate in making management decisions affecting the work.

## Program Information

Courses give an introduction to production technologies and provide initial information to start students in a manufacturing career pathway. Students engage in technical math, introductory computer skills, print interpretation, manufacturing processes, quality control, maintenance and safety.

## Program Outcomes

Graduates will be able to:

- Gain a general knowledge of production technology processes;
- Gain knowledge and understanding of interpreting production prints;
- Apply technical mathematics skills to production processes; and
- Demonstrate basic computer skills.

## Transfer Opportunities

This certificate is offered collaboratively with Northland Community & Technical College, Northwest Technical College, Minneapolis Community and Technical College, Pine Technical College, Riverland Community College, St. Cloud Technical and Community College, and St. Paul College through the 360 Center of Excellence in Manufacturing and Applied Engineering. Courses are transferable within all the listed colleges.

## Career Titles

Assembly line machine operator, manufacturing assembler, team assembler, assembly technician, assembly operator.

## Production Technology Certificate

CMAE 1502 Technical Mathematics .....	(3 cr)
CMAE 1506 Introduction to Computer Applications.....	(2 cr)
CMAE 1510 Print Reading.....	(2 cr)
CMAE 1514 MSSC Safety.....	(2 cr)
CMAE 1518 MSSC Manufacturing Processes & Production (2 cr)	
CMAE 1522 MSSC Quality Practice & Measurement .....	(2 cr)
CMAE 1526 MSSC Maintenance Awareness .....	(2 cr)

CMAE 1528 Career Success Skills OR CMAE 1529 Career Success Skills .....

Total – 16 Credits

GRADUATION REQUIREMENT 16 CREDITS

# ROBOTICS/AUTOMATED SYSTEMS TECHNOLOGIES

## Career Description

Robotic automated systems technicians are an integral part of modern manufacturing firms. Knowledge of robotic programming, flexible manufacturing, CAD systems, industrial communications and overall system integration is essential. Technologies such as new-generation robot controllers, sensors, and electrical control systems have created a need for highly specialized training. Career opportunities are available for robotic technicians in the building, repairing, installing, maintaining, and programming of robotic automated systems. Robotic technicians are valued by industry employers for their problem-solving skills.

## Program Information

The Robotics Automated Systems Technology Program uses the curriculum of technical industry standards set forth by the Robotics Industry Association (RIA) along with a strong advisory board made up of industry leaders in the different manufacturing career areas. The program has the largest robotics automated systems lab in the upper Midwest. Students are trained on the same robots, controllers, and programming languages used by automated manufacturing companies.

## Program Outcomes

Graduates will be able to:

- Identify and apply appropriate safety procedures;
- Apply knowledge and skills in electrical systems;
- Apply knowledge and skills in mechanical systems;
- Apply knowledge and skills in creating program code;
- Analyze and apply specific troubleshooting knowledge and technology in the areas of electrical, mechanical, software and program code;
- Apply effective communication and interpersonal skills as an individual and as a team member.

## Special Program Requirements

Students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: cumulative GPA of credits attempted towards the technical core of the diploma or degree must be at least 2.0;
3. Residency Requirement: students must complete one-third (23) of their credits at Central Lakes College.

## Accreditation

Robotics Industry Association

## Transfer Opportunities

Courses in this program transfer to Bemidji State University, St. Cloud State University and North Dakota State University.

## Career Opportunities

Employment opportunities are abundant in automotive manufacturers, aerospace manufacturers, machine tool companies, welding and fabrication, packaging machinery manufacturers, robotic system integrators, nuclear power facilities, and robotic manufacturers. Selected employers of recent graduates include: 3-M, Acieta, Brenton Engineering, Delkor, Douglas Machine, Fanuc, Graphics Packaging, Hales, Hegman Machine Tool, Motoman, PAR Systems, PRI Robotics, Robotics Automation, Wolf Robotics, and Yaskawa Motoman Robotics.

## Robotics/Automated Systems Technology A.A.S.

First Year – Fall Semester

- MTTS 1264 Intro to Machining Process (2 cr)
- RAST 1101 Industrial Electronics I (3 cr)
- RAST 1104 Introduction to Automation (2 cr)
- RAST 1109 Computers in Industry (2 cr)
- RAST 1110 Intro to Manufacturing (2 cr)
- RAST 1111 Industrial Electronics Lab I (2 cr)
- RAST 1120 Intro to Engineering Graphics (2 cr)

General Education (6 cr)

Total – 21 Credits

Spring Semester

- MATH 1470 College Algebra (3 cr)
- RAST 1102\* Industrial Electronics II (3 cr)
- RAST 1103\* Motors and Drives (3 cr)
- RAST 1113\* Motors & Drives Lab (3 cr)
- RAST 1206\* Programmable Logic Controllers I (3 cr)
- RAST 1212\* Industrial Electronics Lab II (2 cr)
- General Education (3 cr)

Total – 20 Credits

Summer Session

- RAST 2101\* Application Planning & Layout (2 cr)
- RAST 2106\* Industrial Electronics III (2 cr)
- RAST 2116\* Industrial Electronics Lab III (2 cr)

Total – 6 Credits

Second Year – Fall Semester

- RAST 2105\* Transducers (2 cr)
- RAST 2132\* Robotic Programming (3cr)
- RAST 2151\* Robot Integration Lab (6 cr)
- RAST 2165\* Fluid Power (2 cr)
- RAST 2355\* Programmable Logic Controllers II (2 cr)
- General Education (3 cr)

Total – 18 Credits

Spring Semester

- RAST 2154\* Robot Controller Maintenance (2 cr)
- RAST 2395\* Advanced Robot Controller Programming (2 cr)

- RAST 2390\* Robotics Internship (1-3 cr)
- or RAST 2399\* Independent Study (1-3 cr)

Total – 5 Credits

GRADUATION REQUIREMENT – 70 CREDITS

\*Denotes Prerequisites

## Robotics/Automated Systems Technology Diploma

First Year – Fall Semester

- MATH 1500 Applied Math (3 cr)
- MTTS 1264 Intro to Machining Process (2 cr)
- RAST 1101 Industrial Electronics I (3 cr)
- RAST 1111 Industrial Electronics Lab I (2 cr)
- RAST 1104 Introduction to Automation (2 cr)
- RAST 1109 Computers in Industry (2 cr)
- RAST 1110 Intro to Manufacturing (2 cr)
- RAST 1120 Intro to Engineering Graphics (2 cr)

Total – 18 Credits

Spring Semester

- General Education (3 cr)
- RAST 1102\* Industrial Electronics II (3 cr)
- RAST 1212\* Industrial Electronics Lab II (2 cr)
- RAST 1103\* Motors and Drives (3 cr)
- RAST 1113\* Motors & Drives Lab (3 cr)
- RAST 1206\* Programmable Logic Controllers I (3 cr)

Total – 17 Credits

Summer Session

- RAST 2101\* Application Planning & Layout (2 cr)
- RAST 2106\* Industrial Electronics III (2 cr)
- RAST 2116\* Industrial Electronics Lab III (2 cr)

Total – 6 Credits

Second Year – Fall Semester

- RAST 2105\* Transducers (2 cr)
- RAST 2132\* Robotic Programming (3cr)
- RAST 2151\* Robot Integration Lab (6 cr)
- RAST 2165\* Fluid Power (2 cr)
- RAST 2355\* Programmable Logic Controllers II (2 cr)

Total – 15 Credits

Spring Semester

- RAST 2154\* Robot Controller Maintenance (2 cr)
- RAST 2395\* Advanced Robot Controller Programming (2 cr)

- RAST 2390\* Robotics Internship (1-3 cr)
- or RAST 2399 Independent Study (1-3 cr)

Total – 5 Credits

GRADUATION REQUIREMENT – 61 CREDITS

\*Denotes Prerequisites

## Robotic Human Machine Interface Advanced Certificate

- RAST 2121\* SCADA Programming (2 cr)
- RAST 2122\* HMI Programming (2 cr)

- RAST 2153\* Applied Robotic Certification Lab (6 cr)
- Total – 10 Credits

\*Denotes Prerequisite

## Robotic Manufacturing Certificate

- MATH 1500 Applied Mathematics (3 cr)
  - MTTS 1264 Intro to Machining Process (2 cr)
  - RAST 1120 Intro to Engineering Graphics (2 cr)
  - RAST 1101 Industrial Electronics I (3 cr)
  - RAST 1111 Industrial Electronics Lab I (2 cr)
  - RAST 1104 Intro to Automation (2 cr)
  - RAST 1109 Computers in Industry (2 cr)
  - RAST 1110 Intro to Manufacturing (2 cr)
- Total – 18 Credits

## Robotic Offline Programming Advanced Certificate

- RAST 2120\* Offline Programming and Simulation (3 cr)
- RAST 2153\* Applied Robotic Certification Lab (6 cr)

Total – 9 Credits

\*Denotes Prerequisite

## Robotic Vision Advanced Certificate

- RAST 2123\* Robotic Vision Programming (2 cr)
- RAST 2124\* Lenses, Lighting, and Vision Hardware (2 cr)
- RAST 2153\* Applied Robotic Certification Lab (6 cr)

Total – 10 Credits

\*Denotes Prerequisites

# ROBOTIC WELDING CERTIFICATE

## Career Description

Robotic welders set up automated equipment within a robotic welding cell using safety devices, user operator systems, and welding power supplies. They also maintain welding torch equipment, edit and/or create robotic welding programs, change existing welding programs, and program welding parameters.

## Program Information

The Robotic Welder Certificate instructs students in welding cell safety devices, blueprints and symbols. Upon successful completion of the program, students will be skilled in manual and robotic welding procedures, creating and editing robot welding programs, error recovery procedures, and basic maintenance of equipment including lubrication of the robot and welding fixtures.

## Program Outcomes

Graduates will be able to:

- Apply proper industry safety standards;
- Apply welding and cutting safety procedures;
- Perform a variety of welding processes using appropriate equipment and setup procedures for SMAW and GMAW;
- Apply principles of basic welding fundamentals, symbols, blueprints and welding metallurgy;
- Develop correct robotic welding parameters for different welding procedures;
- Perform robotic welding controller operations and programming manual procedures;
- Create robotic welding programs;
- Upload and download existing programs;
- Modify existing welding programs;
- Robot and automated cell system error recovery procedures;
- Robotic welding cell cycle time calculations.

## Robotic Welding Certificate

RAST 1104 Introduction to Automation .....	(2 cr)
RAST 2134 Robotic ARC Welding .....	(3 cr)
WELD 1100 Introduction to Welding .....	(2 cr)
WELD 1101 Shielded METal ARC Welding.....	(4 cr)
WELD 1111 Blueprint Reading.....	(2 cr)
WELD 1117 Gas Metal ARC Welding .....	(3 cr)
GRADUATION REQUIREMENT	16 CREDITS

# ROBOTIC WELDING ADVANCED

## Career Description

Robotic automated systems technicians are an integral part of modern manufacturing firms. Knowledge of robotic programming, flexible manufacturing, CAD systems, industrial communications and overall system integration is essential. Technologies such as new-generation robot controllers, sensors, and electrical control systems have created a need for highly specialized training. Career opportunities are available for robotic technicians in the building, repairing, installing, maintaining, and programming of robotic automated systems. Robotic technicians are valued by industry employers for their problem-solving skills.

## Program Information

The Robotics Automated Systems Technology Program uses the curriculum of technical industry standards set forth by the Robotics Industry Association (RIA) along with a strong advisory board made up of industry leaders in the different manufacturing career areas. The program has the largest robotics automated systems lab in the upper Midwest. Students are trained on the same robots, controllers, and programming languages used by automated manufacturing companies.

## Program Outcomes

Graduates will be able to:

- Identify and apply appropriate safety procedures;
- Apply knowledge and skills in electrical systems;
- Apply knowledge and skills in mechanical systems;
- Apply knowledge and skills in creating program code;
- Analyze and apply specific troubleshooting knowledge and technology in the areas of electrical, mechanical, software and program code;
- Apply effective communication and interpersonal skills as an individual and as a team member.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. Residency Requirement: students must complete one-third (4) of their credits at Central Lakes College.

## Career Opportunities

Employment opportunities are abundant in automotive manufacturing, aerospace manufacturers, machine tool companies, welding and fabrication, packaging machinery manufacturers, robotic system integrators, nuclear power plants, and robotic manufacturers. Selected employers of recent graduates include: 3-M, ABB, Acieta, Automation Inc., Automated Concepts, Brenton Engineering, Delkor Systems, Douglas Machine, Ellison Technologies, FANUC Robotics, Graphics Packaging, Hales, Hegman Machine Tool, Imation, Yaskawa Motoman Robotics, PAR Systems, PRI Robotics, Robotics Automation, Tetra Pak, and Wolf Robotics.

## Career Titles

Examples of career titles held by students obtaining this certificate include field service engineer, applications engineer, applications programmer, automated systems engineer, automated systems technician, and production

systems technician.

## Robotic Welding Advanced Certificate

RAST 2120* Offline Programming and Simulation .....	(3 cr)
RAST 2134* Robotic ARC Welding .....	(3 cr)
RAST 2153* Applied Robotic Certification Lab.....	(6 cr)
Total	12 Credits

\*Denotes Prerequisite

# WELDING AND FABRICATION

## Career Description

With four program options, students prepare for a career in the construction, metal fabrication, repair, service, and other metal working industries. Learn arc welding, gas metal arc welding, flux core tig, and the use of oxyacetylene hand and machine cutting equipment. In addition, students will learn to use the hand and computer numerically controlled (CNC) plasma cutting machine.

## Program Information

The Welding and Fabrication Program introduces blueprint reading for welders. Upon completion of the program, students will be ready to take welding certification and job entry tests.

## Program Outcomes

Graduates will be able to:

- Apply proper industry safety standards;
- Apply welding and cutting safety procedures;
- Identify proper welding consumables and fluxes for a selected process;
- Perform a variety of welding processes using appropriate equipment and setup procedures and for GMAW, SMAW, GTAW, and OAW;
- Apply principles of basic welding fundamentals, symbols, blueprints and welding metallurgy;
- Design and execute fabrication projects to specifications;
- Read and interpret fabrication blueprints and drawings;
- Demonstrate effective written and oral communication skills.

## Transfer Opportunities

Some welding courses can be transferred to a variety of the four-year colleges. Because each college has its own requirements, check with a counselor about transferability.

## Career Opportunities

Graduates have found employment in a wide variety of occupations ranging from pipe welding in construction projects to opportunities in manufacturing.

## Career Titles

Common career titles for this field include production welder, welder fabrication person, metal fabrication person, shop foreman in fabrication, welding shop foreman, welding shop owner or manager, welding supply salesperson, and welding product salesperson.

## Welding and Fabrication A.A.S.

First Year – Fall Semester  
 CCST 1530 Employment Strategies .....(3 cr)

MATH 1500 Applied Math .....(3 cr)  
 WELD 1100 Intro to Welding .....(2 cr)  
 WELD 1101 Shielded Metal ARC Welding .....(4 cr)  
 WELD 1111 Blueprint Reading.....(2 cr)  
 WELD 1117 Gas Metal ARC Welding .....(3 cr)  
 WELD 1140 Trade Knowledge .....(2 cr)  
 Total – 19 Credits

Spring Semester  
 MASE 1106 Intro to Electronics .....(2 cr)  
 WELD 1112 Blueprint Reading II.....(2 cr)  
 WELD 1114 Metallurgy & Fabrication .....(2 cr)  
 WELD 1115 Gas Tungsten ARC Welding .....(4 cr)  
 WELD 1128\* Metal Fabrication.....(3 cr)  
 WELD 1132 Testing/Codes & Inspection .....(2 cr)  
 WELD 1134 Welding Qualification.....(2 cr)  
 Total – 17 Credits

Summer Semester  
 WELD 1130\* Advanced Welding Processes .....(4 cr)  
 WELD 1150 Advanced Metal Fabrication .....(4 cr)  
 Total – 8 Credits

Second Year – Fall Semester  
 General Education .....(16 cr)  
 Total – 16 Credits  
 GRADUATION REQUIREMENT 60 CREDITS  
 \*Denotes Prerequisites

## Welding and Fabrication Diploma

Fall Semester  
 WELD 1100 Introduction to Welding .....(2 cr)  
 WELD 1101 Shielded Metal ARC Welding I .....(2 cr)  
 WELD 1111 Blueprint Reading I .....(2 cr)  
 WELD 1115 Gas Tungsten ARC Welding I .....(2 cr)  
 WELD 1117 Gas Metal ARC Welding I.....(2 cr)  
 WELD 1140 Welding Trade Knowledge .....(4 cr)  
 WELD 1160 Welding Theory .....(4 cr)  
 TOTAL – 18 credits

Spring Semester  
 CCST 1530 Employment Strategies .....(3 cr)  
 WELD 1102\* Shielded Metal ARC Welding II .....(3 cr)  
 WELD 1112\* Blueprint Reading II (Welding Systems).....(2 cr)  
 WELD 1116\* Gas Tungsten ARC Welding II.....(3 cr)  
 WELD 1118\* Gas Metal ARC Welding II .....(3 cr)  
 WELD 1150\* Advanced Metal Fabrication/CNC Automation (4 cr)  
 TOTAL – 18 credits

Summer Session  
 WELD 1113\* Blueprint Reading III (CAD Systems) .....(2 cr)  
 WELD 1120\* Fabrication Design and Construction .....(4 cr)  
 WELD 1134\* Welding Qualification .....(3 cr)  
 TOTAL – 9 credits  
 GRADUATION REQUIREMENT 45 credits  
 \*Denotes Prerequisites

# WELDING TECHNOLOGY CERTIFICATE

## Career Description

Skilled welding, soldering, and brazing workers generally plan work from drawings or specifications or use their knowledge of fluxes and base metals to analyze the parts to be joined. These workers then select and set up welding equipment, execute the planned welds, and examine welds to ensure that they meet standards or specifications. Some welders have limited duties and perform routine jobs that have been planned and laid out. Highly skilled welders work with a wide variety of materials in addition to steel, such as titanium, aluminum, or plastics.

## Program Information

Introductory courses survey production technologies and welding fundamentals. Students use technical mathematics, computer skills, and hands-on experiences with specific welding processes. They learn welding print reading and symbol interpretation, manufacturing processes, quality control, metallurgy, maintenance, and safety.

## Program Outcomes

Graduates will be able to:

- Gain a general knowledge of production technology processes;
- Gain knowledge and understanding of interpreting production prints;
- Apply technical mathematics skills to production processes;
- Demonstrate basic computer skills;
- Gain knowledge and understanding and skills related to welding print reading and interpreting symbols, following welding procedures, safety, metallurgy and mechanical properties of materials, and hands on experience with specific welding processes including oxyacetylene cutting and welding, shielded metal arc welding, gas metal arc welding, flux core arc welding, and gas tungsten arc welding.

## Transfer Opportunities

This certificate is offered collaboratively with Northland Community & Technical College, Northwest Technical College, Minneapolis Community and Technical College, Pine Technical College, Riverland Community College, St. Cloud Technical and Community College, St. Paul College. Courses are transferable within all the listed colleges.

## Career Opportunities

Long-term projections indicate a high demand for replacement workers in welding-related occupations. Advanced manufacturing is considered a high-demand, high-pay industry in Minnesota.

## Welding Technology Certificate

CMAE 1502 Technical Mathematics .....(3 cr)  
 CMAE 1506 Introduction to Computer Applications .....(2 cr)  
 CMAE 1510 Print Reading .....(2 cr)  
 CMAE 1514 MSSC Safety.....(2 cr)  
 CMAE 1518 MSSC Manufacturing Processes & Production (2 cr)  
 CMAE 1522 MSSC Quality Practice & Measurement .....(2 cr)  
 CMAE 1526 MSSC Maintenance Awareness .....(2 cr)  
 CMAE 1560 Interpreting Symbols .....(2 cr)  
 CMAE 1562 Oxy Fuel.....(3 cr)  
 CMAE 1564 SMAW .....(3 cr)  
 CMAE 1566 GMAW/FCAW.....(3 cr)  
 CMAE 1568 GTAW .....(3 cr)  
 CMAE 1570 Metallurgy and Mechanical Properties of Mat. (1 cr)  
 Total 30 Credits  
 GRADUATION REQUIREMENT 30 CREDITS

# GRAPHIC DESIGN

## Career Description

A graphic designer is a creative problem solver who is trained to conceive, plan, and execute a design that communicates a direct message to an audience in an imaginative and visually arresting manner. Effective visual communication requires a graphic designer to communicate ideas and information in ways that will get the attention of and motivate a viewer. Ideas are generated through a design process in which graphic designers research, organize, and interpret the information; define the objectives; originate ideas; and create new visual forms. New and constantly evolving computer and communication technologies further challenge the role of the graphic designer in creating imaginative and clear messages for vastly different audiences. Meeting this challenge requires use of the best media tools for development and delivery of ideas and information: print, photography, packaging, logos, publications, the internet, film, television, and animation.

## Program Information

In the Graphic Design Program, students will take visual ideas from initial concept through creative and technical development and, ultimately, to a final form that is ready for production. Various tools are used, from hand tools for sketches to the latest computerized aids. We focus on projects modeled with industry realities, relevant to high-impact, effective communication.

## Program Outcomes

Graduates will be able to:

- Select appropriate software tools to achieve effective design solutions;
- Communicate design concepts at various stages of development using the design process;
- Develop print and multimedia concepts using traditional, computer-based, and video design tools;
- Develop and present creative portfolios verbally and in writing to clients;
- Interact with clients, marketing personnel, copy writers, web designers, photographers, and printing companies; and
- Demonstrate a respect for diversity of ideas and concepts in a group environment.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative

GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0; and

3. Residency Requirement: students must complete 25% (15) of their credits at Central Lakes College.

## Transfer Opportunities

Students have the opportunity to transfer to Bemidji State University and finish a four-year Bachelor of Arts in Design Technology with an emphasis in Digital Design/Print, Digital Design/Electronic, or Exhibit Design.

## Career Opportunities

There are many employment opportunities in Minnesota for people in the graphic design field. The Twin Cities, Duluth, Brainerd, and St. Cloud are some of the hot spots in the area for jobs in this field.

## Career Titles

Common career titles in this field include advertising agency designer, multimedia designer, corporate in-house designer, print designer, art director, package designer, poster/billboard designer, website designer, magazine designer, video editor, book designer, and newspaper designer.

## Graphic Design A.A.S

First Year – Fall Semester

GDES 1105 Concepts of Design .....	(3 cr)
GDES 1134 Typography .....	(3 cr)
GDES 1126 Intro to Adobe Creative Cloud .....	(3 cr)
VPRO 1114 Camera Operations .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

First Year – Spring Semester

GDES 1120 Publication Design .....	(3 cr)
GDES 1122 Graphic Design Production .....	(3 cr)
GDES 1124 Corporate ID .....	(3 cr)
VPRO 1128 Business of Media .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

Second Year – Fall Semester

GDES 2100 Graphic Design I .....	(3 cr)
GDES 2120 Packaging .....	(3 cr)
GDES 2130 Media Production .....	(3 cr)
GDES 2132 Social Media Design .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

Second Year – Spring Semester

GDES 2102 Graphic Design II .....	(3 cr)
GDES 2113 Art Direction .....	(3 cr)
GDES 2124 Portfolio Production .....	(3 cr)
General Education .....	(6 cr)
<b>Total – 15 credits</b>	
<b>GRADUATION REQUIREMENT 60 CREDITS</b>	

## Graphic Design Diploma

First Year – Fall Semester

GDES 1105 Concepts of Design .....	(3 cr)
GDES 1126 Introduction to Adobe Creative Cloud.....	(3 cr)
GDES 1134 Typography .....	(3 cr)
VPRO 1114 Camera Operations .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

First Year – Spring Semester

GDES 1120 Publication Design .....	(3 cr)
GDES 1122 Graphic Design Production .....	(3 cr)
GDES 1124 Corporate ID .....	(3 cr)
VPRO 1128 Business of Media .....	(3 cr)
General Education .....	(3 cr)
<b>Total – 15 credits</b>	

Second Year – Fall Semester

GDES 2100 Graphic Design I .....	(3 cr)
GDES 2120 Packaging .....	(3 cr)
GDES 2130 Media Production .....	(3 cr)
GDES 2132 Designs in Social Media .....	(3 cr)
<b>Total – 12 credits</b>	

Second Year – Spring Semester

GDES 2102 Graphic Design II .....	(3 cr)
GDES 2113 Art Direction .....	(3 cr)
GDES 2124 Portfolio Production .....	(3 cr)
Choose 3 credits from GDES or VPRO courses .....	(3 cr)
<b>Total – 12 credits</b>	
<b>GRADUATION REQUIREMENT 54 CREDITS</b>	

## Graphic Design Media Technologies Diploma

Fall Semester – 1st year

GDES 1105 Concepts of Design .....	(3 cr)
GDES 2130 Media Production .....	(3 cr)
GDES 2132 Designs in Social Media .....	(3 cr)
PHIM 1126 Introduction to Adobe Creative Cloud .....	(3 cr)
VPRO 1114 Camera Operations .....	(3 cr)
<b>Total – 15 credits</b>	

Spring Semester – 1st year

GDES 1122 Graphic Design Production .....	(3 cr)
PHIM 1128 Business of Media .....	(3 cr)
Choose 10 credits from GDES, PHIM, or VPRO courses ..	(10 cr)
<b>Total – 16 credits</b>	

Fall Semester – 2nd year

GDES 2352 Shop Internship .....	(12 cr)
<b>Total – 12 credits</b>	
<b>GRADUATION REQUIREMENT 43 CREDITS</b>	

# VIDEOGRAPHY PRODUCTION

## Career Description

Videography is quickly becoming one of the fastest growing career choices in the 21st century. With the explosion of cable networks, web-casting, and video corporate communications, this field is expected to experience steady, long-term growth. Videography production is the professional process of telling stories through a series of recorded, filmed images using digital media. Film and video editors edit programming for the motion picture, cable, and broadcast television industries. Camera operators employed in the entertainment, corporate, or news fields use digital media to record movies, television programs, events, and commercials. Studio operations include floor directors, technical directors, camera operators, teleprompter operators, and audio engineers. News camera operators, also called electronic news-gathering (ENG) operators, work as part of a reporting team, following newsworthy events as they unfold. A degree in Videography at Central Lakes College prepares students for entry-level positions in all of these areas.

## Program Information

Shoot, write, edit, produce – these are the foundations for all video and film production. They are the focus of the Videography Production A.A.S. or Diploma Program at Central Lakes College. Students will learn the proper techniques for capturing motion picture footage using professional-grade camera equipment. A strong concentration on production lighting and audio recording is included. Scriptwriting is a key element of the production process and is emphasized in this program. Video editing is essential to all motion picture completion and both basic and advanced editing procedures are stressed. Employers are seeking entry-level operators with a broad understanding of the foundations of production. Our focused approach at Central Lakes College ensures graduates will be positioned appropriately for successful entry into the industry.

## Program Outcomes

Graduates will be able to:

- Apply protocol and safety in video production working environments;
- Recognize and apply knowledge in script writing, camera operation, sound recording, editing, and production design for video applications;
- Utilize video production equipment and software programs used in videography applications and creating special effects;
- Analyze and apply appropriate lighting techniques for motion picture programming; and
- Encode video files for distribution to broadcast, web, and digital recording.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: The cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0; and
3. Residency Requirement: students must complete 25% (15) of their credits at Central Lakes College.

## Certification

Instructor is a Certified Steadicam Operator (Main Workshops).

## Career Opportunities

There are many job opportunities in this field within and outside of Minnesota. From 2006 to 2010, video production experienced 16% growth in career positions – 2% better than all professional fields combined. That trend is expected to improve between 2010 and 2020. The Twin Cities area is considered a national center of activity for jobs in this field. Brainerd, Duluth, and St. Cloud are also excellent places to find placement.

## Career Titles

Some common career titles for this field include video editor, videographer, cinematographer, producer, director, production assistant, photojournalist, news producer, and writer.

## Videography Production A.A.S.

First Year – Fall Semester  
 ENGL 1422 Practical Writing (3 cr) OR ENGL 1410 Composition I .....(4 cr)  
 GDES 1105 Concepts of Design .....(3 cr)  
 GDES 1126 Introduction to Adobe Creative Cloud .....(3 cr)  
 VPRO 1110 Video Editing Workflow ..... (3 cr)  
 VPRO 1114 Camera Operations .....(3 cr)  
 TOTAL – 15-16 credits

First Year – Spring Semester  
 VPRO 1128 Business of Media .....(3 cr)  
 VPRO 1100\* Media Script Writing ..... (3 cr)  
 VPRO 1126 Media Lighting and Sound..... (4 cr)  
 General Education .....(5-6 cr)  
 TOTAL – 15-16 credits

Second Year – Fall Semester  
 GDES 2130 Media Production ..... (3 cr)  
 VPRO 2104 CLC Productions I .....(3 cr)  
 VPRO 2110 Advanced Camera ..... (3 cr)  
 VPRO 2112 Advanced Video Editing ..... (3 cr)

General Education .....(3 cr)  
 TOTAL – 15 credits

Second Year – Spring Semester  
 GDES 2132 Designs in Social Media .....(3 cr)  
 VPRO 2106 CLC Productions II ..... (4 cr)  
 VPRO 2130 Creative Development .....(4 cr)  
 General Education ..... (3 cr)  
 TOTAL – 14 credits  
 GRADUATION REQUIREMENT 60 credits

## Video Production Diploma

First Year – Fall Semester  
 ENGL 1422 Practical Writing (3 cr) OR ENGL 1410 Composition I .....(4 cr)  
 GDES 1105 Concepts of Design .....(3 cr)  
 GDES 1126 Intro to Adobe Creative Cloud .....(3 cr)  
 VPRO 1110 Video Editing Workflow .....(3 cr)  
 VPRO 1114 Camera Operations .....(3 cr)  
 TOTAL – 15-16 credits

First Year – Spring Semester  
 VPRO 1128 Business of Media .....(3 cr)  
 VPRO 1100\* Media Script Writing .....(3 cr)  
 VPRO 1126 Media Lighting and Sound .....(4 cr)  
 General Education ..... (3 cr)  
 TOTAL – 13 credits

Second Year – Fall Semester  
 GDES 2130 Media Production..... (3 cr)  
 VPRO 2104 CLC Productions 1 .....(3 cr)  
 VPRO 2110 Advanced Camera..... (3 cr)  
 VPRO 2112 Advanced Video Editing..... (3 cr)  
 General Education (3 cr)

TOTAL – 15 credits  
 Second Year – Spring Semester  
 GDES 2132 Designs in Social Media .....(3 cr)  
 VPRO 2106 CLC Productions 2 .....(4 cr)  
 VPRO 2130 Creative Development .....(4 cr)  
 TOTAL – 11 credits  
 GRADUATION REQUIREMENT 54 credits



# DENTAL ASSISTING

## Career Description

Given the increasing demands for dental care, dental practices are designed for a dental team approved for the delivery of dental care. An exciting and challenging career awaits you as a professional dental assistant. A career in dental assisting offers variety, job satisfaction, opportunity for service, and financial reward.

## Program Information

The Dental Assisting Program is designed to educate students on ways to control and prevent dental disease as well as teach patients preventive dental care. Training is provided in chairside skills and MN State expanded functions. There are three semesters. Fall and Spring are on-campus and the nine-week Summer session provides internships off-campus in dental facilities and private dental practices. This education prepares the student to take national and state written examinations required for certification and registration as a dental assistant. A certified registered dental assistant becomes a member of the dental team.

## Program Outcomes

Graduates will be able to:

- Perform chair side procedures in a clinical setting;
- Apply infection control, biohazards and treatment area practices;
- Perform dental office procedures;
- Perform radiographic and radiation safety procedures;
- Communicate professionally with patients, peers, and members of the dental health team; and
- Model professionalism through continuing education and membership in the American Dental Assistants Association.

## Special Program Requirements

- The curriculum in the dental assisting program may expose students to hazardous materials, radiation and/or infectious diseases. Students will be provided with information through education and program policies to protect themselves and their patients from harm. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory and clinic. Program policies are available upon request.
- Minnesota Board of Dentistry will only accept American Heart Association Health Care Provider CPR or American Red Cross Professionals Rescuer CPR. CPR must remain current while enrolled through August of the graduating year. 8 hours of dental clinical observation must be completed by October 1st.
- Accuplacer Reading score of 56 or equivalent prerequisites are required for admission into the program.
- All applications for initial license to the Minnesota Board of Dentistry that are received on or after May 1, 2015 will

require a criminal background check.

- In addition, students must meet the following conditions in order to graduate:
- College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
- College Technical Core GPA Requirement: The cumulative GPA of credits in the technical core or degree must be at least 2.0; and
- Residency Requirement: students must complete 25% of their credits at Central Lakes College.

## Accreditation

Accredited by the American Dental Association since May 1967.

## Admissions

Accuplacer Reading score of 56 or equivalent prerequisites are required for admission into the program. Progression through the program is sequential. Admission date is Fall semester. Applicants must have a high school diploma or GED.

## Transfer Opportunities

Some courses within the program may be used as elective credits toward an A.A. degree.

## Career Opportunities

The career outlook for certified and registered dental assistants in Minnesota continues to grow due to the increased demand for dental care. The majority of graduates are employed as clinical assistants, and Minnesota requires specialized credentials as an employment criteria. There is a great deal of stability and employment security for the individual who becomes a dental assistant.

## Career Titles

This program will help students prepare for a wide range of dental assisting careers, including chairside dental assistant in general/specialty practices, expanded-functions dental assistant, administrative business assistant, dental sales personnel, sterilization assistant, and dental insurance personnel.

## Dental Assisting A.A.S Curriculum

First Year – Fall Semester  
 DENT 1106 Dental Orientation & Anatomy .....(2 cr)  
 DENT 1108 General Anatomy .....(3 cr)  
 DENT 1116\* Dental Clinic I .....(8 cr)  
 DENT 1118\* Dental Radiology I .....(2 cr)  
 DENT 1120\* Preventive Dentistry .....(2 cr)  
 DENT 1124 Biomaterials .....(2 cr)  
 Total – 19 Credits

Spring Semester  
 DENT 1114 Pathology, Pharm., Law and Emergencies .....(3 cr)  
 DENT 1123\* Dental Clinic II .....(9 cr)  
 DENT 1129\* Dental Radiology II .....(2 cr)  
 DENT 1132\* Dental Specialties .....(2 cr)  
 DENT 1133\* Principles of Practice Management and Communication .....(2 cr)  
 Total – 18 Credits

Summer Session  
 DENT 1150\* Dental Internship (336 hours) .....(7 cr)  
 Total – 7 Credits

Second Year – Fall Semester  
 ENGL 1410 Composition I .....(4 cr)  
 Students must complete 12 additional credits from the Minnesota Transfer Curriculum (MnTC). General Education courses must be chosen from at least 2 goal areas other than Goal 1- Communications. For students who plan to pursue Dental Hygiene in the future, we suggest choosing your General Education courses in conjunction with prerequisite requirements. See a counselor for assistance choosing courses for your targeted program/college. Typical Dental Hygiene course prerequisites may include:  
 BIOL 2457\* Microbiology .....(4 cr)  
 BIOL 2467\* Anatomy and Physiology I .....(4 cr)  
 BIOL 2468\* Anatomy and Physiology II .....(4 cr)  
 COMM 1422 Interpersonal Communication .....(3 cr)  
 PSYC 2421\* General Psychology I .....(4 cr)  
 SOCL 1401 Introduction to Sociology .....(3 cr)  
 Total – 16 Credits  
 GRADUATION REQUIREMENT 60 CREDITS  
 \*Denotes Prerequisites

## Dental Assisting Diploma

Fall Semester  
 DENT 1106 Dental Orientation & Anatomy.....(2 cr)  
 DENT 1108\*\* General Anatomy .....(3 cr)  
 DENT 1116\* Dental Clinic I .....(8 cr)  
 DENT 1118 Dental Radiology I .....(2 cr)  
 DENT 1120 Preventive Dentistry .....(2 cr)  
 DENT 1124 Biomaterials.....(2 cr)  
 Total – 19 Credits

Spring Semester  
 DENT 1114 Pathology, Pharmacology, Law & Emergencies (3 cr)  
 DENT 1123\* Dental Clinic II .....(9 cr)  
 DENT 1129\* Dental Radiology II .....(2 cr)  
 DENT 1132\* Dental Specialties .....(2 cr)  
 DENT 1133\* Principles of Practice Management & Communication .....(2 cr)  
 Total – 18 Credits

Summer Session  
 DENT 1150\* Dental Internship (336 hours) .....(7 cr)  
 Total – 7 Credits  
 GRADUATION REQUIREMENT – 44 CREDITS  
 \*Denotes Prerequisites  
 \*\*BIOL 1404 Human Biology (3 credits), or BIOL 2467 Anatomy and Physiology I and BIOL 2468 Anatomy and Physiology II (4 credits each) may be substituted for DENT 1108 General Anatomy.

# MEDICAL ASSISTANT

## Career Description

According to the Department of Employment and Economic Development, the need for health care support workers to meet both short-term and long-term workforce needs is high. In Minnesota, the employment for medical assistants is expected to grow much faster than average for other occupations. A medical assistant will have direct patient contact and work closely with physicians, nurses, and other health care professionals. Medical assistants are multi-skilled individuals who are able to competently perform clinical and laboratory duties including collecting medical histories, taking and recording vital signs, explaining treatment procedures, preparing patients for examinations and x-rays, administering medications, removing sutures, changing dressings, sterilizing medical instruments, preparing examining room equipment and instruments, assisting the physician during examinations, preparing laboratory specimens, drawing blood, and performing basic laboratory tests. They may also perform duties that include answering phones, greeting patients, scheduling appointments, as well as other administrative duties.

## Program Information

The Medical Assistant Program is designed to prepare students for career opportunities in the rapidly growing, high-demand field of health care support. Instruction is focused to enable graduates to perform clinical, laboratory, and administrative tasks to keep the offices of physicians, podiatrists, chiropractors, and other health care practitioners running smoothly. The general education credits allow students the opportunity to obtain an AAS Degree. By doing so, students become more well-rounded in their knowledge of the world around them when interacting with patients, families, providers and healthcare team members.

## Program Outcomes

Graduates will be able to:

- Interact with patients, families, providers and healthcare team members in a respectful and caring manner;
- Apply administrative business and office procedures and implement medical documentation systems;
- Assist providers and healthcare team members in clinical procedures related to examination and treatment;
- Effectively use quality assurance requirements in performing clinical and laboratory procedures;
- Perform common diagnostic procedures under a licensed healthcare provider ensuring patient comfort and safety; and
- Demonstrate professional behaviors and attitudes consistent with delivery of safe, ethical, legal and compassionate patient care.

## Special Program Requirements

Students must complete Healthcare Provider CPR working on patients.

Students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: cumulative grade point average (GPA) of credits attempted at CLC must be at least 2.0;
2. College Technical Core GPA Requirement: cumulative GPA of credits attempted towards the technical core of the diploma or degree must be at least 2.0; and
3. Residency Requirement: students must complete 25% (15) of their credits at Central Lakes College.

## Accreditation

The Medical Assistant Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on the recommendation of the Medical Assisting Education Review Board (MAERB). In addition, the program is also accredited by the American Medical Technologists.

## Certification

Upon successful completion of all coursework and a 225 hour clinical internship, students will prepare to sit for the national AAMA certification exam to become a Certified Medical Assistant (CMA) AAMA, or to sit for the national AMT certification exam to become a Registered Medical Assistant (RMA).

## Admissions

Progression through the program is sequential. Admission start date for the Medical Assistant courses is Fall semester. High school diploma or GED required. Students may have completed general education requirements or wish to take those prior to or after completing the program courses. Please contact the Admissions Department on the Brainerd or Staples campus for information or to apply to the program.

## Transfer Opportunities

Some courses within the program may be used as elective credits toward an associate degree.

## Career Opportunities

Because the medical assistant is cross-trained in administrative, clinical, and laboratory duties, the occupation is in increasingly high demand as the population ages and the need for health care increases. Employment options are varied and can be found in clinics and hospitals, as well as other medical facilities.

## Career Titles

Students may take a national certification exam to become a Certified Medical Assistant or Registered Medical Assistant.

## Medical Assistant A.A.S.

Required Technical Courses

HINS 1150 Intro to Diagnosis and Procedure Coding .....	(3 cr)
MEDA 1110* Clinical Procedures I.....	(3 cr)
MEDA 1115* Clinical Procedures II .....	(3 cr)
MEDA 1120 Laboratory Techniques I .....	(3 cr)
MEDA 1125* Laboratory Techniques II .....	(3 cr)
MEDA 1128 Medical Terminology (1 cr) OR PNUR 1138 Medi-	

cal Terminology .....	(1 cr)
MEDA 1130 Ethics and Issues .....	(2 cr)
MEDA 1132* Phlebotomy .....	(2 cr)
MEDA 1135 Administrative Procedures I .....	(3 cr)
MEDA 1137* Administrative Procedures II .....	(2 cr)
MEDA 1141 Disease Conditions.....	(2 cr)
MEDA 1142 Pharmacology .....	(2 cr)
MEDA 2150* Medical Assistant Internship .....	(5 cr)
PNUR 1130 Life Span (1 cr) OR PSYC 2431 Human Develop-	
ment .....	(3 cr)
PNUR 1140 Medication Calculations for Healthcare Careers (1 cr)	
Total 39 credits	

### General Education

An associate in applied science degree requires a minimum of 15 general education credits selected from at least three of the ten goal areas of the Minnesota Transfer Curriculum. Students must include within the General Education component the following courses:

AMSL 1410 American Sign Language (Goal 8) (4 cr) or SPAN	
1401 Beginning Spanish (Goal 8) .....	(4 cr)
BIOL 1404 Human Biology (Goal 3).....	(3 cr)
COMM 2420 Intercultural Communication (Goals 1, 7) .....	(3 cr)
ENGL 1422 Practical Writing (Goals 1, 2) (3 cr) or ENGL 1410	
Composition I (Goal 1) .....	(4 cr)
Choose additional 1-2 credits from the Minnesota Transfer Cur-	
riculum.	
Total 15 credits	

### Electives

Choose 9 additional credits.

Total 9 credits

GRADUATION REQUIREMENT 60 credits

\*Denotes Prerequisites

NOTE: American Heart Association Health Care Provider CPR is a prerequisite before working on patients.

## Medical Assistant Diploma

Fall Semester

BIOL 1404 Human Biology .....	(3 cr)
MEDA 1128 Medical Terminology (1 cr) OR PNUR 1138 Medi-	
cal Terminology .....	(1 cr)
MEDA 1110* Clinical Procedures I .....	(3 cr)
MEDA 1120 Laboratory Techniques I.....	(3 cr)
MEDA 1130 Ethics and Issues .....	(2 cr)
MEDA 1132* Phlebotomy .....	(2 cr)
MEDA 1135 Administrative Procedures I.....	(3 cr)
PNUR 1130* Life Span (1 cr) OR PSYC 2431 Human Develop-	
ment .....	(3 cr)
PNUR 1140 Medication Calculations for Healthcare Careers (1 cr)	
Total 19 Credits	

Spring Semester

HINS 1150* Intro to Diagnosis and Procedure Coding .....	(3 cr)
MEDA 1115* Clinical Procedures II .....	(3 cr)
MEDA 1125* Laboratory Techniques II .....	(3 cr)
MEDA 1137* Administrative Procedures II .....	(2 cr)
MEDA 1141 Disease Conditions .....	(2 cr)
MEDA 1142 Pharmacology .....	(2 cr)

Total 15 Credits

Summer Semester

MEDA 2150\* Medical Assistant Internship .....

Total 5 Credits

GRADUATION REQUIREMENT 39 CREDITS

\*Denotes Prerequisites

\*\*NOTE: American Heart Association Healthcare Provider (CPR) certification is required before working with patients.

# PHLEBOTOMY TECHNICIAN CERTIFICATE

## Career Description

A Phlebotomy Technician (Phlebotomist) is an integral member of the medical laboratory team whose primary function is the collection of blood samples from patients via venipuncture or microtechniques. The Phlebotomy Technician facilitates the collection and transportation of laboratory specimens, and is often the patient's only contact with the medical laboratory. The need to assure quality and patient safety mandates strict professional behavior and standards of practice for Phlebotomists.

## Program Information

The 18 credit Phlebotomy Technician Certificate is designed to prepare students for career opportunities in the rapidly growing, high-demand field of health care support. Instruction is already in place during the fall semester of the Medical Assistant Program. This certificate enables students to complete the academic requirements for a phlebotomy technician in one semester and complete the internship requirements following instruction.

## Program Outcomes

Graduates will be able to:

- Demonstrate professional behaviors and attitudes consistent with delivery of safe, ethical, legal and compassionate patient care.
- Effectively use quality assurance requirements in obtaining patient blood specimens by venipuncture or microtechniques.
- Interact with patients, families, providers, and other healthcare team members in a respectful and caring manner.

## Special Program Requirements

Students must complete Healthcare Provider CPR prior to working with patients.

## Accreditation

Accreditation through AMT or ASCP is being sought at this time.

## Certification

Upon successful completion of all coursework and a 135 hour internship, students will prepare to sit for the national certification exam to become a Certified Phlebotomy Technician.

## Admissions

Progression through the program is sequential. Admission start date is Fall semester. A high school diploma or GED is required. Healthcare Provider CPR is a prerequisite for this program. Please contact the Admissions

Department on the Brainerd or Staples campus for information or to apply to the program.

## Career Opportunities

The primary employment opportunities include working in a clinic setting, hospital, laboratory or blood bank.

## Career Titles

Students may take a national certification exam to become a certified Phlebotomist or Phlebotomy Technician. It is not necessary to have this certification to work as a phlebotomist at this time, but it is the feeling of industry partners that it will eventually be a requirement. By students gaining this certification, it provides them with an advantage when interviewing for phlebotomy positions to show that they have had formal training.

## Phlebotomy Technician Certificate

Fall Semester	
BIOL 1404 Human Biology.....	(3 cr)
ENGL 1422 Practical Writing .....	(3 cr)
MEDA 1120 Laboratory Techniques I .....	(3 cr)
MEDA 1128 Medical Terminology (1 cr) OR PNUR 1138 Medical Terminology .....	(1 cr)
MEDA 1130 Ethics and Issues .....	(2 cr)
MEDA 1132* Phlebotomy .....	(2 cr)
PNUR 1130 Life Span (1 cr) OR PSYC 2431 Human Development .....	(3 cr)
Total 15 credits	

Spring Semester	
MEDA 1134 Phlebotomy Technician Internship .....	(3 cr)
Total 3 credits	
GRADUATION REQUIREMENT	18 CREDITS

\*Denotes Prerequisites

NOTE: Health Care Provider or Professional Rescuer CPR is required prior to working on patients.

# NURSING

## Career Description

Registered nurses (RNs) work to promote health, prevent disease, and help clients cope with illness. They are advocates and health educators for clients, families, and communities. When providing direct client care they observe, assess, and record symptoms, responses, and progress of clients; assist physicians during examinations, treatments, and surgeries; administer medications; and assist in convalescence and rehabilitation. RNs develop and manage nursing care plans and must possess critical thinking and problem solving skills.

## Program Information

The Associates Degree (AD) Nursing Program at Central Lakes College is a traditional nursing program designed to educate and prepare individuals to take the National Council Licensure Examination for RNs. The program is four semesters long or two academic school years.

## Program Outcomes

Graduates will be able to:

- Demonstrate comprehensive, holistic assessments that include diversity in the dimensions of physical, developmental, emotional, psychosocial, cultural, spiritual, and functional status of the client in context of environment;
- Effectively utilize therapeutic verbal and non-verbal communication techniques through culturally competent care that is directed toward promoting positive outcomes and establishing trusting, client-centered relationships;
- Apply the knowledge and science of nursing by performing within the scope of practice of a registered nurse (RN);
- Collaborate with the health care team, including use of nursing judgment to accurately plan patient priorities and preferences, utilize available resources and referrals, and develop shared accountability and mutual respect for safe, ethical, patient-centered, holistic nursing care;
- Demonstrate development of personal/professional behaviors by implementing one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, life-long learning, service learning/civic engagement, caring, advocacy, excellence, and safe, quality care for diverse patients within a family and community context; and
- Analyze assessed information to determine effective clinical decision-making through a spirit of inquiry that results in problem resolution, individualizes care through use of the nursing process, and assures the delivery of accurate, safe care that moves the client and support person toward positive outcomes.

## Special Program Requirements

- This program has a special application process. This

includes completion of a CLC application and the College Entrance Test (CET). Also, a traditional nursing application must be completed along with the TEAS Test. Please contact the admissions department for information or to apply to the program.

- Students must apply each semester that they are seeking acceptance to the AD Nursing Program. Applications are accepted on an ongoing basis. First review of applications will be completed with a priority deadline of February 1st for the Fall start and with a priority deadline of July 1st for a Spring start. Applicants will continue to be reviewed and accepted up until the start of the semester if space is available in the program.

- Background study: Any person who has direct contact with patients and residents at health care facilities licensed by the Minnesota Department of Health must have a criminal background check completed. Results of the study are to be on file in the department of nursing before students begin their clinical experiences. Any student who does not pass the criminal background check will not be permitted to participate in clinical experiences, thereby rendering the individual ineligible to progress in the AD Nursing Program. Students should direct questions and appeals to the Minnesota Department of Human Services, Licensing Division, 444 Lafayette Blvd., St. Paul, MN 55155-3842. Phone: (651) 296-3971. Web address: <http://www.dhs.state.mn.us/>.

- Permission from Facility Health Partners for site clinical participation

- Immunization documentation requirements

- Mandatory orientation session

In addition to the program requirements listed, students must meet the following conditions in order to progress or graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0.
2. Residency Requirement: students must complete 25% of their credits at Central Lakes College.
3. The student must achieve a B- or better in all Nursing (NURS) courses.
4. The student must also achieve a C or better and a cumulative GPA of 3.0 or higher in the following 4 courses: BIOL 2467, CHEM 1407, ENGL 1411, and PSYC 2421.
5. With the exception of courses listed in #4 above, the student must achieve a C or better in all remaining required general education courses.

## Accreditation

This program is approved by the Minnesota Board of Nursing and the North Central Association of Colleges and Schools. The AD Nursing Program is seeking national accreditation.

## Transfer Opportunities

Broader career opportunities are available for RNs with a

## NURSING CONT.

bachelor's or master's degree in nursing. The counseling department has transfer guides for baccalaureate nursing programs at other colleges. Admission requirements and course equivalencies may vary. This program has articulation agreements with the following MnSCU institutions: Bemidji State University, Metro State University, Minnesota State University – Mankato, Minnesota State University – Moorhead, St. Cloud State University, Wisconsin State University.

### Admissions

Admission to the Nursing sequence is competitive and based on TEAS test score.

### Career Opportunities

RNs make up the largest number of health care professionals in the United States. Currently there are 2.6 million RN jobs in the nation with an expected job growth rate of 22%, accounting for a more rapid growth rate than the national average for all other professions. The median salary for RNs is \$62,450. Information about RN jobs in Minnesota may be found at: <http://www.nursing-jobs.org/rn/minnesota>.

### Nursing A.S. Curriculum

Semester One	
CHEM 1407** Life Science Chemistry .....	(4 cr)
ENGL 1410 Composition I .....	(4 cr)
NURS 1540 Professional Nursing Fundamentals .....	(3 cr)
NURS 1541 Professional Nursing Fundamentals Lab .....	(2 cr)
NURS 1542*** Medication Administration Concepts .....	(1 cr)
PSYC 2421 General Psychology .....	(4 cr)
Total – 18 credits	

Semester Two	
BIOL 2467* Anatomy and Physiology I .....	(4 cr)
ENGL 1411* Composition II .....	(4 cr)
NURS 1544* Professional Nursing Concepts I .....	(4 cr)
NURS 1545* Professional Nursing Practicum I .....	(2 cr)
PHIL 2422 Medical Ethics.....	(3 cr)
Total – 17 credits	

Semester Three	
BIOL 2468* Anatomy and Physiology II .....	(4 cr)
NURS 2540* Professional Nursing Concepts II.....	(6 cr)
NURS 2541* Professional Nursing Practicum II .....	(3 cr)
NURS 2542* Advanced Skills for the Professional Nurse ....	(1 cr)
Total – 14 credits	

Semester Four	
BIOL 2457* Microbiology .....	(4 cr)
NURS 2545* Professional Nursing Concepts III.....	(6 cr)
NURS 2546* Professional Nursing Practicum III .....	(3 cr)
NURS 2547* Professional Nursing Leadership .....	(2 cr)
Total – 15 credits	

GRADUATION REQUIREMENT 64 CREDITS

\*Denotes Prerequisites

\*\*The following CHEM courses may be substituted: 1410, 1414, 1424, 2472, or 2473

\*\*\*NURS 2522 may be substituted for NURS 1542.

### Nursing A.S. Advanced Standing

Prerequisites	
Successful completion of a PN Program .....	(9 cr)
BIOL 2467* Anatomy and Physiology I .....	(4 cr)
CHEM 1407** Life Science Chemistry .....	(4 cr)
ENGL 1410 Composition I .....	(4 cr)
ENGL 1411* Composition II .....	(4 cr)
NURS 1547 Professional Nursing Role Transition .....	(3 cr)
PHIL 2422 Medical Ethics .....	(3 cr)
PSYC 2421 General Psychology .....	(4 cr)
Total – 35 credits	

Semester One	
BIOL 2468*** Anatomy and Physiology II .....	(4 cr)
NURS 2540* Professional Nursing Concepts .....	(6 cr)
NURS 2541* Professional Nursing Practicum II .....	(3 cr)
NURS 2542* Advanced Skills for the Professional Nurse ....	(1 cr)
Total – 14 credits	

Semester Two	
BIOL 2457*** Microbiology (4 cr)	
NURS 2544* Professional Nursing Concepts III .....	(6 cr)
NURS 2546* Professional Nursing Practicum III .....	(3 cr)
NURS 2547* Professional Nursing Leadership .....	(2 cr)
Total – 15 credits	

GRADUATION REQUIREMENT 64 CREDITS

\*Denotes Prerequisites

\*\*The following CHEM courses may be substituted: 1410, 1414, 1424 or 1425, 2472 or 2473

\*\*\*Co-requisites may be taken concurrently with required courses, however applications are considered more competitive when completed prior to admission

## PRACTICAL NURSING

### Career Description

Licensed practical nurses (LPNs) and licensed vocational nurses (LVNs) care for people who are sick, injured or disabled under the direction of physicians and registered nurses. The nature of the direction and supervision required varies by state and job setting.

### Program Information

The Practical Nursing Program is designed to prepare graduates to take the National Council Licensure Examination for Practical Nursing. Student course requirements include a wide variety of clinical experiences in hospitals, clinics and nursing homes. Graduates join the healthcare team as LPNs upon successful completion of the licensing requirements. There are several program options available. Classes are offered at Brainerd and/or Staples campuses.

### Program Outcomes

Graduates will be able to:

- Demonstrate professional identity and personal/professional development through accountability, adhering to standards of practical nursing practice within legal, ethical and regulatory framework with specified populations and identification of rationale for scope of practice decision making.
- Effectively communicate with patients and members of the interdisciplinary health care team, incorporating interpersonal and therapeutic verbal and non-verbal communication skills.
- Collect and organize/prioritize holistic patient-centered information from multiple sources to establish foundation for relationship-centered nursing care through nursing judgments within the practical nursing role.
- Collaborate with the registered nurse or other members of the health care team to organize and incorporate data collection and knowledge base to contribute to patient care and actions based on established nursing protocols and nursing process.
- Demonstrate nursing excellence in a caring and empathetic approach to the safe, therapeutic, and individualized care of each client and provide culturally competent care across the lifespan to individuals within a diverse society and within the context of their environment.

### Special Program Requirements

This program has a special application process. This includes completion of a CLC application and the College Entrance Test (CET). Also, a practical nursing application must be completed along with the TEAS Test. Please contact the admissions department for information or to apply to the program.

In addition to the program requirements listed above, students must meet the following conditions in order to

progress or graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0.
2. Residency Requirement: students must complete 25% of their credits at Central Lakes College.
3. The student must achieve a B- or better in all Practical Nursing (PNUR) courses.
4. The student must achieve a C or better in all required general education courses.

### Accreditation

This program is approved by the Minnesota Board of Nursing and the North Central Association of Colleges and Schools. The Practical Nursing Program is seeking national accreditation.

### Transfer Opportunities

This program has transfer articulation agreements with the following MnSCU institutions: Alexandria Technical and Community College, Anoka-Ramsey Community College, Century College, Fond du Lac Tribal & Community College, Hibbing Community & Technical College, Inver Hills Community College, Minneapolis Community & Technical College, Minnesota State College – Southeast Technical, Minnesota State Community and Technical College, Minnesota West Community & Technical College, Normandale Community College, North Hennepin Community College, Northland Community & Technical College, Northwest Technical College – Bemidji, Pine Technical College, Ridgewater College, Riverland Community College, Rochester Community & Technical College, South Central College, St Cloud Technical and Community College.

### Admissions

This program has a special application process. This includes completion of a CLC application and the College Entrance Test (CET). Also, a practical nursing application must be completed along with the TEAS Test. Please contact the admissions department for information or to apply to the program.

### Career Opportunities

Available employment options are varied and can be found in acute care hospitals, nursing homes, home health care settings and clinics.

### Practical Nursing Diploma

Prerequisites

Health Care Provider or Professional Rescuer CPR  
75 hour Minnesota Department of Health Nursing Assistant course OR NSGA 1110 Nursing Assistant  
Passing score on the ATI TEAS test  
BIOL 1404 Human Biology (3 cr) or BIOL 2467\* Anatomy &

## PRACTICAL NURSING CONT.

Physiology I (4 cr) and BIOL 2468\* Anatomy & Physiology II (4 cr)  
 ENGL 1410 Composition I\* .....(4 cr)  
 PNUR 1130 LifeSpan\*\* .....(1 cr)  
 PNUR 1140 Medication Calculations for Healthcare Professionals .....(1 cr)  
 Total 9 Credits

Fall Semester  
 PNUR 1149\* Clinical Lab I .....(3 cr)  
 PNUR 1160\* Practical Nursing Skills Lab .....(3 cr)  
 PNUR 1168\* Psychosocial Nursing .....(3 cr)  
 PNUR 1265\* Medical Surgical Nursing I .....(5 cr)  
 Total 14 Credits

Spring Semester  
 PNUR 1150\* Clinical Lab II .....(3 cr)  
 PNUR 1166\* Gerontological Nursing.....(2 cr)  
 PNUR 1175\* Maternal Child Health .....(2 cr)  
 PNUR 1270\* Medical Surgical Nursing II .....(6 cr)  
 Total 13 Credits

GRADUATION REQUIREMENT – 36 CREDITS

\*Denotes Prerequisites

\*\*Students may substitute PSYC 2431 Human Development, 3 credits for PNUR 1130 Life Span

## NURSING ASSISTANT CERTIFICATE

**Career Description**

A nursing assistant is a nursing home or certified boarding care home employee who is assigned by the director of nursing to provide or assist in the provision of nursing or nursing-related services under the supervision of a registered nurse.

**Program Information**

PNUR 1120, Basic Nursing I, the Nursing Assistant Class, is designed to prepare students for employment in licensed nursing homes and certified boarding care homes. Skills are demonstrated in a supervised laboratory setting and the clinical environment. This course meets MN Stage and Federal requirements. Upon completion of the class, students are eligible to take the Nursing Assistant State Competency Evaluation which is necessary for placement on the MN Stage Registry. PNUR 1120, Basic Nursing I, is a prerequisite to the Practical Nursing Program and to PNUR 1315, the Home Health Aide Class. PNUR 1315, Home Health Aide, is a one (1) credit course. Home Health Aides can be employed in nursing homes or home care agencies.

**Program Outcomes**

Graduates will be able to:

- Demonstrate safe and respectful resident personal cares in a long term care facility setting;
- Demonstrate professional work ethic by arriving for class and clinical on time;
- Demonstrate effective verbal and non-verbal communication skills with residents and other health care team;
- members in a respectful manner that preserves human dignity;
- Demonstrate accurate measurement of intake, output, height, weight and vital signs.

**Special Program Requirements**

The application process includes completion of a CLC application and the College Entrance Test (CET). A \$20 application fee is required.

**Certification**

Central Lakes College offer competency evaluation for nursing assistant and home health aide candidates seeking placement on the MN State Registry. Testing dates, times and fees vary. Please contact the Business Office at Central Lakes College for a current schedule.

**Admissions**

Please contact the admissions department for information or to register for the class.

**Transfer Opportunities**

NSGA 1110 Nursing Assistant 3 credits NSGA 1115 Home Health Aide 1 credit These courses are offered several times throughout the school year. Please contact your advisor or counselor for a current schedule. Upon completion of the course, a Nursing Assistant Certificate and/or Home Health Aide Certificate is awarded. Students completing the Nursing Assistant Course are eligible to take the MN Nursing Assistant Competency Evaluation for placement on the MN State Registry. Students completing the Home Health Aide Course and the Nursing Assistant Course are eligible to take the MN Nursing Assistant/Home Health Competency Evaluation for placement on the MN State Registry.

**Career Opportunities**

Available employment options are varied and can be found in nursing homes, assisted living homes and home health care settings.

**Career Titles**

Nursing Assistant, NA Nursing Assistant Registered, NAR Home Health Aide, HHA

**Nursing Assistant Certificate**

NSGA 1110 Basic Nursing 1.....(3 cr)  
 NSGA 1115 Home Health Aide.....(1 cr)  
 Total – 4 credits

These courses are offered several times throughout the school year. Please consult your adviser or counselor for a current schedule.

# AUTOMOTIVE TECHNOLOGY

## Program Information

The Automotive Technology Diploma at Central Lakes College is an 11-month program that provides students with the skills needed to pursue a career in any area of automotive repair. Graduates of the program are prepared to begin entry-level in an amazing and satisfying career. Our program and regional employers take great pride in professionalism. A dress code, attendance policy, and student conduct code are strictly enforced. Because the program is so intensive, class size is limited to ensure optimum training. The intensity of the program prepares students for the real-world.

## Program Outcomes

Graduates will be able to:

- Troubleshoot and diagnose complex vehicle operating systems;
- Access and apply manufacturers' specifications in repair and replacement;
- Perform vehicle operating system repairs and maintenance;
- Use computerized software programs to interpret and document service;
- Work independently and in teams to service, repair, test and maintain vehicles;
- Work responsibly within all shop safety and environmental guidelines and standards;
- Handle customer needs, complaints and questions about repairs/service.

## Special Program Requirements

In addition to the program requirements listed above, students must meet the following conditions in order to graduate:

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0.
2. College Technical Core GPA Requirement: Cumulative GPA of credits attempted and completed towards the technical core of the diploma or degree must be at least 2.0;
3. Residency Requirement: students must complete one third (14) of their credits at Central Lakes College.

## Accreditation

The Automotive Technology program is a fully accredited program through the National Automotive Technicians Education Foundation (NATEF). The CLC diploma program is accredited at the Master Automotive Service Technician level, the highest ranking accreditation. The NATEF curriculum aligns with both regional employers and Automotive

Service for Excellence (ASE) technician certification standards. CLC's curriculum is reviewed annually with a regional advisory committee of employers and is reviewed by NATEF every 2.5 years to ensure the program stays current with technology and teaching to standards of the current needs of employers.

## Transfer Opportunities

All Automotive Service Excellence (ASE) area certifications (A1-A8) will transfer into the CLC Automotive Technology diploma program. Each course is aligned with the individual ASE certification area (A1-A8). CLC automotive technician courses transfer to many two- and four-year schools. Consult with an instructor, advisor, or counselor to learn about specific transfer opportunities.

## Certification

After successful completion of all of the courses in the diploma program, students are eligible to take the ASE student certification exam. This certification and the diploma are what employers are looking for to certify competency in the automotive service and repair industry.

## Admissions

The Automotive Technology Diploma is an 11-month program starting Fall Semester.

## Career Opportunities

Trained automotive technicians are in huge demand nationwide and regionally. The career field is growing faster than the average career field, both in the nation and regionally. Graduates of the program generally find careers within the region, but alumni are all across the nation.

## Career Titles

Some common career titles for this field are service technician, service writer, technical instructor, technical trainer, sales person, and automotive parts representative. There are also opportunities for self-employment as it is common for graduates to own their own business.

## Automotive Technology Diploma

Fall Semester – First Half

AUTM 1101 A1 Engine Repair .....(4 cr)  
 AUTM 1106\* A6 Electrical/Electronic System I\*\* .....(4 cr)  
 AUTM 1120 Transportation Industry Skills I\*\* .....(1 cr)  
 ENGL 1521 Technical Writing Fundamentals..... (1 cr)  
 Total – 10 credits

Fall Semester – Second Half

AUTM 1108\* A8 Engine Performance I\*\* .....(4 cr)  
 AUTM 1116\* A6 Electrical/Electronics Systems II\*\* .....(4 cr)  
 AUTM 1121 Transportation Industry Skills II\*\* .....(1 cr)  
 Total – 9 credits

Spring Semester – First Half

AUTM 1102 A2 Automatic Transmission & Transaxle ..(4 cr)  
 AUTM 1118 A8 Engine Performance II .....(4 cr)  
 AUTM 1122 Transportation IndustrySkills III\*\* .....(1 cr)  
 Total – 9 credits

Spring Semester – Second Half

AUTM 1104\* A4 Steering & Suspension\*\* .....(4 cr)  
 AUTM 1105\* A5 Brakes .....(4 cr)  
 AUTM 1123 Transportation Industry Skills IV\*\* ..... (1 cr)  
 Total – 9 credits

Summer Semester

AUTM 1103 A3 Manual Drive Train & Axles .....(4 cr)  
 AUTM 1107 A7 Heating & Air Conditioning .....(4 cr)  
 Total – 8 credits

GRADUATION REQUIREMENT 45 CREDITS

\*Denotes Prerequisites

\*\*High School Certifiable Courses

# DIESEL & HEAVY EQUIPMENT TECHNOLOGY

## Career Description

The Diesel & Heavy Equipment Technology programs allow students to prepare for careers in maintenance, repair, and diagnostics of diesel equipment. This program concentrates on the hydraulic/hydrostatic, power train, electrical/electronics, and engine systems of off-road construction equipment such as crawlers, excavators, backhoes, front end loaders, motor graders, and skid steer loaders.

## Program Information

The Diesel and Heavy Equipment Technician Diploma is an eleven-month program that includes an accelerated six-week summer session. The Diesel and Heavy Equipment Technology Associate of Applied Science (A.A.S.) Degree consists of all coursework from the diploma program plus and an additional 15 credits of General Education courses from at least three of the 10 goal areas of the Minnesota Transfer Curriculum (MnTC).

## Program Outcomes

Graduates will be able to:

- Apply safe shop and equipment practices;
- Demonstrate proper use and care of shop and personal tools;
- Inspect, diagnose, and conduct failure analysis and perform preventative maintenance inspections in electrical, hydraulic, engines and power train systems;
- Use service resources and software technologies;
- Apply fundamental skills and concepts to problem solving situations;
- Communicate effectively in diesel mechanics industry situations;
- Demonstrate a high level of craftsmanship and professionalism.

## Special Program Requirements

Students enrolled in these programs must supply their own basic tool sets. A guideline of what tools are needed is available from admissions. A pre-enrollment drug test is required of all students. Enrolled students will remain in a random drug testing consortium.

## Accreditation

This program is accredited by AED Foundation (Associated Equipment Distributors). <http://www.aedfoundation.org/accredited-schools.cfm>

## Career Opportunities

Graduating students find employment at original equipment manufacturing dealerships, construction contractors, independent repair facilities, federal, state and local government agencies, and the related forestry, mining,

and petroleum industries.

## Career Titles

Diesel and Heavy Equipment Technician, Diesel Maintenance Technician, Heavy Equipment Technician, Heavy Truck Technician, Diesel Technician, Diesel Mechanic

## Diesel & Heavy Equipment Technology A.A.S.

Fall Semester  
 DHET 1103 Intro to Construction Equipment .....(1 cr)  
 HEOM 1200 Intro to Operations..... (1 cr)  
 MATH 1500 Applied Math .....(3 cr)  
 The following classes are offered in the fall and the spring:  
 DHET 1125 Hydraulic Theory..... (3 cr)  
 DHET 1126 Hydraulic Lab .....(5 cr)  
 DHET 1128 Power Trains Theory.....(2 cr)  
 DHET 1129 Power Trains Lab .....(5 cr)  
 DHET 1135 Welding for Diesel Equipment .....(1 cr)  
 Total – 20 Credits

Spring Semester  
 DHET 1123 Customer Service/Service Management 1 .....(1 cr)  
 ENGL 1520 Language Fundamentals..... (1 cr)  
 ENGL 1521 Technical Writing Fundamentals .....(1 cr)  
 ENGL 1522 Writing Fundamentals for Diesel & Heavy Equipment Technicians .....(1 cr)  
 The following classes are offered in the fall and the spring:  
 DHET 1107 Electrical Theory .....(3 cr)  
 DHET 1108 Electrical Lab .....(5 cr)  
 DHET 1117 Engine Theory .....(3 cr)  
 DHET 1118 Engine Lab .....(5 cr)  
 Total – 20 Credits

Summer Semester  
 DHET 1130 Diesel Internship .....(2 cr)  
 DHET 1132\* On Highway Vehicle Systems Theory..... (3 cr)  
 DHET 1133\* On Highway Vehicle Systems Lab..... (4 cr)  
 HEOM 1165 CDL .....(3 cr)  
 Total – 12 Credits  
 Students must select 15 general education credits selected from at least three of the ten goal areas of the Minnesota Transfer Curriculum.  
 Total – 15 Credits  
 GRADUATION REQUIREMENT 67 credits  
 \*Denotes Prerequisites

## Diesel & Heavy Equipment Technology Diploma

Fall Semester  
 DHET 1103 Intro to Construction Equipment (1 cr) OR HEOM 1200 Intro to Operations .....(1 cr)  
 MATH 1500 Applied Math..... (3 cr)  
 The following classes are offered in the fall and the spring:  
 DHET 1125 Hydraulic Theory .....(3 cr)  
 DHET 1126 Hydraulic Lab .....(5 cr)  
 DHET 1128 Power Trains Theory.....(2 cr)  
 DHET 1129 Power Trains Lab..... (5 cr)

DHET 1135 Welding for Diesel Equipment .....(1 cr)  
 Total 20 Credits

Spring Semester  
 DHET 1123 Customer Service/Service Management 1 .....(1 cr)  
 ENGL 1520 Language Fundamentals .....(1 cr)  
 ENGL 1521 Technical Writing Fundamentals .....(1 cr)  
 ENGL 1522 Writing Fundamentals for Diesel & Heavy Equipment Technicians ..... (1 cr)  
 The following classes are offered in the fall and the spring:  
 DHET 1107 Electrical Theory..... (3 cr)  
 DHET 1108 Electrical Lab .....(5 cr)  
 DHET 1117 Engine Theory .....(3 cr)  
 DHET 1118 Engine Lab .....(5 cr)  
 Total 20 Credits

Summer Semester  
 DHET 1132\* On Highway Vehicle Systems Theory..... (3 cr)  
 DHET 1133\* On Highway Vehicle Systems Lab..... (4 cr)  
 Total 7 Credits  
 GRADUATION REQUIREMENT 47 CREDITS  
 \*Denotes Prerequisites

# HEAVY EQUIPMENT OPERATIONS & MAINTENANCE

## Career Description

Heavy equipment operators are employed in many areas of the construction industry, some of which include both state and local government work, landscaping, road construction, logging, mining, underground utilities and housing developments. Graduates can expect above average earning potential when they are employed in the grading and excavating industry. The ability to operate various types of heavy equipment makes for a versatile employee which is essential to the construction industry. Knowledge of the maintenance of heavy equipment is critical in maintaining daily construction operations. Positions can be found in rural and metropolitan areas with both large and small companies nationwide. Today's construction includes updated equipment with joystick controls and the use of a global positioning system (GPS). Opportunities are available to progress in the industry to lead operator positions, site supervision or operating your own business. Contractors in all areas of the construction industry need trained employees to be successful.

## Program Information

The Heavy Equipment Operation and Maintenance Program at Central Lakes College, Staples Campus is a unique program offered in Minnesota. The 64-credit program includes courses in both maintenance and operation of heavy construction equipment. Incorporated into the program is the opportunity to "fast track," which includes attending summer session and completing the program with a fourth semester internship in industry. In the well-equipped West Campus maintenance shop students learn the skills necessary to service and maintain a fleet of heavy equipment.

After completion of the maintenance courses, students are given real life projects in the operations field experiencing hands on training on dozers, scrapers, graders, backhoes, wheel loaders, excavators, skid steers and trucks. An opportunity to improve student skills is available on various simulators including truck driving, excavator, motor grader and wheel loader.

Curriculum includes courses in construction survey, blueprint reading, and soils and compaction. Experienced faculty share their knowledge and experience from industry with the next generation of heavy equipment operators. Training takes place at the 360-acre Staples West Campus operations training site with ample space for students to experience hands-on equipment operating. Additional areas are available for special operations such as excavating in water and muck, rock work and clearing and grubbing.

The West Campus includes an up-to-date classroom facility and recently completed nine-bay maintenance shop with overhead cranes, welding bay and dedicated wash bays. The classroom facility includes a soils lab where

students are instructed in various types of soil identification and testing.

The Heavy Equipment Operation and Maintenance Program encourages the development of teamwork and interpersonal communication skills required in the workforce. The program also stresses the importance of safety, a strong work ethic and the value of continuing education and lifelong learning.

The Heavy Equipment Operation and Maintenance Program enables students to stay on top of technological advances in construction equipment, such as GPS, and other issues related to the industry's needs. We are mindful of the needs of the industry, and strive to educate students to maintain the highest standards of quality and integrity to enhance economic growth in communities. Contractors seek competent people to fill the seats of the retiring generation to uphold a competitive business.

## Program Outcomes

Graduates will be able to:

- Perform basic operations of earthmoving equipment related to grading and excavation needs;
- Perform basic heavy equipment maintenance and repairs;
- Demonstrate written and verbal comprehension of basic surveying techniques related to grades, elevations and blueprint reading;
- Identify and practice safe work habits as required by OSHA and industry standards;
- Obtain a current OSHA 10 hour Safety Card;
- Maintain a Class A Commercial Driver's License;
- Maintain a Red Cross CPR/First Aid Certification;
- Demonstrate knowledge of the terms and responsibilities of a "competent person" as it pertains to OSHA, Subpart P.

## Special Program Requirements

Students entering the program will need a current CDL permit and are required to participate in mandatory drug testing. Students in the program must maintain a current driver's license while attending. Random drug and alcohol screening of students in the program will be done throughout the year. In order to graduate from the Heavy Equipment Program, students must earn a cumulative GPA of 2.0 in the credits attempted and completed towards the technical core of the diploma.

## Admissions

The Heavy Equipment Operation and Maintenance Program is offered as a full-time day program. New students are accepted into the program in August, December, and June.

## Career Opportunities

With virtually 100% placement and above-average earning potential, graduates are employed in the grading and excavating industry. Job opportunities are available in all areas of the construction industry as well as mining and logging and also with state and local governments. Many former graduates of the program have become supervisors and some have started their own construction companies.

## Career Titles

Some common career titles of this field are heavy equipment operator, pipeline or crane oiler, snowplow operator, and haul truck driver.

## Heavy Equipment Operation & Maintenance Diploma

First Year – Fall Semester

COMP 1101 Computer Fundamentals.....	(3 cr)
HEOM 1101 Construction Safety & First Aid .....	(1 cr)
HEOM 1102 Mechanical Theory .....	(1 cr)
HEOM 1107 Tools, Fasteners, Shop Practices.....	(1 cr)
HEOM 1108 Heavy Equipment Math/Estimating .....	(2 cr)
HEOM 1165* Commercial Drivers License .....	(3 cr)
HEOM 1200 Intro to Operations.....	(1 cr)
HEOM 1211 Servicing I .....	(3 cr)
<b>Total 15 Credits</b>	

Spring Semester

HEOM 1110* Preventative Maintenance .....	(5 cr)
HEOM 1151 Heavy Equipment Welding .....	(1 cr)
HEOM 1212* Servicing II .....	(2 cr)
HEOM 2102* Construction Survey/Blueprints .....	(5 cr)
HEOM 2150 Competent Person .....	(2 cr)
<b>Total 15 Credits</b>	

Second Year – Fall Semester

CCST 1530 Employment Strategies .....	(3 cr)
HEOM 2103* Soils and Compaction.....	(4 cr)
HEOM 2134* Operations Theory.....	(1 cr)
HEOM 2135* Construction Theory.....	(1 cr)
HEOM 2136* Grading Lab I .....	(5 cr)
HEOM 2138* Grading Lab II .....	(4 cr)
<b>Total 18 Credits</b>	

Spring Semester

HEOM 1261* General Lab .....	(5 cr)
HEOM 2110* Backhoe/Excavation Theory.....	(1 cr)
HEOM 2111* Loader Theory.....	(1 cr)
HEOM 2140* Excavation Lab I.....	(3 cr)
HEOM 2141* Excavation Lab II.....	(3 cr)
HEOM 2142* Excavation Lab III .....	(3 cr)
<b>Total 16 Credits</b>	

GRADUATION REQUIREMENT 64 CREDITS

\*Denotes Prerequisites



# MARINE & SMALL ENGINE TECHNOLOGY

## Career Description

Graduates of this program typically become employed at dealerships as service technicians. The most common types of dealerships include outdoor power equipment, snowmobile, marine, motorcycle, and all-terrain vehicle (ATV).

## Program Information

Courses in the Marine and Small Engine Technology Program are designed to provide the students with the knowledge and skills needed for the rapidly growing recreational and power equipment fields. All aspects of maintenance and repair are taught, which include machine overhauls, shop operation, set up, and delivery.

## Program Outcomes

Graduates will be able to:

- Apply safe work practices in a manner compatible with OSHA requirements and industry expectations;
- Demonstrate industry standard applications of selected tools and equipment for small engine maintenance, diagnostic and repair tools;
- Apply basic diagnostic and repair concepts to small engine, marine engine equipment power train and chassis systems;
- Apply preventative maintenance concepts to small engine equipment care and storage;
- Identify the functional relationships among small engine components and systems;
- Use a variety of computer, Web and technical resources to find information, troubleshoot problems and prepare estimates.

## Career Opportunities

Many former graduates have advanced to positions as service managers, general managers, and factory service representatives.

## Transfer Opportunities

The Marine and Small Engine Technology Program has an articulation agreement with Bemidji State University for transfer to its Industrial Technology Program.

## Marine & Small Engine Technology A.A.S.

First Year – Fall Semester

MASE 1101 Basic Engines I.....	(3 cr)
MASE 1103* Basic Engines I Lab .....	(4 cr)
MASE 1120 Lawn & Garden.....	(2 cr)
MASE 1140 Snowmobile Systems & Lab .....	(4 cr)
General Education.....	(5 cr)
<b>Total 18 Credits</b>	

Spring Semester

MASE 1106 Introduction to Electronics .....	(2 cr)
MASE 1130 Marine Outboard I .....	(4 cr)
MASE 1132* Marine Outboard II .....	(4 cr)
MASE 1134 Marine Lower Unit .....	(4 cr)
MASE 1136 Industry Certification I .....	(2 cr)
General Education .....	(2 cr)
<b>Total 18 Credits</b>	

Second Year – Fall Semester

MASE 2133* Advance Marine .....	(3 cr)
MASE 2134* Advance Marine & Personal Water .....	(3 cr)
MASE 2135* Machine Shop .....	(2 cr)
MASE 2169* MASE Tune Up.....	(3 cr)
MASE 2136 Industry Certification II .....	(2 cr)
General Education .....	(5 cr)
<b>Total 18 Credits</b>	

Spring Semester

MASE 2143* Diagnostic Troubleshooting .....	(3 cr)
MASE 2162* ATV Motorcycle Systems I .....	(4 cr)
MASE 2164* ATV Motorcycle Systems II .....	(4 cr)
MASE 2300 Special Project.....	(1 cr)
General Education.....	(3 cr)
<b>Total 15 Credits</b>	

GRADUATION REQUIREMENT 69 CREDITS

\*Denotes Prerequisites

## Marine & Small Engine Technology Diploma

First Year – Fall Semester

MASE 1101 Basic Engines I .....	(3 cr)
MASE 1103 Basic Engines I Lab .....	(4 cr)
MASE 1120 Lawn & Garden .....	(2 cr)
MASE 1140 Snowmobile Systems & Lab .....	(4 cr)
MATH 1500 Applied Mathematics.....	(3 cr)
<b>Total 16 Credits</b>	

First Year – Spring Semester

MASE 1106 Introduction to Electronics .....	(2 cr)
MASE 1130 Marine Outboard I .....	(4 cr)
MASE 1132 Marine Outboard II .....	(4 cr)
MASE 1134 Marine Lower Unit .....	(4 cr)
MASE 1136 Industry Certifications I .....	(2 cr)
<b>Total 16 Credits</b>	

Second Year – Fall Semester

MASE 2133 Advance Marine.....	(3 cr)
MASE 2134 Advance Marine & Personal Water .....	(3 cr)
MASE 2135 Machine Shop.....	(2 cr)
MASE 2169 MASE Tune Up .....	(3 cr)
MASE 2136 Industry Certifications II .....	(2 cr)
General Education/Electives .....	(3 cr)
<b>Total 16 Credits</b>	

Second Year – Spring Semester

MASE 2143 Diagnostic Troubleshooting .....	(3 cr)
MASE 2162 ATV Motorcycle Systems I .....	(4 cr)
MASE 2164 ATV Motorcycle Systems II.....	(4 cr)
General Education/Electives.....	(5 cr)
<b>Total 16 Credits</b>	

GRADUATION REQUIREMENT 64 CREDITS

\*Denotes Prerequisites

# Course Descriptions

## ACCOUNTING

### ACCT 2011 Accounting Principles I (Financial)

**Credits: 4**

*Prerequisite: Accuplacer Reading Score of 56+*

*Co-Requisite: none*

This course serves as an introduction to the generally accepted accounting principles used to identify, measure, and communicate useful economic information to users. Specific topics include accrual accounting, financial statements, accounting systems, merchandise accounting, internal control, and accounting for assets, liabilities, and owners' capital. International issues and ethics are incorporated into appropriate topics.

*Transfer Curriculum Goal(s): none*

### ACCT 2012 Accounting Principles II (Managerial)

**Credits: 4**

*Prerequisite: ACCT 2011*

*Co-Requisite: none*

This course continues the study of generally accepted accounting principles used to identify, measure, and communicate useful economic information to users. Specific topics include the statement of cash flows and financial statement analysis. In addition, a major portion of this course focuses on the informational needs of management for strategic decision-making. Topics include cost-volume-profit analysis, product costing, cost management, cost behavior, relevant information, performance measurement, and capital budgeting. Ethics are incorporated into projects and discussions throughout the course.

*Transfer Curriculum Goal(s): none*

### ACCT 2114 Payroll Accounting

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to develop an understanding of the various federal and state laws pertaining to the computation and payment of employment compensation. Topics include employment recordkeeping requirements, preparation of the payroll register, individual earnings records, tax reports and other forms required by government agencies.

*Transfer Curriculum Goal(s): none*

### ACCT 2121 Intermediate Accounting I

**Credits: 4**

*Prerequisite: ACCT 2012*

*Co-Requisite: none*

This course is an in-depth study of financial accounting theories, concepts, and practices. It provides a review of the accounting process, the conceptual framework of accounting, and the financial statements. Topics covered in detail include cash and receivables, inventories, property, plant and equipment, and intangible assets.

*Transfer Curriculum Goal(s): none*

### ACCT 2123 Intermediate Accounting II

**Credits: 4**

*Prerequisite: ACCT 2121*

*Co-Requisite: none*

This course is a continuation of the comprehensive study of financial accounting theory, concepts, and practices, with particular emphasis on current and long-term liabilities, stockholders' equity, earnings per share, income taxes, pensions, leases, and the statement of cash flows. Additional related topics will also be presented.

*Transfer Curriculum Goal(s): none*

### ACCT 2137 Accounting for Governmental and Not-for-Profit Entities

**Credits: 3**

*Prerequisite: ACCT 2012*

*Co-Requisite: none*

This course focuses on the application of generally accepted accounting principles to state and local governmental units, health care organizations, and other not-for-profit entities. Topics covered include the governmental fund accounting cycle, budget considerations, financial statement preparation and analysis, and special accounting considerations for health care and other not-for-profit organizations.

*Transfer Curriculum Goal(s): none*

### ACCT 2138 Computerized Accounting Software

**Credits: 3**

*Prerequisite: ACCT 2011*

*Co-Requisite: none*

This course is an introduction to computerized accounting software. During the course, students complete the accounting cycle using an up-to-date version of a popular small business accounting software package. By means of a practical, hands-on approach, students apply abstract accounting principles to concrete accounting procedures. Students record cash sales and deposits, prepare invoices, enter bills, write checks, maintain inventory, process payroll, reconcile accounts, generate financial statements and other managerial reports, close the period, and manage vital data lists.

*Transfer Curriculum Goal(s): none*

### ACCT 2140 Accounting Applications

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will apply various skills, knowledge and tools when analyzing and solving hands-on accounting application problems. This course will train students how to deliver timely, accurate accounting information that is relevant and essential for business making decisions.

*Transfer Curriculum Goal(s): none*

### ACCT 2161 Cost Accounting I

**Credits: 3**

*Prerequisite: ACCT 2012*

*Co-Requisite: none*

This course provides theoretical and practical knowledge of the fundamentals of a cost accounting information system, including cost behavior, cost-volume-profit relationships, costing techniques in service and manufacturing sectors, budgeting, variance analysis and the creation of pro-forma financial statements to evaluate a company's performance. Management use cost accounting information for decision making.

*Transfer Curriculum Goal(s): none*

### ACCT 2165 Income Tax

**Credits: 4**

*Prerequisite: ACCT 2011*

*Co-Requisite: none*

This course is an introductory course in the study of U.S. taxation policy, the application of that policy to calculate the correct tax position, and to prepare a Federal Form 1040 and accompanying schedules along with a MN income tax return in good form for various taxpayers.

*Transfer Curriculum Goal(s): none*

### ACCT 2170 Tax Updates with Tax Software

**Credits: 1**

*Prerequisite: ACCT 2165*

*Co-Requisite: none*

Students will demonstrate an understanding of the most current tax laws and prepare individual income tax returns using TaxWise Software. Students will be expected to achieve IRS certification at the advanced level using interactive training modules and volunteer to prepare individual tax returns at VITA Sites of their choosing within a 60-mile radius of Central Lakes College- Brainerd campus.

*Transfer Curriculum Goal(s): none*

### ACCT 2350 Accounting Internship

**Credits: 1-9**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

The accounting internship is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

*Transfer Curriculum Goal(s): none*

### ACCT 2370 Special Problems in Accounting

**Credits: 1-3**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course allows accounting students to study accounting types of problems relevant for their own career objectives. Students will meet with their instructor to set up their own course of study, and may satisfy course requirements through industry seminars, outside training experiences or individual research.

*Transfer Curriculum Goal(s): none*

## ADMINISTRATIVE ASSISTANT

### ADMN 1120 Administrative Support Applications

**Credits: 3**

*Prerequisite: COMP 1109, COMP 1131, COMP 1135*

*Co-Requisite: COMP 1133, COMP 1134*

This course teaches students to develop skill in performing typical office tasks including electronic and manual file management, mailable document processing, classifying of mail, meeting and event planning, travel arrangements, managing office supplies as well as email and other electronic communication system management. Students will also develop skill in telephone and calendaring procedures through projects and simulations as well as on-line and library and/or internet reference assignments. Emphasis will be on setting priorities and practicing time management skills.

*Transfer Curriculum Goal(s): none*

### ADMN 1125 Business English Skills

**Credits: 3**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course is an extensive, comprehensive study of Business English grammar, spelling, word usage, punctuation, number usage, capitalization and abbreviation rules, and proofreading. Students will develop the technical skills utilizing business/industry standards.

*Transfer Curriculum Goal(s): none*

### ADMN 1156 Championship Keyboarding

**Credits: 3**

*Prerequisite: ADMN 1300*

*Co-Requisite: none*

This course is an independent class and is designed to help students develop superior keyboarding skills by improving

accuracy and speed. Emphasis is placed on accuracy first, speed second. The student will learn how to evaluate their typing errors and how to determine the corrective practice need to improve accuracy and speed. Great emphasis is placed on typing letter by letter with rhythm rather than word by word.

*Transfer Curriculum Goal(s): none*

### ADMN 1300 Introduction to Keyboard

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed for the student who has never had keyboarding or for the student who wants to improve their keyboarding skills. The major objectives are to develop touch control of the keyboard and proper typing techniques, and to build basic speed and accuracy. This class is learning the keyboard only. It will not cover letter styles or reports.

*Transfer Curriculum Goal(s): none*

### ADMN 2110 Administrative Assistant Capstone

**Credits: 3**

*Prerequisite: ADMN 1120, ADMN 1125*

*Co-Requisite: none*

This Capstone course is designed to integrate and reinforce the skills and knowledge learned in previous courses in the program. Project emphasis will develop the students' awareness of work flow, chain of command, and creation/integration of office documents. The use of electronic tools and the integration of documents created in various Microsoft Office Suite programs is the primary focus of this course. Students will learn from hands-on training and business examples to gain general knowledge of day-to-day office procedures. This class would be taken in lieu of an Internship. This should be taken the last semester of their program.

*Transfer Curriculum Goal(s): none*

### ADMN 2150 Internship

**Credits: 1-6**

*Prerequisite: ADMN 1120, ADMN 1125*

*Co-Requisite: none*

This internship provides students with on-the-job experience in the student's career major. A competency-based training plan will be developed for each student in collaboration with the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. The internship program will be available to students who have demonstrated readiness and willingness to learn in a professional business organization. Students will learn from hands-on training and business examples to gain general knowledge of day-to-day office procedures. This should be taken the last semester of their program.

*Transfer Curriculum Goal(s): none*

## AGRICULTURAL STUDIES

### AGRI 1100 Introduction to Precision Agriculture

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will prepare students for the advanced technologies and theories that are emerging in the agriculture industry. Students will develop skills in geographic information systems, global positioning systems, yield monitoring concepts, and remote sensing technologies. Classroom experiences will enable students to combine technologies needed to meet the demanding needs of the agriculture industry.

*Transfer Curriculum Goal(s): none*

#### **AGRI 2150 Agricultural Studies Internship**

**Credits: 1-9**

*Prerequisite: see instructor to register*

*Co-Requisite: none*

The agricultural studies internship is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

*Transfer Curriculum Goal(s): none*

## **AGRONOMY**

#### **AGRO 1100 Introduction to Agronomy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers basic agronomy principles and environmental ethics. Students will learn seed quality, plant growth, anatomy of a plant, seed production, and plant response to environmental factors. Relevant agricultural patents and ethical issues will be discussed.

*Transfer Curriculum Goal(s): none*

## **AMERICAN SIGN LANGUAGE**

#### **AMSL 1410 American Sign Language I**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

In this introductory course, you will engage in receptive and expressive language readiness activities as well as learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn appropriate introductions, how to exchange personal information, sign about their surroundings, explain where they live, speak about their family and converse about activities. Basic aspects of Deaf Culture will also be integrated throughout the course.

*Transfer Curriculum Goal(s): 8*

#### **AMSL 1412 American Sign Language II**

**Credits: 4**

*Prerequisite: AMSL 1410*

*Co-Requisite: none*

In this level 2 introductory course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to give directions, describe physical and personal characteristics of others, make requests and talk about family, routines and occupations. Basic aspects of Deaf Culture will also be integrated throughout the course.

*Transfer Curriculum Goal(s): 8*

#### **AMSL 1420 American Sign Language Cultural Immersion Travel**

**Credits: 2**

*Prerequisite: Instructor permission required*

*Co-Requisite: none*

Students in this course will participate in an American Sign Language/Deaf Culture immersion travel-study trip. The entire duration of the trip will be conducted in American Sign Language. Topics of study will derive from art, culture, history and geography of the area being visited. Classroom time prior to the trip will involve basic culture lessons and

preparation for travel. Post-trip classroom meetings will emphasize reflection of travel experience and learning.

*Transfer Curriculum Goal(s): 1,8*

#### **AMSL 2370 Topics in American Sign Language**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in American Sign Language. Offered on demand.

*Transfer Curriculum Goal(s): none*

#### **AMSL 2410 American Sign Language III**

**Credits: 4**

*Prerequisite: AMSL 1412*

*Co-Requisite: none*

In this level 3 course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to describe placement and give directions, make requests, complaints and suggestions, ask for permission and clarification, tell about life events, nationalities and family history. In depth practice with multiple meaning words in ASL and basic aspects of Deaf Culture will also be integrated throughout the course.

*Transfer Curriculum Goal(s): 8*

#### **AMSL 2412 American Sign Language IV**

**Credits: 4**

*Prerequisite: AMSL 2410*

*Co-Requisite: none*

In this level 4 course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to exchange in-depth personal information, describe and identify shapes, patterns and textures, and sign about weekend activities. In-depth practice with multiple meaning words in ASL and basic aspects of Deaf Culture will also be integrated throughout the course.

*Transfer Curriculum Goal(s): 8*

#### **AMSL 2414 Conversational ASL**

**Credits: 1**

*Prerequisite: AMSL 1410*

*Co-Requisite: none*

In this course, students will build receptive and expressive conversational skills through small group work. Vocabulary and classifier building through conversational settings. Continued practice with real world experiences and discussions.

*Transfer Curriculum Goal(s): 8*

#### **AMSL 2420 Deaf Culture**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

No sign language experience is necessary for this course! This class introduces students to the history and culture of Deaf people. Students will study the influences in Deaf culture, the implications of being pathologically deaf vs. culturally Deaf, and various aspects of Deaf community and culture. The course also examines the historical treatment of deaf people as well as educational influences, causes, and treatment of deafness.

*Transfer Curriculum Goal(s): 6,7*

## **ANIMAL SCIENCE**

#### **ANSI 1100 Introduction to Animal Science**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a broad introduction to animal science, and the role of animals in society from biological, social, global and industry perspectives. Topics covered include the fundamental concepts of nutrition, anatomy/physiology, breeding, behavior, health care, animal welfare, marketing, economics and management principles as they apply to both traditional and non-traditional species of livestock and poultry.

*Transfer Curriculum Goal(s): none*

#### **ANSI 1110 Food Safety: From Farm to Fork**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a producer and consumer oriented introduction to food safety and food safety risks associated with the agrifood industry, specifically the food animal sector. Topics of study will include zoonotic and food borne pathogens, chemicals, toxins and drug residues, biosecurity, current technology, consumer perceptions and regulatory agencies responsible for overseeing food safety in the industry. Students will examine food safety risks associated with production, harvest, transporting, processing, distribution, retail sale, home and commercial kitchen use of animals and animal products and learn the control, prevention and intervention strategies available to help minimize the risk of food borne disease.

Students completing this course have the opportunity to earn the National Restaurant Association ServSafe Certificate, which meets the State of Minnesota's requirements for Food Manager Certification.

*Transfer Curriculum Goal(s): none*

## **ANTHROPOLOGY**

#### **ANTH 1457**

##### **Cultural Anthropology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Cultural Anthropology is the comparative study of contemporary human cultures, and includes analysis of various aspects of culture, such as language, food-getting, family and kinship, economics, politics, religion, and change.

*Transfer Curriculum Goal(s): 5,8*

#### **ANTH 1598 Topics in Anthropology**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Anthropology. Offered on demand.

*Transfer Curriculum Goal(s): none*

#### **ANTH 2411 Cultures of American Indians**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an examination of Native American Cultures that will include discussion of contemporary issues facing native communities. It will focus on the distinct worldviews that influence all aspects of culture within those communities

as well as their relationships with other communities, both native and non-native.

*Transfer Curriculum Goal(s): 5,7*

## **APPLICATION DEVELOPMENT**

#### **APPD 1110 Programming in C#**

**Credits: 3**

*Prerequisite: none*

*Co-Requsite: Students are strongly encouraged to take APPD 1111 Problem Solving Using Logic (3 cr) concurrently, or have experience in computer programming.*

This is an introductory course in programming languages. It is designed to begin at basic level concepts and move into advanced topics as the course progresses. This course uses C# as the programming language for software development in order to help students prepare for certification exams that use C#. The basic programming concepts learned in this course can be applied to a number of other languages. This course is designed to focus on programming concepts and uses the C# platform to present the material. Students will be creating projects based on the C# platform. This course is intended to be one of a series of courses that prepares students for application development and uses concepts that students will be able to use to prepare for industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques.

The students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft 70-483.

*Transfer Curriculum Goal(s): none*

#### **APPD 1111 Problem Solving Using Logic**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to developing solutions to problems and developing a formalized understanding of programming logic. By using pseudocode (high level language) to represent solutions and developing an understanding of a programming language to implement the solutions, a student will have the fundamental understanding to begin developing programs in other languages and environments. Topics include the System Development Life Cycle, Agile programming methodology and the fundamentals of solving real-world problems using logic. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 1113 Programming in HTML5 with JavaScript and CSS3**

**Credits: 3**

*Prerequisite: APPD 1111*

*Co-Requisite: none*

This introductory course will help students learn basic HTML5 and JavaScript programming skills and the imple-

mentation of styles using CSS3. It focuses on using HTML5, and JavaScript to implement programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications. This course is designed to focus on developing application concepts while using HTML5 with JavaScript and CSS3 to present the material. Students will learn how to implement and manipulate document structures and objects, implement program flow, access and secure data and use CSS3 in applications. This course is intended to be the first course in a series of courses that prepare students for HTML5 and JavaScript application development and uses concepts that students will be able to use to prepare for industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCS D 70-480.

*Transfer Curriculum Goal(s): none*

#### **APPD 1115 Database Design Fundamentals**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to database design and Structured Query Language (SQL). The building blocks of database design, such as fields, rows, and columns will be addressed. Topics will include data design and modeling in relational databases. Students will also learn how to select, add, update and delete records from a database. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 1120 Android Application Development Fundamentals**

**Credits: 3**

*Prerequisite: APPD 1111*

*Co-Requisite: none*

This course is designed to introduce students to Android development using the Java programming language and object-oriented programming. Students will learn how to plan, develop, and debug Java applications. Topics include introduction to the Android environment, introduction to Java programming and the implementation of project development techniques in a mobile application development environment. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 1125Advanced Database Design**

**Credits: 3**

*Prerequisite: APPD 1111, APPD 1115*

*Co-Requisite: none*

This course is designed to further students' knowledge in database design and management of SQL server databases. Topics include disaster planning and recovery, safeguarding data, automating database management processes and op-

timizing SQL server performance. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 1300 Mobile Application Development Fundamentals**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to the concepts of mobile application development and a rapid development framework. Topics include terminology of application development, research into platform-dependent and platform-independent development, and the development of apps that the students may use on their own devices. The knowledge, skills, and attitudes covered in this course will help students to decide if a program of study in application development is an appropriate option for future study.

*Transfer Curriculum Goal(s): none*

#### **APPD 2111 Android/Server Interaction**

**Credits: 3**

*Prerequisite: APPD 1125, APPD 2120*

*Co-Requisite: none*

This course is designed to expose students to the Google Cloud Messaging (GCM) service and to access an SQL server database from an Android application. Students will use GCM as they develop and update their Android applications. Topics include Google Cloud Messaging, application synchronization, SQL server access and client-server database design. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 2114 Developing Windows Applications Using C#**

**Credits: 3**

*Prerequisite: APPD 1110*

*Co-Requisite: none*

This is an advanced programming course using C# for software development. This course is designed to focus on programming concepts and uses the C# platform to present the material. Students will create projects based on the C# platform. This course is the second course in a series of courses that prepare students for application development and industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. Students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCS D 70-484.

*Transfer Curriculum Goal(s): none*

#### **APPD 2116 Developing Windows Applications Using HTML5 and JavaScript**

**Credits: 3**

*Prerequisite: APPD 1113*

*Co-Requisite: none*

This course is an advanced course in programming languages using HTML5 and JavaScript. This course is designed assuming prior HTML5, JavaScript, and CSS3 knowledge and will help students learn essential programming skills and techniques that are required to develop Windows Applications. This course will help prepare students to design and develop Windows Apps, create and program the user interface, and manage security and data. This course is the second course in a series of courses that prepare students for HTML5 and JavaScript application development and industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCS D 70-481.

*Transfer Curriculum Goal(s): none*

#### **APPD 2120 Advanced Android Development**

**Credits: 3**

*Prerequisite: APPD 1120, APPD 1125*

*Co-Requisite: none*

This course is designed to advance students' knowledge in the Android programming environment. Students will learn how to install and modify the Android SDK environment, create databases using SQLite, use XML and JSON to use external databases and plan, develop, and debug Android. Topics include Java programming and the integration of internal and external databases into the Android applications. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 2122 iOS Development Fundamentals**

**Credits: 3**

*Prerequisite: APPD 1111*

*Co-Requisite: none*

This course is designed to introduce students to iOS development using the Objective-C programming language and the Xcode environment. Students will learn how to plan, develop, and debug Objective-C applications. Topics include introduction to the iOS environment, introduction to Objective-C programming and the implementation of project development techniques in a mobile application development environment. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

*Transfer Curriculum Goal(s): none*

#### **APPD 2124 Software Development Methodology**

**Credits: 3**

*Prerequisite: APPD 1111*

*Co-Requisite: none*

This course focuses on the methods used to design and engineer software. Students will review the historical contexts of multiple methodologies that have evolved in the development of software. The course will examine the different methods of software development and how software

can be developed using the principles of today's accepted and widely used methodologies. Students will spend time working with each of the methodologies listed: SDLC, Agile, Microsoft Solutions Framework (MSF), and Scrum. Other methodologies will also be explored. Focus will be on an Agile methodology or an evolved Agile methodology. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer.

Certification Preparation: none

*Transfer Curriculum Goal(s): none*

#### **APPD 2126 Advanced Windows Application Development Using HTML5 and Javascript**

**Credits: 3**

*Prerequisite: APPD 2116*

*Co-Requisite: none*

This course is an advanced course in programming languages using HTML5, JavaScript and CSS3. This course is the third course in a series of courses that prepare students for HTML5 and JavaScript application development and industry certification exams. The focus is on advanced programming skills and techniques that are required to develop Windows Applications using HTML5 and JavaScript platforms. Programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCS D 70-482.

*Transfer Curriculum Goal(s): none*

#### **APPD 2128 Advanced Windows Application Development Using C#**

**Credits: 3**

*Prerequisite: APPD 2114*

*Co-Requisite: none*

This is an advanced programming course designed to focus on programming concepts using the C# platform to create applications. This course is the third course in a series of courses that prepare students for application development and industry certification exams. Programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. Students are expected to develop projects using object-oriented design methods. This course is a culminating course in C#. Students will design and work through the publishing process to publish an application developed individually or in a team project. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCS D 70-485.

*Transfer Curriculum Goal(s): none*

#### **APPD 2132 Advanced iOS Development**

**Credits: 3**

*Prerequisite: APPD 1125, APPD 2122*

*Co-Requisite: none*

This course is designed to advance students' knowledge in the iOS programming environment. Students will learn how to install and modify the Xcode IDE environment, use

external databases and plan, develop, and debug Objective-C applications. Topics include Objective-C programming, threading and synchronization, and the integration of external databases into the Objective-C applications. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.  
*Transfer Curriculum Goal(s): none*

## ART

### ARTS 1401 Black and White Photography I

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

Students will learn basic shooting and compositional techniques with the use of digital cameras. Information regarding current and cutting edge technology will be employed in the field and classroom. Students will photograph subjects on field trips, images will be converted to black and white using Adobe software and exported on printers. Critique sessions will follow in the classroom after students produce finished images. This course provides the basic framework for other photography courses.

*Transfer Curriculum Goal(s): 6*

### ARTS 1403 Color Photo I

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

Students will learn basic shooting and compositional techniques with the use of digital cameras. Students will learn to visualize images in the field conveying their personal vision as an artist. Students will explore the use of contrast, depth of field and focus to interpret the image during digital capture. Critique sessions will follow in the classroom. This course provides the basic framework for other photography courses.

*Transfer Curriculum Goal(s): 6*

### ARTS 1405 Exploring Color Photography

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course focuses on digital photography, integrating principles and processes of contemporary image capture. A variety of visual projects engage students in solving aesthetic and technical problems incorporating analysis, interpretation, expression and presentation. An historical perspective will also be included. Commercial labs will be used for print processing. It is strongly recommended participants have a digital camera with manual exposure control.

*Transfer Curriculum Goal(s): 6*

### ARTS 1420 The Art of Digital Photography

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course is an introduction to visual art, stressing the basic skills involved in creating and understanding Digital Photography. The objective of this course is to encourage the students to open their mind to the cultural significance of visual arts as well as develop the ability to use digital media as a vehicle of artistic expression. The course is composed of equal parts of lecture and creative studio work.

*Transfer Curriculum Goal(s): 6*

### ARTS 1425 Introduction to Graphic Design

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This introductory course explores the basic principles, aesthetic and conceptual practices of graphic design. This course is a studio art course as such it will concentrate on conceptualization, interpretation, and evaluation of communication art. Emphasis is placed on developing an awareness and effective use of type, image, symbols, and visual relationships. Students focus on the design process as a way to develop and refine design solutions.

*Transfer Curriculum Goal(s): 6*

### ARTS 1450 Introduction to Studio Art

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This is an introductory course that explores materials, techniques, and concepts used in contemporary and historical art. The possibilities of 3-dimensional and 2-dimensional art will be investigated through the elements and principles of design. This course will challenge students to generate ideas, experiment with meaning and metaphor, develop aesthetic sensitivity, and participate in critique and self-evaluation. This is a basic course designed to provide a foundation for all art studio courses, and is recommended as an introduction to the art field and creative process for all students.

*Transfer Curriculum Goal(s): 6*

### ARTS 1458 Drawing

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This is an introductory course concerned with translation of three-dimensional form into two-dimensional visual expression. Students experience a variety of drawing media used in contemporary and historical art. The possibilities of line, shape, gesture, value, texture, space, proportion, perspective, and composition will be investigated through work-based assignments. A variety of subjects from still life, architectural forms, flora, and fauna are used as inspiration for the student's drawings. This course will challenge students to generate ideas, experiment with meaning and metaphor, develop aesthetic sensitivity, and participate in critique and self-evaluation. This is a basic course designed to provide a drawing foundation for all art studio courses, and is recommended as an introduction to the art field and creative process for all students.

*Transfer Curriculum Goal(s): 6*

### ARTS 1459 2-D Design & Color

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course is an introduction to the elements and principles of two-dimensional design presented through study of significant master works by artists from various cultures. Projects will emphasize creative decision-making and development of the language of visual composition. This class is recommended for students going into visually oriented fields of study such as visual arts, graphic design, architecture, etc. Art majors and minors should schedule it early in their first year of study.

*Transfer Curriculum Goal(s): 6*

### ARTS 1468 Painting

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

The purpose of this course is to introduce the student to the use of color and basic concepts and exploration in imagery through the use of opaque paint. There will be opportunities for creative decision-making, as well as development of skills in aesthetic judgments and constructive self-criticism through groups and individual critiques. Art majors and minors should take this course.

*Transfer Curriculum Goal(s): 6*

### ARTS 1470 Art Appreciation

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course is an introduction to the history and appreciation of art through a survey of humanity's needs and aspirations as expressed in painting, sculpture, printmaking, crafts, etc. A study of individual artists and art movement in specific context relative to the political and economical circumstances is a component of the class. Other components include critical analysis and writing requirements.

*Transfer Curriculum Goal(s): 6*

### ARTS 1487 Ceramics: Beginning Hand Building

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course focuses on creative three-dimensional design in clay emphasizing hand construction methods. Further emphasis is on surface treatment, the nature of clay and glaze, bisque and glaze firing. Study of aesthetics through the students' work as well as historical and contemporary masters of various cultures. This course is recommended for art majors and minors.

*Transfer Curriculum Goal(s): 6*

### ARTS 1488 Ceramics: Beginning Throwing

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater  
Co-Requisite: none*

This course is a focus on development of basic skills in the use of the potter's wheel. Selected slide presentations of historical and contemporary potters from throughout the world and discussion of the aesthetics of pottery and vessels will be explored.

*Transfer Curriculum Goal(s): 6*

### ARTS 1489 Intermediate Ceramics

**Credits: 3**

*Prerequisite: ARTS 1487 or ARTS 1488  
Co-Requisite: none*

This course emphasizes expressive use of form and surface relating to hand building and/or the potter's wheel. Additional focus is on making and using glaze as well as firing and study of historical and contemporary artists.

*Transfer Curriculum Goal(s): 6*

### ARTS 1510 Autumn Landscape Photography

**Credits: 3**

*Prerequisite: none  
Co-Requisite: none*

This is an accelerated and intensive landscape photography course that is scheduled for Autumn. Students will work in an outdoor setting photographing images in either color or black and white. Emphasis is placed upon specific challenges and opportunities that photographing in an outdoor setting provides. Compositional techniques and proper exposure

values will be covered in great detail. All images will be captured on digital cameras. The images will be burned to compact disks and critiqued by the instructor and class.

*Transfer Curriculum Goal(s): none*

### ARTS 1512 The Art of Photographing Wildflowers

**Credits: 3**

*Prerequisite: none  
Co-Requisite: none*

This is an accelerated and intensive photography course that specializes in wildflowers. Students will work in an outdoor setting photographing images in either color or black and white. Emphasis is placed upon specific challenges and opportunities that photographing in an outdoor setting provides. Compositional techniques and proper exposure values will be covered in great detail. All images will be captured on digital cameras. The images will be burned to compact disks and critiqued by the instructor and class.

*Transfer Curriculum Goal(s): none*

### ARTS 1596 Topics in Art

**Credits: 1-3**

*Prerequisite: none  
Co-Requisite: none*

This course will examine selected topics of interest in Art. Offered on demand.

*Transfer Curriculum Goal(s): none*

### ARTS 1597 Topics in Art

**Credits: 1-3**

*Prerequisite: none  
Co-Requisite: none*

This course will examine selected topics of interest in Art. Offered on demand.

*Transfer Curriculum Goal(s): none*

### ARTS 1598 Topics in Art

**Credits: 1-3**

*Prerequisite: none  
Co-Requisite: none*

This course will examine selected topics of interest in Art. Offered on demand.

*Transfer Curriculum Goal(s): none*

### ARTS 2401 Black and White Photography II

**Credits: 3**

*Prerequisite: ARTS 1401  
Co-Requisite: none*

Students will explore the Zone System from visualization to capture. Students will employ the use of contrast, focus and composition to create their vision with the captured photograph. Images will be critiqued to guide the photographer along their visual journey. Students will explore a subject in depth and produce a body of work to put into practice the skills learned in ARTS 1401.

*Transfer Curriculum Goal(s): 6*

### ARTS 2403 Color Photo II

**Credits: 3**

*Prerequisite: ARTS 1403  
Co-Requisite: none*

Students will create a personal project with digital imagery that follows their vision as a photographer. This course explores the essence of using color and tone to convey emotion and feeling with the camera. Images will be captured in color and edited using Adobe software. Critique sessions will guide the student to explore all aspects of the subject. Possible venues for the published work will be researched with

each student.  
*Transfer Curriculum Goal(s): 6*

#### **ARTS 2410 Introduction to Photo/Video Art**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 56 or greater*  
*Co-Requisite: none*

This course is an introduction to the aesthetic and conceptual practices of digital capture media. This course is a studio art class as such it will concentrate on conceptualization, interpretation, and evaluation of still and video-based art. Students will develop skills as artists through still and continuous image capture, presentation and/or screenings, discussions, critique, demonstrations, and assigned projects. Students will become familiar with basic production techniques, including project planning and storyboarding, lighting, exposure control, audio, editing, and performance for the camera.

*Transfer Curriculum Goal(s): 6*

#### **ARTS 2485 American Indian Art**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 56 or greater*  
*Co-Requisite: none*

The purpose of this course is to introduce the student to American Indian Art through a survey of the historical art from the landmass north of Mexico. Indian art by culture areas include the Plains, the Southwest, California, the Great Basin, Pacific Plateau, the Pacific Northwest Coast, Arctic Coast, and the Woodlands. Contemporary artists and works are included.

*Transfer Curriculum Goal(s): 6,7*

#### **ARTS 2486 Art History/Ancient**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 56 or greater*  
*Co-Requisite: none*

This course is a survey of art from pre-history through the Middle Period. It includes human creativity presented through a variety of media and art forms. This course will fulfill requirements for the liberal arts degree and offers an excellent basis for cultural diversity, critical analysis and aesthetic appreciation.

*Transfer Curriculum Goal(s): 6*

#### **ARTS 2487 Art History/Modern**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 56 or greater*  
*Co-Requisite: none*

This course is a survey of art from the Middle Period through modern art. It continues from where the Art History/Ancient course stopped, but it is not necessary to take the two courses in sequence. It includes human creativity presented through a variety of media and art forms. This course will fulfill requirements for the liberal arts degree and offers an excellent basis for cultural diversity, critical analysis and aesthetic appreciation.

*Transfer Curriculum Goal(s): 6*

#### **ARTS 2490 Art History/Non-Western**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 56 or greater*  
*Co-Requisite: none*

This course is a survey of multicultural art from around the world. We will study art from various countries which may include India, China, Korea, Japan, Africa and the Native Arts of the Americas and Oceania. Critical analysis and cultural diversity are components of this course.

*Transfer Curriculum Goal(s): 6,8*

#### **ARTS 2583 Independent Study**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course gives the art student an opportunity to continue concentrated studies in art courses after all regularly offered classes in the specific area have been completed.

*Transfer Curriculum Goal(s): none*

## **AUTOMOTIVE TECHNOLOGY**

#### **AUTM 1101 A1 Engine Repair**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers the fundamentals of internal combustion engine operation, repair and maintenance, the procedures for removal, replacement, diagnosing, rebuilding, and assembly. Proper tool and equipment application and failure diagnosis are emphasized in this course. This course provides a minimum of 125 clock hours of the 120 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1102 A2 Automatic Transmission & Transaxle**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course teaches the theory of operation of automatic transmissions and transaxles and the related components. The fundamentals of service of the components of the transmissions will be introduced and practiced in this course. This course provides a minimum of 125 clock hours of the 120 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1103 A3 Manual Drive Train & Axles**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers standard automotive and light truck clutches, drive line, differential/4x4 and manual transmissions/transaxles. The clutch section includes design, adjustment, overhaul, diagnosis and repair of mechanical and hydraulic systems. The drive line section includes phasing alignment and balance. The manual transmission/transaxle section teaches the operation theory and repair. This course provides a minimum of 100 clock hours of the 100 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1104 A4 Steering & Suspension**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course teaches suspension systems using leaf springs, coil springs, MacPherson struts, torsion bars and wheel balance. It also covers the principles of operation, disassembly, checks and adjustments of power and manual steering gears, and manual and power rack and pinion systems. Also teaches the procedures required for checking and adjusting wheel alignment. This course provides a minimum of 100 clock hours of the 95 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1105 A5 Brakes**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course teaches the principles of brakes, hydraulic system fundamentals, disc and drum brakes, parking brakes and power assist units. Also included is an introduction to ABS systems. Emphasis is placed on operation, diagnosis and repair of various types of brake systems. This course provides a minimum of 125 clock hours of the 105 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1106 A6 Electrical/Electronic Systems I**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers the theory and operation of all electrical and electronic systems on the automobile. It will cover basic electronics, starting and charging, body electronics, and computer operation. This course provides a minimum of 125 clock hours of the 230 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1107 A7 Heating & Air Conditioning**

**Credits: 4**  
*Prerequisite: AUTM 1106*  
*Co-Requisite: none*

This course teaches the principles of air conditioning and its relationship to the heating system. The various types, diagnosis of malfunctions, testing and repair are studied in the classroom. Practical experience is performed on live systems: recovering, evacuating, component replacement, charging and performance testing on the systems. This course provides a minimum of 100 clock hours of the 90 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1108 A8 Engine Performance I**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course teaches the theory and repair of automotive engine systems. It includes ignition systems, emission controls, electronic engine controls, and engine performance diagnosis. This course provides a minimum of 125 clock hours of the 220 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1116 A6 Electrical/Electronic Systems II**

**Credits: 4**  
*Prerequisite: AUTM 1106*  
*Co-Requisite: none*

This course covers the theory and operation of all electrical and electronic systems on the automobile. It will cover basic electronics, starting and charging, body electronics, and computer operation. This course provides a minimum of 125 clock hours of the 230 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1118 A8 Engine Performance II**

**Credits: 4**  
*Prerequisite: AUTM 1106, AUTM 1108*  
*Co-Requisite: none*

This course teaches the theory and repair of automotive engine systems. It includes ignition systems, emission controls, electronic engine controls, and engine performance diagnosis. This course provides a minimum of 125 clock hours of the 220 required NATEF clock hours.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1120 Transportation Industry Skills I**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is designed to give students an understanding of safety procedures used in a working automotive shop. Safety involving tools and equipment, as well as personal safety, will be discussed. Students will gain an understanding of the tools and equipment used in a working automotive production shop. Preparation of automotive repairs and delivery to the customer will be stressed.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1121 Transportation Industry Skills II**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is designed to give the students workplace employability skills needed for a successful career in the automotive field. It deals with people skills, problem solving skills, ethics, communications and teamwork.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1122 Transportation Industry Skills III**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is designed to teach math and common measurement tools used in an automotive shop environment. Fasteners and sealants will also be discussed and applied to proper usage. Safe handling and disposal of hazardous wastes will be emphasized.

*Transfer Curriculum Goal(s): none*

#### **AUTM 1123 Transportation Industry Skills IV**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course describes different job classifications available to the automotive industry. This course will also teach skills needed to conduct a job interview successfully, and to write and maintain a resume.

*Transfer Curriculum Goal(s): none*

## **AVIATION**

#### **AVIA 1110 Aeronautics**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course provides principles of flight, navigation, aircraft and engine operation, flight instruments, flight computer, communications, flight planning, and Federal Aviation Regulations. Successful completion of this course allows the prepared student to take the FAA Private Pilot Airmen Knowledge Exam.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1112 Aviation Physiology**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers the effects of human physiology including hypoxia, barotraumas, vertigo, fatigue, drugs, vision and preventive medicine, with a review of accident reports

and other materials relating to casualty factors in aviation accidents and aviation safety.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1114 Private Flight Lab**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides actual training in flight, navigation, aircraft and engine operation, flight instruments, flight computer, communications, flight planning, and Federal Aviation Regulations. Successful completion of this course allows the student to take the FAA Private Pilot Checkride.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1120 Instrument Training**

**Credits: 4**

*Prerequisite: AVIA 1110, AVIA 1114*

*Co-Requisite: none*

This course covers the instruments and systems, weathers, IFR procedures, Federal Aviation Regulations, altitude instrument flying, cross country procedures, and instrument approaches. Successful completion of this course allows the prepared student to take the FAA Instrument Pilot Knowledge Exam. This course is offered on demand.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1122 Instrument Training Flight Lab**

**Credits: 3**

*Prerequisite: AVIA 1110, AVIA 1114*

*Co-Requisite: none*

This course provides actual training in flight for navigation systems, weather, IFR procedures, FAA regulation, attitude instrument flying, cross country procedures, and instrument approaches. Successful completion of this course allows the prepared student to take the FAA instrument Pilot Checkride.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1130 Commercial Ground & Flight**

**Credits: 4**

*Prerequisite: AVIA 1120, AVIA 1122*

*Co-Requisite: none*

This course provides instruction in aircraft systems, aerodynamics, and human factors relating to aviation. Emphasis will be on Federal Aviation Regulations relevant to the federal airspace system and commercial flight. Successful completion allows the prepared student to take the Commercial Pilot FAA Knowledge Exam.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1132 Commercial Ground & Flight Lab**

**Credits: 3**

*Prerequisite: AVIA 1120, AVIA 1122*

*Co-Requisite: none*

This course provides instruction in aircraft systems, aerodynamics, and human factors relating to aviation. Emphasis will be on Federal Aviation Regulation relevant to the federal airspace system and commercial flight. Successful completion allows the prepared student to take the Commercial Pilot FAA Knowledge Exam.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1140 Certified Flight Instructor Ground & Flight**

**Credits: 4**

*Prerequisite: AVIA 1130, AVIA 1132*

*Co-Requisite: none*

This course provides basic information leading to a CFI

Certificate. The two areas covered are the fundamentals of instructing including methods helpful to flight instruction, components of the flight training syllabus, and flight instructor responsibilities including aircraft systems, aerodynamics, Federal Aviation regulations, weight and balance, performance charts, and physiology as it relates to private, commercial, and CFI Certificates.

*Transfer Curriculum Goal(s): none*

#### **AVIA 1142 Certified Flight Instructor Ground & Flight Lab**

**Credits: 1**

*Prerequisite: AVIA 1130, AVIA 1132*

*Co-Requisite: none*

This course provides the student actual in-flight training necessary to obtain a FAA Certified Flight Instructor Certificate. Flight instruction covers all maneuvers necessary for teaching private and commercial students. Successful completion allows prepared student to take the Certified Flight Instructor (CFI) FAA Checkride.

*Transfer Curriculum Goal(s): none*

## **BIOLOGY**

#### **BIOL 1404 Human Biology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an introduction to the structure and function of the human body using an organ systems approach. The organ systems studied include the integumentary, skeletal, muscular, circulatory, respiratory, digestive, excretory, nervous, endocrine and reproductive systems. Human development and heredity will also be integrated. Two hours lecture and two-hour lab weekly.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 1411 Concepts of Biology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a one semester survey of the fundamental concepts of biology. Topics covered may include: cell structure and function, understanding how living things grow, reproduce, acquire, and use energy, and respond to their environments, plants, animals, behavior, evolution, ecology, or biotechnology. Two hours lecture and a two-hour lab weekly. This course is intended for non science majors.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 1415 Environmental Biology**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course takes a holistic approach to current status and future prospects of earth's life support systems emphasizing human impact on the environment. Topics include interrelationships of organisms and their environment, population dynamics, pollution, major ecosystems, examination of causes and possible solutions to major local, national and global environmental problems. This course is intended for non-science majors.

*Transfer Curriculum Goal(s): 3,10*

#### **BIOL 1420 Nutrition**

**Credits: 3**

*Prerequisite: Accuplacer Reading Score of 56*

*Co-Requisite: none*

This course examines the basic principles of nutrition, including: the composition, sources and dietary require-

ments for carbohydrates, lipids, proteins, water, vitamins and minerals; the effects of deficiencies and toxicity; diet planning; digestive system anatomy and physiology; and energy balance. This course is an excellent preparation for entry into health-related fields.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 1422 Honors Biology - An Inquiry-Based Course in Life Science**

**Credits: 5**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This honors course will explore the principles of biology in the context of neuroscience, exploring the structure and function of the nervous system in physical, cognitive, emotional, and psychosocial domains. Students enrolled in this honors course will be required to read additional scientific literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry-based investigations, collaboration, or other project types that the instructor deems worthy of the Honors designation. At least one extended field trip to the two day 51st Nobel Conference on Addiction will be required.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 1431 General Biology I**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: none*

An introduction to the basic life process at the cellular level including the chemistry of life, organization of the cell, membranes, energy, enzymes, respiration, photosynthesis, cell division, Mendelian genetics, molecular genetics (DNA), and genetic engineering. There is a strong emphasis on problem solving and the scientific process.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 1432 General Biology II**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: none*

A macroscopic approach to biology covering the topics of evolution, ecology and biodiversity of living organisms. Topics include taxonomy and classification of the major groups of plants and animals, structure and function, development, and behavior. Lecture and laboratory. For majors and non-majors.

*Transfer Curriculum Goal(s): 3,10*

#### **BIOL 1510 Essentials of Human Anatomy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course explores the structure and function of the human body at multiple levels: individual cells; their coming together to form tissues; the organization of tissues into organs; organs working together as parts of organ systems; and finally, how those organ systems support one another to maintain

the body. Normal structure and function are presented as a starting point, and then the effects of disease processes on structure and function are examined. The effects of disease are also considered at multiple levels: from cells to organ systems; and then beyond the effects on individuals to how diseases affect populations and societies. This course is primarily designed for students enrolled in the HINS Healthcare Administrative Specialist program.

*Transfer Curriculum Goal(s): none*

#### **BIOL 2411 Biology of Women**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This biology course is designed to introduce basic biological concepts in the context of human reproduction. Relevant topics covered may include human reproductive anatomy and physiology, human genetics, menstrual cycles and disorders, pregnancy, labor and delivery, infertility and reproductive technology, fetal development, contraception, sexually transmitted diseases and reproductive organ cancers, menopause, and global women's health care issues. Lab included. This course is intended for non-science majors and is not for women only.

*Transfer Curriculum Goal(s): 3,7*

#### **BIOL 2415 General Ecology**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is structured so that students can see the variations and complexities of nature. Topics cover the physical environment, the organism and the environment, populations, species interactions, community, and ecosystem dynamics. Lecture is accompanied by laboratory and field exercises.

*Transfer Curriculum Goal(s): 3,10*

#### **BIOL 2457 Microbiology**

**Credits: 4**

*Prerequisite: BIOL 1404 and CHEM 1407, or BIOL 1404 and CHEM 1414, or BIOL 1404 and CHEM 1424, or BIOL 1431, or BIOL 2401, or BIOL 2467*

*Co-Requisite: none*

Microbiology is the study of microbes such as bacteria, viruses, and fungi. Structure and function of microbes are examined, with an emphasis placed on the transmission, pathogenesis and control of microbial infections. In addition to medical aspects, the course covers environmental and industrial roles of microbes. Microbiological lab techniques include culturing, staining, and identification of microbes. This course meets for two hours of lecture and two 2-hour labs weekly. It is designed for liberal arts and sciences students, biology, nursing and other science related fields.

*Transfer Curriculum Goal(s): 3*

#### **BIOL 2467 Anatomy & Physiology I**

**Credits: 4**

*Prerequisite: BIOL 1404 or BIOL 1411 or BIOL 1431 or CHEM 1405 or CHEM 1414 or CHEM 1424*

*Co-Requisite: none*

The first of a two-course sequence in which the details of the human body are explored beginning with the organization of the human body that includes a comprehensive study of (bio)chemistry, cytology and histology. Then proceeds to investigate both the anatomy (structures) and physiology (functions) of the: integumentary, skeletal, muscular, nervous, (and an introduction to the) endocrine systems. For liberal arts and sciences students, biology, nursing and other science related fields.

*Transfer Curriculum Goal(s): 3*

### **BIOL 2468 Anatomy & Physiology II**

**Credits: 4**

*Prerequisite: BIOL 2467 with grade of "C" or higher*

*Co-Requisite: none*

The second of a two course sequence designed to investigate the anatomy and physiology of the remaining organ systems including the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Three hours lecture and a three hour lab weekly. For liberal arts and sciences students, biology, nursing and other science related fields.

*Transfer Curriculum Goal(s): 3*

### **BUSN 1102 Accounting for Non-Accountants**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a practical introduction to accounting, the language of business, for business owners and managers. Both the how and the why of accounting principles and practices are blended to provide a foundation for the financial management of service and merchandise businesses. The procedural based model of instruction provides a hands-on learning experience for students. The course is recommended for all business careers outside of the accounting field.

*Transfer Curriculum Goal(s): none*

### **BUSN 1110 Marketing Principles**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides a foundation of marketing concepts for the student. The course material is designed to develop a knowledge of both general and specialized marketing terms. Topics include marketing function, consumer behavior, product strategies, marketing channels, pricing strategies, and promotion.

*Transfer Curriculum Goal(s): none*

### **BUSN 1131 Business Math**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to provide calculator and mathematical knowledge and skills needed to make calculations necessary to solve business problems. Success is based on the touch method of operating calculators efficiently, and mathematical calculations relative to the fundamental mathematical processes used for basic math, solving for unknowns, percentages, discounts, markups and markdowns, checking accounts, interest, payroll, compound interest and present value, annuities and sinking funds, credit cards, home mortgages, stocks and bonds, and basic business statistics.

*Transfer Curriculum Goal(s): none*

### **BUSN 1162 Customer Relations**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce the basics of customer service in the areas of service strategies, attitudes, retention, communication, and sales. The student will learn how to create positive memorable experiences for customers, provide consistent caring and professional service, and avoid becoming involved in unproductive customer interactions.

*Transfer Curriculum Goal(s): none*

### **BUSN 1164 International Business**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides students with an understanding of the core concepts related to the international environment in which business is conducted today. Students are expected to be able to understand the global economy as well as the structural frameworks that influence an organization's global operations.

*Transfer Curriculum Goal(s): none*

### **BUSN 1166 Business Communications**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course emphasizes the importance of individual and organizational image when communicating in any matter with customers, fellow employees and employers. A concept-and-practice approach focuses on purpose, content, and planning.

*Transfer Curriculum Goal(s): none*

### **BUSN 1501 Introduction to Business**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the forces that shape business in American and overview of how American business responds. Topics include business economics, forms of business organizations, management functions, marketing procedures, business finance, and insurance considerations.

*Transfer Curriculum Goal(s): none*

### **BUSN 2541 Legal Environment of Business**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of the political and legal framework within which American businesses operate. Topics include the nature and formation of law and its application to business, constitutional, administrative, criminal, and international laws, contracts, torts, product liability, cyber law, bankruptcy, consumer protection, environment, real property, business organization, and employee relations.

*Transfer Curriculum Goal(s): none*

## **CENTER FOR MANUFACTURING AND APPLIED ENGINEERING**

### **CMAE 1502 Technical Math**

**Credits: 3**

*Prerequisite: Accuplacer Arithmetic score of 45*

*Co-Requisite: none*

This is an introductory technical math course. The course is designed for students who have basic math skills and for those who need a review of basic technical math concepts.

The primary goals of this course are to help individuals

acquire a solid foundation in the basic skills of math/shop algebra and geometry. This course will show how these skills can model and solve authentic real-world problems. This is a blended online course utilizing Tooling "U", D2L and proctored unit exams.

*Transfer Curriculum Goal(s): none*

### **CMAE 1506 Introduction to Computers**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course provides essential, hands-on coverage of Microsoft Office 2007 suite which includes: Getting started with Microsoft Office 2007, Word 2007, Excel 2007, Access 2007, Powerpoint 2007, Email/Netmail, Desire to Learn, Smart Thinking, Computer Security and E-folio Building.

*Transfer Curriculum Goal(s): none*

### **CMAE 1510 Print Reading**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course will orient students in the basic skills and abilities required for understanding prints utilized in a manufacturing/industrial environment. Emphasis will be on interpretation of geometric dimension and tolerance symbols/principles, alphabet of lines, multi-view drawing (including orthographic projection, isometric views, and perspective drawing), title blocks, revision systems, identification of general/local notes, dimensions and tolerances, basic principles of math/geometry in relation to mechanical print reading, and, interpretation of basic weld symbols. The course will cover techniques of basic shop sketching and interpretation of three-dimensional drawings.

*Transfer Curriculum Goal(s): none*

### **CMAE 1514 MSSC Safety**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course is designed to prepare students for the Manufacturing Skill Standards Council's (MSSC) Safety Certification Assessment. The course curriculum is based upon federally-endorsed national standards for production workers. The course will introduce OSHA standards relating to personal protective equipment, HAZMAT (hazardous materials) communication, tool safety, confined spaces, electrical safety, emergency response, lockout/tagout and others.

*Transfer Curriculum Goal(s): none*

### **CMAE 1518 MSSC Manufacturing Processes and Production**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course is designed to prepare students for the Manufacturing Skill Standards Council's (MSSC) Manufacturing Processes and Production Certification Assessment. The course curriculum is based upon federally endorsed national standards for production workers. This course emphasizes Just-In-Time (JIT) manufacturing principles, basic supply chain management, communication skills, and customer service.

*Transfer Curriculum Goal(s): none*

### **CMAE 1522 MSSC Quality**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course is designed to prepare students for the Manufacturing Skill Standards Council's (MSSC) Quality Certification Assessment. The course curriculum is based upon federally-endorsed national standards for production workers. Emphasis is on continuous improvement concepts and how they relate to a quality management system. Students will be introduced to a quality management system and its components. These include corrective actions, preventative actions, control of documents, control of quality records, internal auditing of processes, and control of non-conforming product.

*Transfer Curriculum Goal(s): none*

### **CMAE 1526 MSSC Maintenance Awareness**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52*

*Co-Requisite: none*

This course is designed to prepare students for the Manufacturing Skill Standards Council's (MSSC) Maintenance Awareness Certification Assessment. The course curriculum is based upon federally-endorsed national standards for production workers. This course introduces the concepts of Total Productive Maintenance (TPM) and preventative maintenance. Students are introduced to lubrication, electricity, hydraulics, pneumatics, and power transmission systems.

*Transfer Curriculum Goal(s): none*

### **CMAE 1528 Career Success Skills**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is an introductory career success skills course. The primary goals of this course are to help individuals acquire a solid foundation in the basic skills for a successful career. This course will identify the skills important to businesses and help the student assess his/her level of skill. The course will provide suggestions for how the student can improve his/her level of skill. This is an on-line course utilizing D2L and Screencast.

*Transfer Curriculum Goal(s): none*

### **CMAE 1530 Machining Math**

**Credits: 2**

*Prerequisite: Accuplacer Arithmetic score of 62 or higher,*

*CMAE 1502*

*Co-Requisite: none*

This math course is designed for students in a machine shop environment. The primary goal of this course is to help individuals acquire a solid foundation in the basic skills of math that relate to machine shop and industrial manufacturing. This course will show how these skills can model and solve authentic real world problems.

*Transfer Curriculum Goal(s): none*

### **CMAE 1532 Machine Tool Print Reading**

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 52 or greater,*

*CMAE 1510*



*Co-Requisite: none*

This course will orient students in skills and abilities required for understanding prints used in a machining environment. Emphasis will be on use and interpretation of geometric dimensioning, tolerance, and symbols used in machining of a part or assembly of a group of machined parts. Students will be introduced to and use basic principles of math/geometry, surface symbols, geometric tolerances, welding symbols, material types, sections and sectional views.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1534 Machine Tool Technology Theory**

**Credits: 2**

*Prerequisite: CMAE 1530 and CMAE 1532*

*Co-Requisite: none*

This course covers measurement tools and uses, cutting tools and types, machine shop tools such as band saws, lathes, vertical milling machines, basic machine tool set-up, operations of machine tools, terminology used within the scope of machining processes.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1536 Machine Tool Technology Lab I**

**Credits: 2**

*Prerequisite: CMAE 1534*

*Co-Requisite: none*

This course will address the basic operations of drill presses, tool grinders, vertical milling machines, engine lathes and metal cutting saws. Machine safety, machine component identification, as well as turning, milling sawing, bench work project layout, single point tool grinding projects are also included in the course. Students will be introduced to the proper use and care of inspection measuring tools.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1538 Machine Tool Technology Lab II**

**Credits: 2**

*Prerequisite: CMAE 1536*

*Co-Requisite: none*

This course will address the advanced operations of a drill press, vertical milling machine, engine lathe, surface grinder and saws, machine safety, machine component identification, as well as turning, milling, sawing, surface grinding lab projects. Students will also learn the care of and use of high precision measuring equipment.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1542 Geometric Dimensioning and Tolerancing**

**Credits: 2**

*Prerequisite: CMAE 1532*

*Co-Requisite: none*

Students will learn how to read prints with geometric dimensioning and tolerance applications. Each of the geometric controls will be examined so that the student is able to determine the allowable variation in form and size between part features. The Y14.5 M standard will be part of the overall instruction. Using precision equipment, most of the geometric controls will be inspected to print specifications.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1550 DC Power**

**Credits: 3**

*Prerequisite: CMAE 1502*

*Co-Requisite: none*

This course covers the basic principals in DC electrical circuits including series, parallel and complex circuit analysis, OHM's law, electrical meters, conductor, insulators, resistors, batteries and magnetism. The course material covered

will enable students to calculate circuit parameters, build electrical circuits, use testing equipment to measure and troubleshoot circuit and electrical components.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1554 Digital Electronics**

**Credits: 3**

*Prerequisite: CMAE 1502*

*Co-Requisite: none*

In this course learners will acquire a fundamental knowledge of digital electronics. Boolean algebra, numbering systems covered include hexadecimal, binary, BCD, and octal. Digital devices and circuits, analog to digital conversion along with digital to analog conversion will be covered. Learners will build and test basic digital circuits, test circuits to digital truth tables, troubleshoot circuits as required.

*Transfer Curriculum Goal(s): none*

#### **CMAE 1570 Metallurgy and Mechanical Properties of Materials**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

## **CHEMISTRY**

#### **CHEM 1407 Life Science Chemistry**

**Credits: 4**

*Prerequisite: Accuplacer Arithmetic score of 65 or higher*

*Co-Requisite: none*

This course will provide the student with an introduction to general, organic and biological chemistry. Topics include: scientific measurement, atomic and molecular structure, periodicity, chemical bonding, nomenclature, chemical reactions, nuclear chemistry, solutions, acids, bases, organic functional groups, carbohydrates, lipids, amino acids, proteins and enzymes. The laboratory will reinforce lecture concepts.

*Transfer Curriculum Goal(s): 3*

#### **CHEM 1410 Environmental Chemistry**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course includes simplified topics in scientific measurement, atomic theory, bonding theory, states of matter, chemical reactions, hydrocarbons and fossil fuels, batteries, fuel cells, electrolysis, water sources, water pollution and purification.

*Transfer Curriculum Goal(s): 3,10*

#### **CHEM 1414 Fundamentals of Chemistry**

**Credits: 4**

*Prerequisite: Acuplacer Arithmetic score of 65 or greater, or Acuplacer Elementary Algebra score of 52 or greater, or MATH 0790 (2.0 GPA), or MATH 0800 (2.0 GPA)*

*Co-Requisite: none*

This course involves the study of general laws of chemistry, periodicity, atomic and molecular structure, physical and chemical changes.

*Transfer Curriculum Goal(s): 3*

#### **CHEM 1424 Chemical Principles I**

**Credits: 5**

*Prerequisite: MATH 0581, 0582, 0583, 0584, 0585, 0586, 1505, 1506, 1470, 1472 or 1477; or Acuplacer Elementary Algebra score of 52, or Acuplacer Arithmetic score of 65, or ACT MATH score of 21. Acuplacer and ACT test results are*

*valid for 2 years.*

*Co-Requisite: none*

This course includes a more rigorous collegiate treatment of topics in physical measurement, dimensional analysis, state of matter, nomenclature, chemical reactions, stoichiometry, gas laws, thermochemistry, atomic structure, and molecular bonding theory.

*Transfer Curriculum Goal(s): 3*

#### **CHEM 1425 Chemical Principles II**

**Credits: 5**

*Prerequisite: CHEM 1424*

*Co-Requisite: none*

This course is a continuation of CHEM 1424 and includes topics in gases and their properties, intermolecular forces and liquids, chemistry of solids, solutions and their behavior, chemical kinetics, chemical equilibria, acid-base theories, common ion and buffer systems, precipitation reactions, thermodynamics and equilibrium, and an introduction to organic chemistry.

*Transfer Curriculum Goal(s): 3*

#### **CHEM 2472 Organic Chemistry I**

**Credits: 5**

*Prerequisite: CHEM 1425*

*Co-Requisite: none*

This course involves a thorough coverage of the aliphatic and aromatic classes of compounds involving the study of structure, nomenclature, physical properties, preparation, reactions and analysis of these compounds. Also included is the study of reaction mechanisms.

*Transfer Curriculum Goal(s): 3*

#### **CHEM 2473 Organic Chemistry II**

**Credits: 5**

*Prerequisite: CHEM 2472*

*Co-Requisite: none*

This course is a continuation of CHEM 2472 and involves a thorough coverage of the aliphatic and aromatic classes of compounds involving the study of structure, nomenclature, physical properties, preparation, reactions and analysis of these compounds. Also included is the study of reaction mechanisms.

*Transfer Curriculum Goal(s): 3*

## **CHILD DEVELOPMENT**

#### **CDEV 1100 Foundations of Child Development**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an overview of typical and atypical child development across cultures, from prenatal through school age including physical, social-emotional, language, cognitive, aesthetic, and identity/individual development. It integrates developmental theory with appropriate practices in variety of early childhood care education settings.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1105 Child Safety, Health & Nutrition**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will guide the student in obtaining skills needed to establish and maintain a physically and psychologically safe and healthy learning environment for young children. Topics include preventing illness and accidents, handling emergencies, providing health, safety and nutrition education experiences, meeting children's basic nutritional needs, child abuse and current health related issues.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1110 Guidance: Managing the Physical/Social Environment**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an exploration of the physical and social environments that promote learning and development for young children. It includes an introduction to basic child guidance techniques for individual and group situations. Emphasis is on problem-prevention and positive guidance strategies, including: communication, limit-setting, problem-solving, encouragement, and behavior modification. Students will apply their knowledge of the environment's role to an actual work setting.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1115 Planning & Implementing Curriculum**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course examines the role of the teacher in early childhood settings. It applies the knowledge of child development as it relates to individual children, communities, curriculum and communication activities.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1120 Professional Relations in Early Childhood Careers**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will guide the student in obtaining skills needed to establish and maintain a psychologically, safe learning environment for young children. Topics include child abuse, child neglect, reporting and educational experiences.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1130 Infant/Toddler Development and Learning**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an overview of infant/toddler theory and development in home or center-based settings. Students will integrate knowledge of developmental needs, developmentally appropriate environments, effective care giving, teaching strategies, and observations methods.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1133 Creative Developmental Experiences**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course examines the development of children with special needs and prepares caregiver/teachers to integrate children with special needs into child development settings. The course includes review of legislation affecting children with disabilities, classroom strategies to meet the needs of a child with disabilities, the child within the family and community and overview of a variety of disabling conditions which might affect a young child.

*Transfer Curriculum Goal(s): none*

#### **CDEV 1135 Profiles of Exceptional Child**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an exploration of individual difference in the areas of mental retardation, orthopedic handicaps, visual and hearing impairments, speech and language disorders, learning disabilities, emotional and behavioral disorders, and the gifted. It is an introduction to the field of special needs. Although it is designed for students in the CDEV program, it is appropriate for persons who are interested in Special Education, either teachers, teacher's aides, childcare providers, or parents.

*Transfer Curriculum Goal(s): none*

**CDEV 1150 Childcare Business Strategies**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides students with an introduction to budgeting, financial management, and financial record keeping in child development programs. Specific topics include: start-up costs, determining utilization rates, setting/collecting parent fees, identifying break-even points, preparing financial statements, and fundraising.

*Transfer Curriculum Goal(s): none*

**CDEV 1160 Internship**

**Credits: 1-4**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course provides the student an opportunity to integrate theory and practice, applying knowledge and skills in an instructor approved, licensed pre-school development setting. Students participate in the setting as members of the teaching team. Students implement a variety of learning experiences that are developmentally appropriate and culturally sensitive for a specific group of children. Students complete a portfolio documenting learning experiences based on selected BOT standards.

*Transfer Curriculum Goal(s): none*

**CDEV 1162 Internship in Specialized Setting**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides on the job training for students interested in working with children with special needs. This course will create connections with future employers and provide students with an opportunity to reinforce previously introduced content regarding instructional planning, working with families, collaboration, and theories of disabilities.

*Transfer Curriculum Goal(s): none*

**CDEV 1305 Child Abuse and Neglect**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will guide the student in obtaining skills needed to establish and maintain a psychologically, safe learning environment for young children. Topics include child abuse, child neglect, reporting and educational experiences.

*Transfer Curriculum Goal(s): none*

**CDEV 1306 Child Safety**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course offers an opportunity to learn and practice accident prevention procedures, emergency, and safety education learning experiences.

*Transfer Curriculum Goal(s): none*

**CDEV 1307 Child Health**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will guide the student in obtaining skills needed to establish a healthy learning environment for young children. Topics include preventing illness and providing healthy educational experiences.

*Transfer Curriculum Goal(s): none*

**CDEV 1308 Nutrition**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will guide the student in obtaining skills needed to establish policies and practices that meet basic nutritional needs of young children. Topics include policies and procedures of a developmentally appropriate nutrition program, appropriate nutritional education activities for infants through school age children.

*Transfer Curriculum Goal(s): none*

**CDEV 1323 Guidance: Developmentally Appropriate Practice**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Emphasis will be placed on applying and practicing strategies and techniques to sensory, cognitive, social-emotional, language and creative learning environments. Designed for anyone working in the child care and development industry.

*Transfer Curriculum Goal(s): none*

**CDEV 1394 Topics in Child Development**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

*Transfer Curriculum Goal(s): none*

**CDEV 1395 Topics in Child Development**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

*Transfer Curriculum Goal(s): none*

**CDEV 1396 Topics in Child Development**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

*Transfer Curriculum Goal(s): none*

**CDEV 1397 Topics in Child Development**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

*Transfer Curriculum Goal(s): none*

**CDEV 1398 Topics in Child Development**  
**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

*Transfer Curriculum Goal(s): none*

**CDEV 2100 Introduction to Foundations of Public School Education**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Introduction to the Foundations of Public Education addresses the historical, social, and political foundations of education in the United States. Students will examine the roles, functions, and responsibilities of preschool, elementary, and secondary classroom teachers.

*Transfer Curriculum Goal(s): none*

**CDEV 2110 Characteristics of Students w/Learning and Behavior Disorders**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course focus is on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practice, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

*Transfer Curriculum Goal(s): none*

**CDEV 2112 Collaboration Skills & Transition Training**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

To best create a seamless system of transition for students with disabilities from secondary to post secondary environments, students will analyze and apply various collaboration methods with agencies, educational staff and multicultural populations. Emphasis will be given to the process of coordination of multiple service agencies in those transitions.

*Transfer Curriculum Goal(s): none*

**CDEV 2114 Introduction to Autism Spectrum Disorder**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is an overview of autism spectrum disorders. Focus will be given to characteristics of individuals who have been identified as having autism, Asperger's syndrome and childhood disintegrative disorders.

*Transfer Curriculum Goal(s): none*

**CDEV 2340 Professional Leadership**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course prepares students to take an active/advocate role in the child development profession by examining the history, current trends, and future of child care and early childhood education.

*Transfer Curriculum Goal(s): none*

**CDEV 2343 School Age Development and Learning**  
**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course provides students with an overview of school age development: physical, cognitive, creative, and social/emotional. It integrates theory with developmentally appropriate practice in home and center based settings. Several guidance strategies will be addressed including problem-solving, group meetings and team building.

*Transfer Curriculum Goal(s): none*

**CDEV 2350 Practicum I**  
**Credits: 3**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course provides an opportunity to apply knowledge and skill in an early childhood setting. Students implement a variety of learning experiences that are developmentally appropriate for and culturally sensitive to a specific age and group of children.

*Transfer Curriculum Goal(s): none*

## COLLEGE AND CAREER STUDIES

### CCST 1510 College Success Skills

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course is designed to promote student and lifelong success. Course content generally includes academic skills, life management skills, and information about school & community. Specific topics include: goal setting, learning styles, college reading strategies, study techniques, time management, test-taking skills, memory techniques, stress reduction, critical thinking applications, communication tips, assertiveness, relationship building, cultural diversity awareness, health and wellness issues, college and community resources, financial planning and the many personal issues that may affect college students.

*Transfer Curriculum Goal(s): 12*

### CCST 1512 Combat to Classroom

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will assist students to understand the unique needs of Veteran, military members and their families as they transition from their military related experiences to the college environment and the community. Particular focus will be on, but not be limited to: The development process for the service member and their family related to separation and reconnecting from deployments, the emotional issues related to military service and combat experiences, the physical/disability issues related to military service and combat experiences, the issues of stress and anxiety including Post Traumatic Stress Disorder (PTSD), the issue of racism as it relates to military and combat experiences, the physical and emotional health, financial, and other services available, the campus and community based support services and activities for veterans, military members and their families, and the role of civic engagement in the transition process for veterans and military members.

*Transfer Curriculum Goal(s): none*

### CCST 1520 Career Planning

**Credits: 2**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course provides a comprehensive approach to career planning, educational planning, and decision making. The course begins with a self-exploration process in which students examine their values, personality characteristics, interests, strengths, skills, and goal setting. Current trends, occupational information, job seeking skills, and other resources will be explored to evaluate career options and educational goals.

*Transfer Curriculum Goal(s): 12*

### **CCST 1525 Customer Service/Service Management**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

### **CCST 1530 Employment Strategies**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to provide the student an opportunity to research and explore all aspects of employment seeking strategies. Students will develop job-search strategies that will lead to more effective marketing of their skills. Critical components of the course include: planning your job search, gathering the tools (resumes, cover letters), beginning the search, interviewing and evaluating job offers.

*Transfer Curriculum Goal(s): none*

### **CCST 1535 Honors Leadership Development**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This course is designed to provide students the opportunity to explore the concept of leadership, to develop and improve their leadership skills, and gain personal insight that will help them reach their educational and personal goals. The course integrates readings from the humanities, experiential exercises, films, and contemporary readings on leadership. In addition the course provides opportunities for students to become service leaders through service learning. Courses in the Honors program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with the instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 12*

### **CCST 1541 Student Senate**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is a first year course that provides a practical introduction to leadership. Students will study and apply the theories of leadership through the weekly Student Senate meetings, student activities, and service learning projects. This course is designed to prepare students for a lifetime of engaged, responsible, and active community involvement.

*Transfer Curriculum Goal(s): none*

### **CCST 1542 Student Senate II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This second year course provides a practical introduction to leadership. Students will study and apply the theories of leadership through the weekly Student Senate meetings, student activities, and service learning projects. This course is designed to prepare students for a lifetime of engaged, responsible, and active community involvement.

*Transfer Curriculum Goal(s): none*

### **CCST 1550 Introduction to College**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide college students with the skills necessary to make a successful transition to college. In this course, students will gain personal insight and identify strategies that will help them reach their educational and personal goals. Course activities will focus on introducing students to the skills that are needed for academic success, such as time management, educational planning, strategies for learning, and use of college resources.

*Transfer Curriculum Goal(s): 12*

### **CCST 1552 Success Strategies for Athletes**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is a course designed for student athletes, which addresses both the study skills necessary to succeed academically and the complex athletic eligibility requirements (NCAA/NJCAA/NAIA) that govern present and future athletic competition.

*Transfer Curriculum Goal(s): 12*

### **CCST 1559 Money Management Skills**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces students to basic money management skills so they will make informed decisions in managing their personal finances. Topics include understanding the student loan process and obligations, creating a budget, debt management, use of credit and credit cards, credit reports, checking and savings accounts, banking basics, insurance issues, developing a personal financial plan and setting financial goals.

*Transfer Curriculum Goal(s): none*

### **CCST 1560 Math Success Strategies**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course helps students be successful in math through questioning strategies, modeling and visual representations, number flexibility, making connections among ideas, and identifying math in your life and future career. Students will explore a variety of math concepts with hands-on activities and cooperative learning to build confidence in math, develop math skills and conceptual understanding, and apply effective learning strategies for mathematics. Throughout the course, students will apply the concepts of effective learning while participating in math activities, games, cooperative learning. Math topics may vary depending on interests and needs of the group.

*Transfer Curriculum Goal(s): none*

### **CCST 1570 On Course**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 40 or greater*

*Co-Requisite: none*

The goal of this course is to help you grow academically and personally. This course is ideal for you if your career goals are unclear or if you've reached a point in your life where you feel "stuck". Topics include personal responsibility, self-motivation, self-management, and interdependence. You will have opportunities to grow in the ways you think, learn, and communicate.

*Transfer Curriculum Goal(s): 12*

### **CCST 1590 Service Learning and Civic Engagement**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Students in this course develop and/or implement service learning project to help the college's community including the surrounding local community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies. Projects may include collaboration with college classes, various community agencies and organizations, education projects for college students, mentoring and shadowing. Students gain hands-on experience in project planning, development, implementation and evaluation.

*Transfer Curriculum Goal(s): none*

### **CCST 1598 Topics in CCST**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in College & Career Studies. On demand.

*Transfer Curriculum Goal(s): none*

### **CCST 2520 Career Internship Experience**

**Credits: 1**

*Prerequisite: Instructor's Permission*

*Co-Requisite: none*

This internship course explores careers and training in a supervised work setting. You will examine and reflect on your internship experience by using feedback from others as well as your own self-analysis. Learn what skills employers are looking for to develop your resume while exploring your career options.

*Transfer Curriculum Goal(s): none*

## **COMMUNICATION**

### **COMM 1410 Introduction to Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This beginning-level course is designed to introduce students to four key areas of the communication discipline: interpersonal communication, intercultural communication, small group communication and public speaking. Through this course, students will explore the fundamental theories of communication as well as identify and apply the basic skills from each of those core areas so they can become more effective communicators in a variety of contexts.

*Transfer Curriculum Goal(s): 1*

### **COMM 1420 Interpersonal Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course is a study of communication behaviors in dyads

(pairs) and their impact on personal relationships. Learners analyze the common variables of interpersonal communication and learn techniques to overcome barriers to effective communication. Students will learn techniques of interpersonal competency improving one-on-one skills for verbal and non-verbal communication, perception, self-disclosure, listening and feedback, sharing emotions, assertiveness, coping with conflict, appropriate mediated interpersonal communication and communicating with family and friends and in the workplace.

*Transfer Curriculum Goal(s): 1*

### **COMM 1422 Honors Interpersonal Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

Honors Interpersonal Communication is an enriched study of communication behaviors in dyads (pairs) and their impact on personal relationships. Learners analyze the common variables of interpersonal communication and learn techniques to overcome barriers to effective communication. Students will learn techniques of interpersonal competency improving one-on-one skills for verbal and non-verbal communication, perception, self-disclosure, listening and feedback, sharing emotions, assertiveness, coping with conflict, appropriate mediated interpersonal communication and communicating with family, friends and in the workplace. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways. This course will feature an expanded reading load, as well as more in-depth assignments and discussions.

*Transfer Curriculum Goal(s): 1*

### **COMM 1430 Public Speaking**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course is designed to introduce students to the basic principles of effective public speaking, focusing on informative and persuasive techniques. Topics included are topic selection and research/development; message and argument construction; audience and occasion analysis, critical thinking and evaluation; outlining and structure; and delivery and presentation skills. Students will also compare and contrast mediated communication performance skills and theory with traditional delivery mediums of public address.

*Transfer Curriculum Goal(s): 1,2*

### **COMM 1450 Introduction to Mass Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course will study how mass forms of communication disseminate information and influence situations. Included will be an introduction to the history and development of mass communication systems: newspapers, magazines, books, recorded music, radio, television, movies and social networking. Units in advertising and public relations will also be included. Students will study and critically assess the technical, historical, social, economic, global and ethical aspects of mass communication including legal issues,

global citizenship, and rights and responsibilities as media consumers and producers.

*Transfer Curriculum Goal(s): 2,9*

### **COMM 2420 Intercultural Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course is designed to study communication among individuals of different cultural backgrounds, including the study of similarities and differences across cultures. Intercultural Communication is designed to help students learn about their own cultural identities, recognize cultural differences, identify barriers, adjust their communication, and build successful relationships to help them better succeed in their professional and personal lives. We'll look inclusively at culture, exploring both international and domestic variables. Topics will include communication and intercultural communication theory, barriers to communication such as ethnocentrism, stereotyping, prejudice and discrimination, cultural variables affecting communication such as language, nonverbal behaviors, perception, rules, values and worldview.

*Transfer Curriculum Goal(s): 1,7*

### **COMM 2422 Honors Intercultural Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

Honors Intercultural Communication is an enriched study of communication among individuals of different cultural backgrounds, including similarities and differences across cultures. Intercultural Communication is designed to help students learn about their own cultural identities, recognize cultural differences, identify barriers, adjust their communication, and build successful relationships to help them better succeed in their professional and personal lives. We'll look inclusively at culture, exploring both international and domestic (sub-culture) variables. Topics will include intercultural communication theory, identity, history and historical trauma, linguistics and verbal behaviors, nonverbal behaviors, perception, rules, values, ethics and worldview, as well as barriers to communication such as ethnocentrism, stereotyping, prejudice and discrimination. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways. This course will feature an expanded reading load, as well as more in-depth assignments and discussions.

*Transfer Curriculum Goal(s): 1,7*

### **COMM 2510 Applied Communication**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course allows students to earn credit while participating in a supervised applied learning experience in a career communication, service learning communication, or leadership communication context. A minimum of 54 service hours per credit per semester or summer session will be required for completion of the course. In addition, all proposed projects (with required project outlines created by the student) must be pre-approved by the supervising Communication instructor and all arrangements made prior to registration for the

semester in which the project is proposed to be scheduled.

*Transfer Curriculum Goal(s): none*

## **COMPUTER TECHNOLOGY**

### **COMP 1101 Computer Fundamentals**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is a beginning course for students who want to understand the basics of computer hardware, the operating system, office applications and the internet, and how they integrate together in the computer world. Topics and skills will include using and changing the Windows desktop, downloading software from the internet, the file hierarchy and saving files, using the basic functions of word processing, spreadsheet, database and presentation software to create and format documents, understanding the basics of a network for the office and across the internet, the use of email clients to send messages, how to attach documents and organize tasks, connecting to and using the internet, searching the web effectively, working with sounds and picture files, and understanding privacy issues and how to prevent identity theft when using computers and the internet.

*Transfer Curriculum Goal(s): none*

### **COMP 1103 Computer Basics-Operating Systems**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is a slow moving and a step by step procedure in delivery of the material. Course will provide basic skills including functions of the following: how a computer works, internet security, password security, applications, functions of the toolbar, windows desktop, file structure, and saving documents. The proper use of email and its functions will be explored along with the features of a particular email system. Utilization of the help and support feature and its functions within the operating system and email system will be addressed.

*Transfer Curriculum Goal(s): none*

### **COMP 1104 Computer Basics-Applications**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is a slow moving and a step by step procedure in delivery of the material. Course will provide basic skills including functions of the following: how a computer works, internet security, password security, applications, functions of the toolbar, windows desktop, file structure, saving, formatting and managing word documents, resume writing, editing text documents and font attributes. Organizational skills and managing a file system will be explored and implemented. Utilization of help and support feature within the applications used will be explored.

*Transfer Curriculum Goal(s): none*

### **COMP 1109 Introduction to Operating Systems**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basics of how to get the most out of using the Microsoft Windows operating system. Topics include identifying minimal hardware requirements needed to run Windows; customizing the desktop environment; file management; maintaining hard drives and other removable storage media; multitasking; the Windows applications of

WordPad, Paint, Notepad and Windows Live; and sharing hard drives and printers in a small network environment. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Certiport: IC3 - Computing Fundamentals.

*Transfer Curriculum Goal(s): none*

### **COMP 1120 Introduction to Computer Applications**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the current computer application software most used in the business and education worlds, the Microsoft Office suite of Word, Excel, Access, PowerPoint and Outlook. Some of the topics to be covered include: formatting Word documents; creating research papers and resumes using wizards and templates; creating Web pages with Word; using Excel to create worksheets and embedded charts; using Excel formulas and functions; creating what-if analysis; creating static and dynamic web pages using Excel; creating and querying an Access database; creating a PowerPoint presentation with a unified design; pictures and sound elements; and using Outlook to send and view mail, manage appointments and contacts. Career Preparation: Any business career that uses the Microsoft Office suite applications, including, but not limited to: Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Certiport: IC3 - Key Applications.

*Transfer Curriculum Goal(s): none*

### **COMP 1121 Advanced Computer Applications**

**Credits: 3**

*Prerequisite: COMP 1120*

*Co-Requisite: none*

This course covers some of the advanced features and formatting options available in the Microsoft Office suite applications of Word, Excel, Access, and PowerPoint. Topics include: creating tables, charts and watermarks in Word documents, generating form letters, mailing labels and envelopes, creating newsletters, using the financial functions available in Excel to create data tables and amortization schedules, creating templates, creating reports from an Access database, creating Access forms and subforms, creating macros and using wizards, creating a switchboard manager in Access, using and modifying visual and sound elements in PowerPoint presentations, delivering PowerPoint presentations and collaborating in workgroups. Integration between the Office suite applications will be emphasized. Career Preparation: Any business career that uses the Microsoft Office suite applications, including, but not limited to: Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Microsoft Office Specialist, Word Core and Excel Core.

*Transfer Curriculum Goal(s): none*

### **COMP 1122 IT Essentials**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

IT Essentials curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level Information and Communication Technology (ICT) professionals. The curriculum covers the fundamentals of computer hardware and software

as well as advanced concepts such as security, networking, and the responsibilities of an ICT professional. Students develop working knowledge of how computers operate, how to assemble computers, and how to troubleshoot hardware and software issues. Hands-on labs and virtual learning tools help students develop critical thinking and complex problem-solving skills. The course emphasizes the practical application of skills and procedures needed to install and upgrade hardware and software and troubleshoot systems. The IT Essentials (ITE) curriculum emphasizes practical experience to help students develop fundamental computer and career skills. ITE helps students prepare for entry-level career opportunities in ICT and the CompTIA A+ certification. The course also provides a learning pathway to the Cisco CCNA. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA A+ Hardware (220-801) and A+ Operating Systems (220-802). Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently.

*Transfer Curriculum Goal(s): none*

### **COMP 1123 Introduction to Networks (CCNA-I)**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is the first of four courses designed to prepare students for Cisco CCNA certification, and the first of two courses required for Cisco CCENT Certification. This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCENT & CompTIA Network+ N10-005.

*Transfer Curriculum Goal(s): none*

### **COMP 1124 Routing and Switching Essentials (CCNA-II)**

**Credits: 3**

*Prerequisite: COMP 1123*

*Co-Requisite: none*

This course is the second of four courses designed to prepare students for Cisco CCNA certification, and the second of two courses required for Cisco CCENT Certification. This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing

in both IPv4 and IPv6 networks. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer. Certification Preparation: Optional. Cisco CCENT  
*Transfer Curriculum Goal(s): none*

**COMP 1131 Microsoft Word Comprehensive Credits: 4**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on basic through advanced skill sets using the current Microsoft Word Office Suite software application. Students will use Microsoft Word 2010 to create, format, and edit documents, research papers with citations and references, business letters with a letterhead and tables, and documents with a title page, tables, and watermarks. Students will use templates to create a resume. Students will generate form letters, implement mail merge functions and create mailing labels, and directories. Students will create advanced newsletters with multiple desktop publishing features and deploy document collaboration and integration tools. Advanced topics include creating a table of contents with an index, creating a template for an online form, and working with macros, document security, and XML. Students will learn project planning guidelines, how to publish Office Web pages online, saving to the Web and creating APA-MLA research papers. Students need to be efficient with operating system functions as this course focuses on the application itself with the assumption that students have effective operating system functional skills. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, Administrative Support, Administrative Assistant and Help Desk/Computer Repair Technician. Certification Preparation: Optional. Certipoint: MOS: Microsoft Office Word 2013 Expert Exam 77-425. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1132 Microsoft Access Comprehensive Credits: 4**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on basic through advanced skill sets using the Microsoft Access 2010 software application. Students will use Microsoft Access 2010 to create databases and database objects while learning introductory database table structure. Students will learn the concepts for querying a database, maintaining a database and to create reports, forms, multiple table forms and advanced report techniques. Students will learn to use SQL and advanced form techniques. Students will write macros, create navigation forms, PivotTables, and PivotCharts. Students will learn how to design a database and then administer a database system. This course covers the skill sets and exam objectives for the Microsoft Office Specialist (MOS) 77-885 certification exam. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and

general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, Database Management, and Help Desk/Computer Repair Technician. Certification Preparation: Optional. Certipoint: MOS: Microsoft Office Access 2010 Exam 77-885. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1133 Microsoft PowerPoint Comprehensive Credits: 3**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on basic through advanced skill sets using the current Microsoft PowerPoint Office Suite software application. Students will learn use Microsoft PowerPoint to create and edit a basic presentation, enhance a presentation with pictures and shapes, reuse a presentation and add multimedia. Students will work with information graphics, deliver and collaborate on presentations, add emphasis with text boxes, and create self-running presentations containing animation. Students will enhance presentations with hyperlinks and action buttons, develop presentations from an outline and create a photo album presentation with shapes. Student will create and customize a template and handouts using masters. Students will learn project planning guidelines, how to publish Office Web pages online, and saving presentations to the Web. This course covers the skill sets and exam objectives for the Microsoft Office Specialist (MOS) 77-422 certification exam. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician and Administrative Support. Certification Preparation: Optional. Certipoint: MOS: Microsoft Office PowerPoint Exam 77-422. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1134 Microsoft Outlook Comprehensive Credits: 1**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on basic through advanced skill sets using the current Microsoft Outlook Office Suite communication software application. The course learning objectives are centered on the Microsoft Office Specialist (MOS) 77-423 certification exam objectives. Students will learn use Microsoft Outlook to format message content by using character and paragraph formatting, use graphic elements such as charts and tables, and create contact records, tasks, and appointments from incoming messages. Students will create contact groups, schedule meetings, and share schedules to

facilitate communication with other Outlook users. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician, Administrative Assistant and Administrative Support. Certification Preparation: Optional. Certipoint: MOS: Microsoft Office Outlook 2013 Exam 77-423. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1135 Microsoft Excel Comprehensive Credits: 4**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on basic through advanced skill sets using the current Microsoft Excel Office Suite software application. The course learning objectives are centered on the Microsoft Office Specialist (MOS) 77-427 certification exam objectives. Students will use Microsoft Excel to create charts, create analytical and financial reports, optimize data entry, create a family budget, format numerical (financial, statistical, etc.) reports, create forms, create graphing analyses, process data using what-if analyses, design reports, and create trending data. Students will learn to be proficient with advanced formulas, functions, and data analysis tools. Students will also learn to manipulate data for analysis, presentation, and collaboration. Students will learn to manipulate Excel options to customize their environment to meet varying organizational needs and enhance their productivity. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician, Administrative Assistant and Administrative Support. Certification Preparation: Optional. Certipoint: MOS: Microsoft Office Excel 2013 Exam 77-427. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1138 iPad Technologies Credits: 3**

*Prerequisite: none*  
*Co-Requisite: none*  
This course will help students maximize the power of their iPad and master all the versatile and fun features while using their iPad. Topics include how to configure settings, access the Internet, use Mail and Safari, and download music, movies, TV shows, ebooks, apps, games, and more. Students will get tips for taking photos and video with the camera, use FaceTime for video chatting, navigate with GPS, and connect to social networks. Students will set up, customize, sync,

and back up their iPad and choose a data plan for their iPad. Students will configure mail and integrate with various email accounts and connect with social networks. A current iPad is required for this course.  
*Transfer Curriculum Goal(s): none*

**COMP 1140 Survey of Web-Based Tools Credits: 3**

*Prerequisite: none*  
*Co-Requisite: none*  
This course focuses on using current technology tools for collaboration, entertainment, professional development, system security, and networking on the Internet. Innovative technologies that will be explored include many of the following: social networking sites (MySpace, Friendster, Facebook, LinkedIn), virtual technologies (virtual environments, 3D chat, avatars, and online meetings), social network integration tools (RSS feeds, wikis, blogs, mashups, podcasts), voice and video collaboration tools and file sharing services (VoIP, TokBox, Skype, Twitter, Facetime, SnapChat, Instagram, Pinterest Windows Live Mesh, Live Meeting, Animoto), security and personal safety (firewall technology, anti-spyware, anti-virus, anti-spam, phishing and identity theft, netiquette and ethnics), marketing and business tools (Flickr and E-bay), Web 3.0 application design strategies, and career opportunities on today's Web.  
*Transfer Curriculum Goal(s): none*

**COMP 1204 Computer Repair I Credits: 4**

*Prerequisite: none*  
*Co-Requisite: none*  
This course addresses many of the objectives of the CompTIA A+ Hardware (220-801) and A+ Software (220-802) Certification Exams, and introduces students to the operation, diagnosis, troubleshooting, and simple maintenance of microcomputer components. Topics include hardware compatibility, system architecture, memory, storage, expansion devices, peripherals, customer service, safety, and preventative maintenance. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA A+ Hardware (220-801) and A+ Software (220-802).  
*Transfer Curriculum Goal(s): none*

**COMP 1206 Computer Repair II Credits: 3**

*Prerequisite: COMP 1204*  
*Co-Requisite: none*  
This course is the sequel to COMP 1204 and addresses many of the objectives of the CompTIA A+ Hardware (220-801) and A+ Software (220-802) Certification Exams, introducing students to the operation, diagnosis, troubleshooting, and maintenance of microcomputer components. Topics include complete system assembly, maintenance, operating system architecture, installation, maintenance and troubleshooting, simple networking, viruses, data backup, and disaster recovery. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA A+ Hardware (220-801) and A+ PC Software (220-802).

*Transfer Curriculum Goal(s): none*

### **COMP 1230 Network Essentials**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course provides individuals who are new to Microsoft Windows product client/server networking technologies with the knowledge necessary to understand and identify the tasks involved in supporting Microsoft Windows based networks. This course will introduce networking terminology, LANs and WANs, client/server networks, peer-to-peer networks, communication protocols, communication devices, OSI model, IEEE standards, media, cabling, network topologies, Ethernet, TCP/IP, IP Addressing, connectivity devices, disaster recovery. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. CompTIA Network + N10-005.

*Transfer Curriculum Goal(s): none*

### **COMP 1253 Client Operating System Administration**

**Credits: 4**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course is one of a series of Microsoft Operating System Administration and Engineering courses that help prepare students for client support and help desk MCSA Microsoft Certification. This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows on stand-alone and client computers that are part of a workgroup or domain. Students work with networks configured as a domain-based or peer-to-peer environment with access to the Internet and cloud services. This course focuses on installation, configuration, and management of client computers in a network environment and the skills to administer upgrades, migration paths, disk structure, permissions, sharing, and other security issues related to file systems. Students will learn how to Install and Upgrade to Windows 8, Configure Hardware and Applications, Configure Network Connectivity, Configure Access to Resources, Configure Remote Access and Mobility, Monitor and Maintain Windows Clients, Configure Backup and Recovery Options. Career Preparation: The studies in this course will help students prepare for careers in Computer Networking and System Administration such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Microsoft 70-687.

*Transfer Curriculum Goal(s): none*

### **COMP 1305 Exploring Digital World Technologies**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course focuses on basic through advanced computer concepts with an emphasis on both the personal computer and enterprise computing. Topics include hardware, application and system software, the Internet and World Wide Web, communications, e-commerce, societal issues, database management, systems analysis and design, programming, information systems, career opportunities, certifications in the computer field, and computer trends. Students will finish the course with a solid understanding of computers, how to use computers, and how to access information on the

Web. This course presents the most-up-to-date technology in an ever-changing discipline, gives students an in-depth understanding of why computers are essential components in business and society, frames the fundamentals of computers and computer nomenclature, particularly with respect to personal computer hardware and software, and the Web. Students will learn the latest trends in technology and computer concepts and how these topics are integrated into their daily lives. This course will assist students in exploring a career centered on current and emerging technologies.

*Transfer Curriculum Goal(s): none*

### **COMP 1315 Computer Literacy and E-learning**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course begins with understanding and effectively using the CLC E-learning components including D2L, Google gmail, and MnSCU E-services. The course then focuses on computing fundamentals, key applications, and living online - the three standard skills sets categories of the IC3 computer literacy curriculum. The learning domains included in this course are Computer Hardware, Peripherals and Troubleshooting, Computer Software, Using an Operating System, Common Program Functions, Word Processing Functions, Spreadsheet Features, Communication with Presentation Software, Communication Networks and the Internet, Electronic Communication and Collaboration, Using the Internet and the World Wide Web, and The Impact of Computing and the Internet on Society. This course will help students prepare for the IC3 certification exam. Career Preparation: Diverse - All business and organizational careers using current computer technologies. Certification Preparation: IC3."

*Transfer Curriculum Goal(s): none*

### **COMP 1398 Topics in Computer Technology**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover selected topics of interest in Computer Technology. These topics could include a variety of current computer technology issues, releases, platforms, security, networking or others. Career Preparation: Information Technology, Computer Technology. Certification Preparation: None, unless specified in topic material.

*Transfer Curriculum Goal(s): none*

### **COMP 2107 Supporting Client Operating Systems**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides students who are new to Microsoft client operating systems with the knowledge and skills necessary to troubleshoot basic problems end users will face while running Microsoft client operating systems in an active directory network environment, or in a workgroup environment. This is an introductory level computer-support course designed to provide an overview of operating system concepts and how to troubleshoot the current version of Microsoft client operating systems. This is the first course in the Microsoft Certified IT Professional (MCITP) certification. This course is intended for new entrants and career changers new to the IT industry who have experience using Microsoft Office and have basic Microsoft Windows navigation skills. This course is also intended for a current call center technician with six months experience looking to validate and update their support skills. Career Preparation: The studies in this course will help students prepare for careers in com-

puter support, client support, and system support such as MCDST, systems analyst, support technician, support analyst, and help desk administrator. Certification Preparation: Optional. Microsoft 70-620. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

*Transfer Curriculum Goal(s): none*

### **COMP 2111 Security Essentials**

**Credits: 4**

*Prerequisite: COMP 1123 or COMP 1230*

*Co-Requisite: none*

This course addresses the objectives of CompTIA's Security+ Certification and will help prepare students to pass the Security+ Certification Exam. This course is designed to provide students with a broad-based knowledge of network security and assist them in preparing for a career in information technology or for further study in specialized security fields. Subjects covered will include, but not be limited to, the following: authentication, security attacks, malicious code, remote access, e-mail, web security, direct and file transfer services, hacking and anti-hacking utilities, wireless and instant messaging devices, media, network security topologies, intrusion detection, security baselines, cryptography, physical security, disaster recover, and computer forensics. Career Preparation: The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA Security+ SY0-301.

*Transfer Curriculum Goal(s): none*

### **COMP 2113 Advanced Operating Systems: Command Line Administration**

**Credits: 3**

*Prerequisite: COMP 1230 and COMP 1253*

*Co-Requisite: none*

This course focuses on the concepts of the command line interface using the Command Prompt window, referred to as the MS DOS prompt window in earlier versions of Windows. Topics covered include commands, syntax, switches, attributes, pipes, filters, redirection, advanced batch files, optimizing performance and troubleshooting using batch sequence processing, and how to use simple Internet related internal commands from the command line. Both internal and external commands will be studied and applied in the command interpreter. Students will create batch files and learn how to apply these utilities in an operating system and network operating system environment. Students will build maintenance utility and automation programs using the command line interpreter. Career Preparation: The studies in this course will help students prepare for careers in information technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, Computer Support, Information Technology, and Help Desk/Computer Repair Technician.

*Transfer Curriculum Goal(s): none*

### **COMP 2115 Command Line and PowerShell Administration**

**Credits: 4**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course focuses on the concepts of the command line interface using the Command Prompt window, referred to as the MS-DOS prompt window in earlier versions of Windows. Students will also be introduced to PowerShell as an alternative scripting tool. Topics covered include commands, syntax, switches, attributes, pipes, filters, redirection, advanced batch files, optimizing performance and troubleshooting using batch sequence processing, and how to use simple Internet-related internal commands from the command line. Both internal and external commands will be studied and applied in the command interpreter. Students will create batch files and learn how to apply these utilities in an operating system and network operating system environment. Students will build maintenance utility and automation programs using the command line interpreter. Students will also use PowerShell, a scripting technology and create automation of system management tasks and the creation of system management tools. Topics covered include the Windows PowerShell Command Line, object based scripting with .NET, writing PowerShell Scripts, working with variables, arrays and hashes, implementing conditional logic, using loops to process data, organizing scripts using functions, and basic system administration. Career Preparation: The studies in this course will help students prepare for careers in information technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, Computer Support, Information Technology, and Help Desk/Computer Repair Technician.

*Transfer Curriculum Goal(s): none*

### **COMP 2116 IT Project Management**

**Credits: 3**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course will introduce students to the principles of managing information technology (IT) projects. This course focuses on presenting the PEMBOK Guide 5e project management principles, and preparing students for industry certifications, including CompTIA Project+ and PMI's PMP. Topics covered include project integration, scope, time, cost, quality, human resource, communications, risk, procurement, and stakeholder management as well as team building and performance measuring. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA Project+ and PMI PMP.

*Transfer Curriculum Goal(s): none*

### **COMP 2118 Server Administration**

**Credits: 4**

*Prerequisite: COMP 1230 and COMP 1253*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course provides students with the knowledge and skills necessary to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server environment. These tasks include managing user, computer, and group accounts; managing access to network resources; managing printers; managing an organizational unit in a network based on Active Directory directory service; and implementing Group Policy to manage

users and computers. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-640. Was previously COMP 1254.

*Transfer Curriculum Goal(s): none*

#### **COMP 2119 Network Infrastructure**

**Credits: 4**

*Prerequisite: COMP 2118*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course provides students with the knowledge and skills necessary to install, configure, maintain, and safeguard data in a Microsoft Windows Server environment. These tasks include managing, configuring, administering, and installing the Dynamic Host Configuration Protocol, Domain Name System, configuring File Services, Printers, Network Policy and Access Services, and Securing a Windows Environment. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-642. Was previously COMP 1255.

*Transfer Curriculum Goal(s): none*

#### **COMP 2120 Network Planning and Design**

**Credits: 4**

*Prerequisite: COMP 2119*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course provides students with the knowledge and skills necessary to plan and design a TCP/IP physical and logical network, plan and troubleshoot a routing strategy, plan a Dynamic Host Configuration Protocol (DHCP) strategy, optimize and troubleshoot DHCP, plan a Domain Name System (DNS) strategy, optimize and troubleshoot DNS, plan and design Deploying IIS and Active Directory Certificate Services, and network access. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-646.

*Transfer Curriculum Goal(s): none*

#### **COMP 2121 Directory Services Infrastructure**

**Credits: 4**

*Prerequisite: COMP 2120*

*Co-Requisite: none*

This course is the final course in a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course is a capstone course which provides students with the knowledge and skills to successfully plan, design, implement, configure, and troubleshoot a Microsoft Windows Server Active Directory service infrastructure. The course focuses on a review of all previous Microsoft Server courses, including Business Continuity, Windows Server directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication,

organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer.

Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-647.

*Transfer Curriculum Goal(s): none*

#### **COMP 2126 Wireless Networking**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course focuses on the evolving need of home and office wireless technologies and mastering wireless local area networks. The course covers aspects of wireless networks with a particular emphasis on wireless network security and design. Course material includes implementing practical hardware, software and network configurations for wireless networking. This course will address the objectives of the CWNA (Certified Wireless Network Administrator) industry certification. The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, Support Technician, and Systems Engineer. Certification Preparation: Planet3 Wireless CWNA

*Transfer Curriculum Goal(s): none*

#### **COMP 2127 Hardware/Software Evaluation**

**Credits: 2**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course focuses on the evaluation of emerging product technologies. The content will vary with new release hardware components and software betas. Evaluation criteria will be established for the product evaluation and students will work through a systematic evaluation process. Career Preparation: The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer.

*Transfer Curriculum Goal(s): none*

#### **COMP 2130 Scaling Networks (CCNA-III)**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is the third of four courses designed to prepare students for Cisco CCNA certification. This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCNA.

*Transfer Curriculum Goal(s): none*

#### **COMP 2131 Connecting Networks (CCNA-IV)**

**Credits: 3**

*Prerequisite: COMP 2130*

*Co-Requisite: none*

This course is the fourth of four courses designed to prepare students for Cisco CCNA certification. This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCNA.

*Transfer Curriculum Goal(s): none*

#### **COMP 2132 Implementing Cisco IOA Network Security**

**Credits: 3**

*Prerequisite: COMP 1124*

*Co-Requisite: none*

CCNA Security helps students prepare for entry-level security specialist careers by developing an in-depth understanding of network security principles and the tools and configurations needed to secure a network. The curriculum provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices. CCNA Security offers the following: provides an in-depth, theoretical overview of network security principles as well as the tools and configurations available; emphasizes the practical application of skills needed to design, implement, and support network security; supports the development of critical thinking and complex problem-solving skills through hands-on labs. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer. Certification Preparation: Optional. Cisco CCNA Security.

*Transfer Curriculum Goal(s): none*

#### **COMP 2133 Fundamentals of Voice Over IP**

**Credits: 3**

*Prerequisite: COMP 1124*

*Co-Requisite: none*

This course covers associate-level knowledge and skills required to administer a voice network, the required skill set for specialized job roles in voice technologies such as voice technologies administrator, voice engineer, and voice manager, and important skills in VoIP technologies such as IP PBX, IP telephony, handset, call control, and voicemail solutions. Students will learn the skills and knowledge related to the Cisco Unified Communications Manager, which is typically employed by large organizations such as governments, large companies, and colleges, as well as the Cisco CallManager Express (CME) and Cisco Unity Express (CUE) solutions typically used by medium and small organizations such as companies with less than 2,000 employees, retail businesses, and small school districts. Career Preparation: The studies in this course will help students prepare for careers

in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer.

*Transfer Curriculum Goal(s): none*

#### **COMP 2150 Windows Server Administration I**

**Credits: 5**

*Prerequisite: COMP 1230*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the first of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of core services such as the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure, Active Directory and networking services. In addition, this course also covers such valuable skills as: Managing Active Directory Domain Services Objects, Automating Active Directory Domain Services Administration, Implementing Local Storage, Implementing File and Print Services, Implementing Group Policy, Implementing Server Virtualization with Hyper-V. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-410 Installing and Configuring Windows Server 2012 exam objectives.

*Transfer Curriculum Goal(s): none*

#### **COMP 2151 Windows Server Administration II**

**Credits: 5**

*Prerequisite: COMP 2150*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the second of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of core services such as user and group management, network access, and data security. In addition, this course also covers such valuable skills as: Implementing a Group Policy Infrastructure, Managing User and Service Accounts, Maintaining Active Directory Domain Services, Configuring and Troubleshooting DNS, Configuring and Troubleshooting Remote Access, Installing, Configuring, and Troubleshooting the Network Policy Server Role, Optimizing File Services, Increasing File System Security, Implementing Update Management. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-411 Administering Windows Server 2012 exam objectives.

*Transfer Curriculum Goal(s): none*

#### **COMP 2152 Windows Server Administration III**

**Credits: 5**

*Prerequisite: COMP 2151*

*Co-Requisite: none*

This course is one of a series of Microsoft Server System

Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the third of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of Advanced Windows Server 2012 Services such as advanced configuring tasks necessary to deploy, manage, and maintain a Windows Server 2012 infrastructure. It covers such skills as fault tolerance, certificate services, and identity federation. In addition, this course also covers such valuable skills as: Implementing Advanced Network Services, Implementing Advanced File Services, Implementing Dynamic Access Control, Implementing Network Load Balancing, Implementing Failover Clustering, Implementing Disaster Recovery, Implementing Active Directory Certificate Services (AD CS), Implementing Active Directory Federation Services (AD FS). Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-412 Configuring Advanced Windows Server 2012 Services exam objectives.

*Transfer Curriculum Goal(s): none*

#### **COMP 2153 Client Operating System Management** **Credits: 4**

*Prerequisite: COMP 1253*

*Co-Requisite: none*

This course is one of a series of Microsoft Operating System Administration and Engineering courses that help prepare students for client support and help desk MCSA Microsoft Certification. This course provides students with the knowledge and skills necessary to master configuration or support for Windows 8 computers, devices, users and associated network and security resources. Students work with networks configured as a domain-based or peer-to-peer environment with access to the Internet and cloud services. Students will also work on Designing an Installation and Application Strategy, Maintaining Resource Access, Maintaining Windows Clients and Devices, and Managing Windows 8 Using Cloud Services and Microsoft Desktop Optimization Pack. Career Preparation: The studies in this course will help students prepare for careers in Computer Networking and System Administration such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Microsoft 70-688.

*Transfer Curriculum Goal(s): none*

#### **COMP 2154 Advanced Network Defense** **Credits: 3**

*Prerequisite: COMP 2111*

*Co-Requisite: none*

This course examines theoretical understanding of network security principles as well as the tools and configurations available. The course will emphasize the practical application of skills needed to design, implement, and support network security. Students will develop critical thinking and complex problem solving skills using simulation-based scenarios that promote the exploration of networking security concepts, allowing students to experiment with network behavior and ask "What if" questions. Students will be equipped with the knowledge and skills needed to prepare for entry-level security specialist careers. The course will cover modern network security threats, securing network devices, authentication,

authorization and accounting, firewall technologies, intrusion prevention, cryptography, implementing virtual private networks, managing a secure network, and implementing the Cisco adaptive security appliance. Career preparation: GSEC, GSED, CCNA, MCTA, MCSA, security analyst, information security officer, network security administrator, network security engineer, security systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, and network manager. Certification preparation: GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GCIA), Security Certified Network Professional (SCNP)

*Transfer Curriculum Goal(s): none*

#### **COMP 2155 Network Intrusion** **Credits: 3**

*Prerequisite: COMP 2111*

*Co-Requisite: none*

This course examines ethical hacking and information systems security auditing. Students will focus on the current security threats, advanced attack vectors, and practical real time demonstration of the latest hacking techniques, methodologies, tools, tricks, and security measures. The course will explore pentesting (Penetration Testing), hacking and securing systems. The lab intensive environment provides student's in-depth knowledge and practical experience with the current security systems. Foundational concepts include how perimeter defenses work and scanning and attacking networks. Students will learn how intruders escalate privileges and what steps can be taken to secure information technology system. Content topics include: intrusion detection, policy creation, social engineering, Distributed Denial-of-Service (DDoS) attacks, buffer overflows, and virus creation. Career preparation: GSEC, GSED, CCNA, MCTA, MCSA, security analyst, information security officer, network security administrator, network security engineer, security systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, and network manager. Certification preparation: GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GCIA), Security Certified Network Professional (SCNP).

*Transfer Curriculum Goal(s): none*

#### **COMP 2160 Ethics in Information Technology** **Credits: 2**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course will introduce students to ethical topics and situations that exist in, and are possibly unique to, information technology. Actual case studies will be explored, and students will learn practical advice on how to deal with these issues if they arise. Topics covered will include a definition of ethics, ethics for IT professionals and users, computer crime, internet crime, privacy laws, constitutional freedoms, intellectual property, software development, employment issues, and industry codes of ethics. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, IS Manager and CIO.

*Transfer Curriculum Goal(s): none*

#### **COMP 2170 Linux Systems** **Credits: 4**

*Prerequisite: COMP 1230, COMP 1253*

*Co-Requisite: none*

This course introduces students to the Linux operating

system and will help students prepare for entry-level Linux certification. Topics covered include system architecture; Linux installation and package management, GNU and Unix commands, devices, Linux file systems and file system hierarchy standards, shells, scripting and data management, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals, and security. The studies in this course help students prepare for careers in Networking, such as Linux Administrator, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional, CompTIA LX0-101 and LX0-102 and LPI LPIC-1 (101 and 102)

*Transfer Curriculum Goal(s): none*

#### **COMP 2202 Computer User Support** **Credits: 3**

*Prerequisite: COMP 1204*

*Co-Requisite: none*

This course provides an overview of microcomputer user support responsibilities. This course provides students with a comprehensive understanding of the helpdesk environment and the knowledge, skills, and abilities necessary to work in the user support industry. Students will learn problem-solving, communication skills, working individually and in teams. Troubleshooting strategies and tools will be analyzed and used. Studies include historical changes in computer use, end-user application support, help systems, communication strategies, customer satisfaction techniques, evaluation techniques, industry and organizational standards, needs assessments and documentation. Career Preparation: The studies in this course will help students prepare for careers in technology support such as Computer Support Specialist, Help Desk Technician, and Information Technology Specialist. Was previously COMP 1202.

*Transfer Curriculum Goal(s): none*

#### **COMP 2213 Computer Careers Internship** **Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This internship provides students with on-the-job experience in the student's computer career major. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. Career Preparation: The studies in this course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst, Linux Administrator, Help Desk Technician, MCSE, MCSA, LAN Administrator, WAN Administrator depending on the major of study. Certification Preparation: None.

*Transfer Curriculum Goal(s): none*

#### **COMP 2214 Help Desk Internship I** **Credits: 5**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This internship provides students with on-the-job experience in a computer user support field. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job setting situation. Career Preparation: The studies in this course will help students prepare for careers

in Computer/Information Technology such as Computer Support Specialist and Help Desk Technician. Certification Preparation: None.

*Transfer Curriculum Goal(s): none*

#### **COMP 2216 Help Desk Internship II** **Credits: 5**

*Prerequisite: COMP 2214*

*Co-Requisite: none*

This is a continuing internship providing students with additional on-the-job experience in the student's computer career major. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. The studies in this course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst, Linux Administrator, Help Desk Technician, LAN Administrator, WAN Administrator depending on the major of study.

*Transfer Curriculum Goal(s): none*

#### **COMP 2220 Introduction to Computer Programming** **Credits: 4**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course is an introduction to the techniques used in structured programming using current programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. The students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst, Systems Engineer and Business Analyst.

*Transfer Curriculum Goal(s): none*

#### **COMP 2222 Introduction to Visual Basic and Scripting** **Credits: 3**

*Prerequisite: COMP 1109*

*Co-Requisite: none*

This course provides an overview of Visual Basic programming and scripting and entry-level programming fundamentals including variables, controls, data types and structures, emphasizing design and development considerations for Windows based application programs and operating systems. Students will write Visual Basic code to perform operations using arrays, manipulating strings, and performing file input and output functions. Topics include: the Visual Basic and scripting development environment, intrinsic controls, data types, control structures, procedures and functions, arrays, user-defined types, file handling, Visual Basic as an object oriented language, and writing scripts for systems calls and command line arguments. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst, Systems Engineer and Business Analyst.

*Transfer Curriculum Goal(s): none*

#### **COMP 2314 Introduction to Project Manager** **Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course addresses the objectives covered by the



CompTIA IT Project+ Certification Exam, and is designed to introduce students to project management, with an emphasis on IT project management. Topics include project initiation and scope definition, project planning, project execution, control and coordination, and project closure, acceptance, and support. Career Preparation: The studies in this course will help students prepare for careers in Project Management such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, IT Project Manager, and Senior IT Project Manager. Certification Preparation: Optional. CompTIA Project+.

*Transfer Curriculum Goal(s): none*

## CRIMINAL JUSTICE

### CRJU 1101 Criminal Justice

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is an introduction into the American Criminal Justice System. The course will cover police, court, and correctional facilities, and given an overview of how our criminal justice system works. Discussion on various topics will analyze procedures and cases that made our laws what they are today.

*Transfer Curriculum Goal(s): none*

### CRJU 1104 Juvenile Justice

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover the study of juvenile delinquency, the theories of causation, and the methods of corrections. It will also examine the correction systems which are offered for juvenile offenders. This class will cover the mandatory Minnesota Post Board categories that are required by the State of Minnesota licensing examination.

*Transfer Curriculum Goal(s): none*

### CRJU 1106 Corrections & Probation

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine the historical and contemporary correctional theories and programs with emphasis on the current organizational structure. Probation, Parole, and alternatives to incarceration will be explored.

*Transfer Curriculum Goal(s): none*

### CRJU 1108 Community Corrections

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course addresses the concepts and practices of community corrections. The specific content includes halfway house program activities, restitution projects and program coordination, work release activities, court diversion processes and programs, truancy tracking programs, and community outreach initiatives.

*Transfer Curriculum Goal(s): none*

### CRJU 1109 Report Writing in Law Enforcement

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will teach the students a professional approach to law enforcement report writing procedures required by police officers. Spelling, grammar, and punctuation will be

mandatory in this course. The focus will be on documenting the chain of evidence and chronological events applicable to criminal investigations. Application of oral interviewing and interrogation skills will be included. Forms required by law enforcement personnel will be covered in class along with the use of a computer lab classroom.

*Transfer Curriculum Goal(s): none*

### CRJU 1112 Police and the Community

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will study the historical and contemporary roles of policing in society, strategies for positive police-community relations and job-related issues for police officers. Students will be introduced to positive principles of interaction between the police officer and citizens of the community in which the officer serves. The course will also cover contemporary police practices which include community-oriented policing and problem-oriented policing.

*Transfer Curriculum Goal(s): none*

### CRJU 2101 Criminal Law

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is a course in substantive law, including the elements of major crimes and their possible legal defenses. This course will also familiarize students with the Minnesota Criminal Statutes and help prepare students by covering a large portion of the Minnesota POST objectives.

*Transfer Curriculum Goal(s): none*

### CRJU 2102 Criminal Procedures

**Credits: 4**

*Prerequisite: CRJU 1101 or instructor's consent*

*Co-Requisite: none*

This course covers the study of constitutional law and criminal procedures utilizing the opinions of the U.S. Supreme Court and the Minnesota Rules for Criminal procedures. Emphasis is placed on the constitutional guidelines for law enforcement, rules of arrest, search and seizure, and the Minnesota Rules of Procedures.

*Transfer Curriculum Goal(s): none*

### CRJU 2106 Fitness for Law Enforcement

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will prepare the student for the law enforcement physical fitness assessment approved by the Minnesota P.O.S.T. Board. Students will perform exercises at the direction of the Cooper Law Enforcement Fitness Specialist to enhance the students' conditioning, agility, flexibility, cardiovascular endurance and strength. This course will also cover nutrition and maintaining total fitness.

*Transfer Curriculum Goal(s): none*

### CRJU 2108 Criminal Investigations

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is a course in substantive law, including the elements of major crimes and their possible legal defenses. This course will also familiarize students with the Minnesota Criminal Statutes and help prepare students by covering a large portion of the Minnesota POST objectives.

*Transfer Curriculum Goal(s): none*

### CRJU 2110 Topics in Criminal Justice

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will address those issues currently under public scrutiny. These would likely include, but not be limited to, deadly force and use of force, capital punishment, racism in the system, sexism within the justice system, police corruption, abuse of authority throughout the system, the code of silence found within the system, and other relevant topics of timely nature.

*Transfer Curriculum Goal(s): none*

### CRJU 2112 Ballistic and Firearms Identification

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of internal and external ballistics and their relationships to criminal investigations. Included in the coursework will be comprehensive analysis of projectile striation operational signatures, projectile impact signatures, and gunshot powder residue analysis, both spectrographically and reproductions. Students will be required to complete an investigatory process that includes testimony in mock court.

*Transfer Curriculum Goal(s): none*

### CRJU 2114 Traffic Law

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the Minnesota Traffic Statutes and how they are applied, interpreted, and enforced. Vehicle registration, vehicle insurance and safety responsibility acts, drivers license laws, rules and regulations as they relate to snowmobiles and all-terrain vehicles, motorcycles and other motor vehicles will be covered.

*Transfer Curriculum Goal(s): none*

### CRJU 2116 Science of Fingerprints

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of fingerprints as it relates to criminal investigations and the identification of suspects and victims of crimes. The student will learn the Henry system of obtaining rolled impressions and the techniques of computerization in locating and filing unknown latent prints. Dusting, lifting, and photographing latent prints in various mediums will also be examined. Laser detection and ultraviolet location of latent prints will be presented in class.

*Transfer Curriculum Goal(s): none*

### CRJU 2118 Criminal Justice Photography

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

A primary facet of criminal investigation is founded in recording of evidence and the crime scene for trial via still and video photography. This course of study will take the student through various investigative endeavors which create photographic tasks similar to actual crime scenes and criminal investigations which require photographic documentation.

*Transfer Curriculum Goal(s): none*

### CRJU 2124 General Evidence and Identification Preparation

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

A substantial component of criminal investigations is found in crime scene reconstruction. This course enables the student to undertake a physical examination of various forms of evidence likely encountered in a variety of crime scene investigations. Plaster and plastic reproductions of latent tracks, number restoration, crime scene sketching, and the collection and preservation of physical evidence will be examined. Related photography will also be a part of the course.

*Transfer Curriculum Goal(s): none*

### CRJU 2135 Internship

**Credits: 1-8**

*Prerequisite: instructor's permission*

*Co-Requisite: none*

This is a practical learning experience in criminal justice in the area of the student's interest. This course is usually scheduled after the student has completed one year of course work. Coordinator and agency approval is required. Students are not guaranteed an internship.

*Transfer Curriculum Goal(s): none*

### CRJU 2140 Law Enforcement & Behavioral Science

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course examines the dark side of law enforcement. The student will explore corruption, deviancy, and criminality found within police departments nationally, and discuss how it impacts upon relations within poor and minority citizens.

*Transfer Curriculum Goal(s): none*

### CRJU 2150 Constitutional Law and the Justice System

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course gives students an appreciation and understanding of the United States Constitution and its importance within our democracy. The historical basis and development of constitutional concepts will be examined. Specific attention will be paid to constitutional limitations upon government authority over private citizens. In addition to stressing amendments with the Bill of Rights, the course will look at the 14th Amendment. We will address the Minnesota POST Board learning objectives relating to constitutional law.

*Transfer Curriculum Goal(s): none*

### CRJU 2160 Use of Force

**Credits: 2**

*Prerequisite: CRJU 2101 and CRJU 2114, cumulative GPA of 2.0 or higher, current/valid MMPI (psychological exam), valid physician's sign off sheet, valid driver's license, background check completed*

*Co-Requisite: none*

Use of force includes basic techniques and tactics for a Peace Officer to defend against different types of assaults against an officer and the reasonable force necessary to overcome the resistance being forced upon the officer in defending himself/herself. This course will decrease the likelihood of injury to the officer, and minimize the use of excessive force.

*Transfer Curriculum Goal(s): none*

### **CRJU 2162 Firearms**

**Credits: 3**

*Prerequisite: CRJU 2101 and CRJU 2114, cumulative GPA of 2.0 or higher, current/valid MMPI (psychological exam), valid physician's sign off sheet, valid driver's license, background check completed*

*Co-Requisite: none*

Firearms include basic techniques and tactics for a Peace Officer to utilize during a deadly force encounter that would involve an officer utilizing his/her service weapon. This course also includes basic firearms safety, care and cleaning of service weapons and basic firearms shooting principles.

*Transfer Curriculum Goal(s): none*

### **CRJU 2164 Patrol Practicals**

**Credits: 5**

*Prerequisite: CRJU 2101 and CRJU 2114, cumulative GPA of 2.0 or higher, current/valid MMPI (psychological exam), valid physician's sign off sheet, valid driver's license, background check completed*

*Co-Requisite: none*

Patrol Practicals cover all types of instruction which involve patrol related duties. This course will acknowledge emergency vehicle operations and factors and duties related to patrol operations. Proper patrol techniques involving traffic stops, felony stops, crimes in progress, search warrant procedures, building searches, EDP responses, and crash investigations will be examined. Patrol procedures for SFST/DWL, interview/interrogations will be critical to the student's learning experience in patrol practicals. Drugs and cell phone crimes will illustrate some of the common issues involved in solving crimes in today's society. Proper patrol function and basic communication exercises during patrol practicals will enhance the student's ability to recognize a threat and evaluate each scenario situation.

*Transfer Curriculum Goal(s): none*

### **CRJU 2166 Tactical Communications/Relations**

**Credits: 2**

*Prerequisite: CRJU 2101 and CRJU 2114, cumulative GPA of 2.0 or higher, current/valid MMPI (psychological exam), valid physician's sign off sheet, valid driver's license, background check completed*

*Co-Requisite: none*

Tactical Communications and Relations provides the student with the confidence and knowledge to effectively communicate with the public, courts, and police administration. The student will become familiar with other cultures and lifestyles. The student will also gain an understanding of the dangers of hazardous materials and identify warning signs in relation to hazardous materials.

*Transfer Curriculum Goal(s): none*

### **CRJU 2311 Basic Firearms**

**Credits: 1**

*Prerequisite: CRJU students only*

*Co-Requisite: none*

This course will cover the basic fundamentals of handguns and shotguns. Nomenclature of firearms will be covered, along with shooting. This is a preparation for students who are unfamiliar with firearms, so that they may successfully complete the skills component to be a licensed police officer.

*Transfer Curriculum Goal(s): none*

### **CRJU 2315 POST Prep**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is a review of information that is contained in the "Learning Objectives for Professional Peace Officer Education," as approved by the Minnesota Board of Peace Officer Standards and Training. Course information is divided into five parts to match each of the five categories as found in the "Learning Objectives for Professional Peace Officer Education." The five categories will cover the following information: Category One (Practical Applications and Techniques), Category Two (The Criminal Justice System: Civil and Criminal Law), Category Three (Community Policing), Category Four (Victims and Victims' Rights), Category Five (Leading, Managing and Communicating).

*Transfer Curriculum Goal(s): none*

### **CRJU 2399 Seminar in Police Administration**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course takes a broad look at management in law enforcement and the challenges that comes with being a supervisor. Basic management skills, personal skills, managing problems, hiring personnel, budgeting, and deploying law enforcement resources to improve productivity will be discussed.

*Transfer Curriculum Goal(s): none*

## **DENTAL ASSISTANT**

### **DENT 1106 Dental Orientation & Anatomy**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will focus on correct pronunciation, spelling and the meaning of terms used in the dental vocabulary. The terminology presented in this course will be utilized by the student throughout the Dental Assisting program. This course will focus on identifying structures of the head and neck and describe their functions to include the skull, face, mandible, hard palate, muscles of mastication, sinuses, oral cavity, salivary glands, nerves and blood supply. This course will focus on the development of the tissues and organs found in the oral cavity, the structural components of the hard and soft tissues and the detailed anatomy of the adult and primary dentition.

*Transfer Curriculum Goal(s): none*

### **DENT 1108 General Anatomy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an introductory level for health professionals who need a basic understanding of anatomy and physiology, and the interrelationships between the structures and functions. The organ systems include integumentary, skeletal, muscular, nervous, sensory, endocrine, circulation, respiratory, digestive, excretory and reproductive systems.

*Transfer Curriculum Goal(s): none*

### **DENT 1114 Pathology, Pharmacology, Law & Emergencies**

**Credits: 3**

*Prerequisite: DENT 1106*

*Co-Requisite: none*

This course is designed to provide the student with a knowledge of pathology, the body's defense, healing mechanisms, and diseases of the oral cavity. This course will provide the

student with a basic knowledge of drugs and their effects. It provides knowledge of emergencies and the prevention and treatment of these emergencies within a dental office environment. It will also acquaint students with ethical practices of dentistry, along with knowing Minnesota dental law.

*Transfer Curriculum Goal(s): none*

### **DENT 1116 Dental Clinic I**

**Credits: 8**

*Prerequisite: DENT 1106*

*Co-Requisite: none*

This course is part of the required curriculum for the Dental Assisting program diploma. This course will focus on the ability of the student to practice for proficiency the tasks performed in clinical situations.

*Transfer Curriculum Goal(s): none*

### **DENT 1118 Dental Radiology I**

**Credits: 2**

*Prerequisite: None*

*Co-Requisite: none*

This course is designed to enable the student to possess the knowledge to allow them to identify landmarks and mount various series of radiographs. It provides the student with the knowledge in the properties of x-rays, the generation of x-rays, basic ionizing radiation information, machine components and identification of the paralleling technique. Darkroom technique and radiology infection control protocol will also be identified.

*Transfer Curriculum Goal(s): none*

### **DENT 1120 Preventive Dentistry**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: DENT 1106*

This course is designed to provide the student with the knowledge to instruct a patient in oral hygiene methods and oral hygiene aids. The course will differentiate intrinsic and extrinsic stains of the teeth. The use of fluoride therapies will be explained and identified. The signs and symptoms of periodontal disease will be explained. The course will cover basic nutrition and its relationship to dental health.

*Transfer Curriculum Goal(s): none*

### **DENT 1123 Dental Clinic II**

**Credits: 9**

*Prerequisite: DENT 1116, DENT 1118, DENT 1106, DENT 1120*

*Co-Requisite: none*

This course is designed to give the student a practical application of chair-side procedures within a clinical environment. It will emphasize those procedures considered expanded functions in the state of Minnesota.

*Transfer Curriculum Goal(s): none*

### **DENT 1124 Biomaterials**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is, designed to provide knowledge of dental materials to include the properties, application, and mixing technique of each material. It will cover the identification of dental materials hazardous components and how to handle the material along with the correct disposable method of the hazardous material.

*Transfer Curriculum Goal(s): none*

### **DENT 1129 Dental Radiology II**

**Credits: 2**

*Prerequisite: DENT 1118*

*Co-Requisite: none*

This course is a continuation of Dental Radiology I with emphasis on patient management, radiation safety, additional radiographic techniques and legal issues relating to radiology.

*Transfer Curriculum Goal(s): none*

### **DENT 1132 Dental Specialties**

**Credits: 2**

*Prerequisite: DENT 1106*

*Co-Requisite: none*

This course is designed to provide the student with a knowledge of terminology, instruments, procedures and the dental assistants role in the specialty areas of oral surgery, endodontics, orthodontics, periodontics, prosthodontics, and pediatric dentistry.

*Transfer Curriculum Goal(s): none*

### **DENT 1133 Principles of Practice Management & Communication**

**Credits: 2**

*Prerequisite: DENT 1106*

*Co-Requisite: none*

This course teaches general principles of communication in health care settings. Specific emphasis is placed on verbal and nonverbal skills, assertiveness and confidentiality in a variety of situations to include receptionist, office manager, business manager, insurance clerk, records manager, data processor, appointment clerk and bookkeeping. It will cover the use of the dental software system Dentrix and operation of basic office equipment.

*Transfer Curriculum Goal(s): none*

### **DENT 1150 Dental Internship**

**Credits: 1-7**

*Prerequisite: instructor's permission*

*Co-Requisite: none*

This course is designed to provide the student with the opportunity of a practical application of chair-side procedures within a dental practice/facility environment. The student's progress is monitored by an instructor and supervised by a licensed dentist.

*Transfer Curriculum Goal(s): none*

### **DENT 1340 Dental Review**

**Credits: 1**

*Prerequisite: instructor's permission*

*Co-Requisite: none*

This course is designed to provide the student with the opportunity to review for the national certification and state registration exams.

*Transfer Curriculum Goal(s): none*

### **DENT 1342 Topics in Dentistry**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover selected topics of interest in Dental Assisting.

*Transfer Curriculum Goal(s): none*

## DIESEL AND HEAVY EQUIPMENT TECHNICIAN

### DHET 1103 Introduction to Construction Equipment

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce students to various makes and models of construction equipment and safety related to the basic operation of construction equipment.

*Transfer Curriculum Goal(s): none*

### DHET 1107 Electrical Theory

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: DHET 1108*

This course covers the theory, principles of operation, troubleshooting, testing, maintenance, and repair techniques of electrical components and systems found on modern construction equipment and trucks. Battery starting, charging, accessory systems, electronic controls will be emphasized.

*Transfer Curriculum Goal(s): none*

### DHET 1108 Electrical Lab

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: DHET 1107*

This course is associated with the electrical theory course. Students will be assigned lab projects relating to testing and repair of electrical systems and components used on construction equipment and trucks.

*Transfer Curriculum Goal(s): none*

### DHET 1117 Engine Theory

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: DHET 1118*

This course covers Engine and Electrical related Safety concerns relating to general shop practices and tools used when maintaining, diagnosing, and repairing Engine and Electrical systems and components. The Theory and principals of Engine systems, Fuel systems, components, and sub-assemblies used on construction, mobile, and truck related systems will be covered.

*Transfer Curriculum Goal(s): none*

### DHET 1118 Engine Lab

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: DHET 1117*

This course is associated with the engine theory class. Students will be assigned lab projects relating to the troubleshooting and repair of diesel engines used on construction equipment and trucks.

*Transfer Curriculum Goal(s): none*

### DHET 1123 Customer Service & Service Management

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

In this course the student will gain the basic skills necessary to provide customer service and service management both in the shop and in the field as a professional service technician. The student will be introduced to the organization and management skills required by parts and service personnel. The student will understand how to properly complete a work order.

*Transfer Curriculum Goal(s): none*

### DHET 1125 Hydraulic Theory

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: DHET 1126*

This course covers the theory and operation of hydraulic and hydrostatic components and systems used on construction equipment and truck related systems. Reading and understanding hydraulic schematics will be emphasized.

*Transfer Curriculum Goal(s): none*

### DHET 1126 Hydraulic Lab

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: DHET 1125*

This course is associated with the hydraulic theory courses. Students will be assigned lab projects relating to troubleshooting and repair of hydraulic and hydrostatic components and systems used on construction equipment and truck related systems.

*Transfer Curriculum Goal(s): none*

### DHET 1128 Power Train Theory

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: DHET 1129*

This course covers the theory and operations of power shift and other hydraulically shifted transmissions, differentials, final drives, and undercarriages used on construction equipment. Manual non-twin countershaft transmission will also be covered.

*Transfer Curriculum Goal(s): none*

### DHET 1129 Power Train Lab

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: DHET 1128*

This course is associated with the power train theory course. Students will be assigned lab projects relating to troubleshooting, failure analysis, and repair of power train components related to construction equipment.

*Transfer Curriculum Goal(s): none*

### DHET 1130 Diesel Internship

**Credits: 1-6**

*Prerequisite: instructor's permission*

*Co-Requisite: none*

The Diesel internship is an opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

### DHET 1132 On Highway Vehicle Systems Theory

**Credits: 3**

*Prerequisite: DHET 1107 and DHET 1117, or DHET 1125 and DHET 1128*

*Co-Requisite: DHET 1133*

This course covers the theory, operation, testing, and repair of compressed air systems, air and hydraulic brakes, steering, suspension, clutches, manual transmissions, differentials, and HVAC systems found on on-highway construction vehicles.

*Transfer Curriculum Goal(s): none*

### DHET 1133 On Highway Vehicle Systems Lab

**Credits: 4**

*Prerequisite: DHET 1107 and DHET 1117, or DHET 1125 and DHET 1128*

*Co-Requisite: DHET 1132*

Students will be assigned lab projects typically relating to repairs made in a heavy equipment repair facility. Emphasis will be on testing and repairing air, hydraulic brake systems, steering suspension, clutches, manual transmissions, differentials, and HVAC systems.

*Transfer Curriculum Goal(s): none*

### DHET 1135 Welding for Diesel Equipment

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basic welding techniques used for wire (MIG), arc and oxyacetylene welding and cutting used in the diesel and heavy equipment field. This course will also cover the different types of welding materials and metals and the different welding positions used.

*Transfer Curriculum Goal(s): none*

### DHET 1310 Trade Math

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers topics used in the diesel mechanic industry. Some of the topics of this course include calculations involving threads, piston displacement, job tickets, and Ohms Law. Students will also read measuring devices and scales commonly used in a shop.

*Transfer Curriculum Goal(s): none*

## EARTH SCIENCE

### ESCI 1400 Geology of National Parks

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This introductory course is a survey of the principles of geology, thematically centered on the processes that shaped the continent of North America, with special emphasis on the National Parks and Monuments of the United States. It includes topics such as plate tectonics, mountain building, volcanoes, faults and faulting, erosion by water, wind, and ice, ice ages, glacial landscapes, fossilization, and geologic time. Students will apply newly acquired geologic skills to case studies of individual national parks.

*Transfer Curriculum Goal(s): 3,10*

### ESCI 1405 Astronomy

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

Is a survey of current day space observations and explorations at the conceptual level. The course is designed as an introduction to the study of astronomy and approaches the physics of planetary and stellar investigations from a perspective suitable for the motivated but non-mathematically-oriented liberal arts student. In addition to presenting an introduction to the basics of observing the night sky, the course surveys the latest observations, discoveries and theories in the rapidly developing areas of comparative planetology, stellar evolutionary processes, black holes, quasars, and other non-thermal phenomena. Finally, the course summarizes the latest cosmological theories about the fundamental nature of the universe in light of the best information available from observational platforms such as

the Hubble Space Telescope.

*Transfer Curriculum Goal(s): 3*

### ESCI 1421 Minnesota Geology

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is an introduction to the unique geologic history of Minnesota. The course is designed for the science and non-science major yearning for insight into the varied and interesting geology of Minnesota. The course includes the geologic history, mineral resources, rocks, waters and local geology. Environmental concerns pertinent to Minnesota will also be considered. Field trips outside of scheduled class and lab time are required.

*Transfer Curriculum Goal(s): 3*

### ESCI 1444 Natural Disasters

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of phenomena known collectively as natural disasters, covered from the geoscientific perspective, with consideration for the impact of such events on human societies. Topics in this course will include volcanoes, hurricanes, tsunamis, earthquakes, and others. Course also includes studies of the underlying processes that create the environment for these events, such as plate tectonics, the oceanic heat budget, and atmospheric circulation.

*Transfer Curriculum Goal(s): 3,10*

### ESCI 1451 Oceanography

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to the science of oceanography through the interdisciplinary areas of biological, chemical, geological, and physical oceanography. Topics include ocean floor, plate tectonics, sea water chemistry, currents, waves, tides, coasts, and marine life. Contemporary environmental topics are also part of this course and may include marine contamination, marine noise, overfishing, alternative energy, global climate change, tsunami and storms, coastal issues, and marine resources.

*Transfer Curriculum Goal(s): 3,10*

### ESCI 1452 Oceanography Lab

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This optional laboratory course is an introduction to the science of oceanography through hands on experiences in the interdisciplinary areas of biological, chemical, geological, and physical oceanography. This course includes a variety of activities supporting the topics discussed in Oceanography lecture. These topics may include the ocean floor, plate tectonics, air-sea interactions, sea water chemistry, currents, waves, tides, coastal processes, and ocean life. Laboratory exercises will also focus on environmental topics which may include pollution, over fishing and food supply, alternative energy, global warming, El Nino Southern Oscillation, the North Atlantic Oscillation, tsunami and storms, coastal problems, marine resources, etc. While not required, it is recommended that you complete ESCI 1451 before enrolling in this course.

*Transfer Curriculum Goal(s): 3,10*

### ESCI 1454 Earth Science and the Environment

**Credits: 4***Prerequisite: none**Co-Requisite: none*

This course is a survey of the scientific underpinnings of contemporary environmental issues on the global, continental, and regional scales. For disciplines such as geology, meteorology and oceanography, it is an introductory course, but is also a course on practical applications of these sciences for inquiry into the human impact on Earth's concentric spheres.

*Transfer Curriculum Goal(s): 3,10***ESCI 1455 Honors Earth Science and the Environment****Credits: 4***Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator**Co-Requisite: none*

This course is a survey of the scientific underpinnings of contemporary environmental issues on the global, continental, and regional scales. For the geoscience disciplines of geology, meteorology, climatology, and oceanography, it is an introductory course. But is also a course on the practical applications of these sciences for inquiry into the human impact on Earth's concentric spheres. Students enrolled in this honors course will be required to read additional scientific literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation. At least one extended field trip may be required.

*Transfer Curriculum Goal(s): 3,10***ESCI 1460 Exploring the Edge of Space****Credits: 3***Prerequisite: Accuplacer reading score of 56**Co-Requisite: none*

In this course students will work as a team to plan and successfully conduct a near-space high-altitude balloon flight (HAB). Such flights involve learning Earth surface and atmospheric structure and dynamic processes, hypothesis writing, experimental design and construction, electronics testing and assembly, microcontroller programming, data collection and analysis, and scientific report writing. Successful execution of a near-space HAB flight requires extensive teamwork and collaboration. At least one all-day off campus field excursion is required for this course. Whenever possible students in this class will collaborate with students of other courses, colleges, and K-12 schools. Collaboration in this case may involve presenting technical and science topics to other CLC and to K-12 students, and helping others with experimental design and construction, and interpreting data.

*Transfer Curriculum Goal(s): 3***ESCI 1461 Honors Exploring the Edge of Space****Credits: 4***Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator**Co-Requisite: none*

In this course students will work as a team to plan and successfully conduct a near-space high-altitude balloon flight (HAB). Such flights involve learning Earth surface and atmospheric structure and dynamic processes, hypothesis writing, experimental design and construction, electronics testing and assembly, microcontroller programming, data collection and analysis, and scientific report writing. Successful execution of a near-space HAB flight requires ex-

tensive teamwork and collaboration. At least one all-day off campus field excursion is required for this course. Whenever possible students in this class will collaborate with students of other courses, colleges, and K-12 schools. Collaboration in this case may involve presenting technical and science topics to other CLC and to K-12 students, and helping others with experimental design and construction, and interpreting data. Students will read primary scientific literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 3***ESCI 2581 Topics in Earth Science****Credits: 1-3***Prerequisite: none**Co-Requisite: none*

This course will examine selected topics of interest in Earth Science. On demand.

*Transfer Curriculum Goal(s): none***ECONOMICS****ECON 1450 The American Economy****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course is an introduction to and a descriptive survey of the modern American Economy. Concentration is on the major forces affecting the economy, with special attention given to the role and responsibility of the federal government.

*Transfer Curriculum Goal(s): 5***ECON 1451 Honors American Economy****Credits: 3***Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator**Co-Requisite: none*

This course is an introduction to and a descriptive survey of the modern American Economy. Concentration is on the major forces affecting the world economy, with special attention given to the role and responsibility of the United States government in national and world economic affairs. The course will require attendance at the 2016 Nobel Conference in St. Peter, MN, and will include multiple topics related to the conference theme, "In Search of Economic Balance." Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 5***ECON 1598 Topics in Economics****Credits: 1-3***Prerequisite: none**Co-Requisite: none*

This course will examine selected topics of interest in Economics. Offered on demand.

*Transfer Curriculum Goal(s): none***ECON 2401 Principles of Economics-Macroeconomics****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course provides the basic principles behind the economic process, nature of the free-enterprise system, money and banking, national income, monetary and fiscal policy, and other macroeconomic concepts. Although not required, it is recommended that students complete ECON 1450 prior to taking this course.

*Transfer Curriculum Goal(s): 5***ECON 2402 Principles of Economics-Microeconomics****Credits: 3***Prerequisite: ECON 1450 or sophomore standing**Co-Requisite: none*

This course studies the functioning of the market in the free-enterprise economy and the various factors that affect market conditions and market structures. Included in the study are the price system, consumer behavior, business firm behavior, resource markets, income distribution, and other microeconomic concepts.

*Transfer Curriculum Goal(s): 5***ECOTOURISM AND ENVIRONMENTAL STUDIES****ECOT 1100 Introduction to Ecotourism****Credits: 1***Prerequisite: none**Co-Requisite: none*

This course will expose students to ecotourism. Ecotourism is responsible travel to natural areas that aims to conserve the environment and sustains the well-being of local people.

*Transfer Curriculum Goal(s): none***ECOT 1120 Environmental Wisdom of the Elders****Credits: 3***Prerequisite: none**Co-Requisite: none*

Modern society is just beginning to realize the value of what is called traditional or indigenous ecological knowledge. In order to understand how Ecological Tourism (Ecotourism) can provide a value both to the indigenous people and the environments they depend on, one must understand these relationships. This course will help the student understand how to save endangered ecosystems and species by providing indigenous peoples with a way to continue living in harmony with their surroundings. By providing a livelihood for their families, both the people and the environment can benefit.

*Transfer Curriculum Goal(s): none***ECOT 1130 Global Environmental Travel****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course will look at the increasing interest by many travelers to visit locations, but with a "softer touch" than in

the past. More travelers want to learn, to see, to understand, and to help save environments and cultures for present and future generations.

*Transfer Curriculum Goal(s): none***ECOT 1350 Ecotourism Internship****Credits: 1-6***Prerequisite: consent of instructor**Co-Requisite: none*

This course is designed to provide students with an opportunity to work in some aspect of Ecotourism.

*Transfer Curriculum Goal(s): none***ECOT 2160 Ecotourism Travel Plan Development****Credits: 3***Prerequisite: instructor's consent**Co-Requisite: none*

This is a capstone course for the AAS degree in Ecotourism. The student will design a trip, including marketing, pricing, arrangements, etc., ensuring that the trip is in fact sensitive to the environments and cultures found in the location.

*Transfer Curriculum Goal(s): none***ENVR 1120 Indigenous Environmental Knowledge****Credits: 3***Prerequisite: none**Co-Requisite: none*

Studying indigenous peoples' way of life can give us a key to how to insure the future survival of all people on this planet. Modern Society is beginning to realize the value of what is called traditional or indigenous environmental knowledge. This knowledge is the way in which indigenous people relate to their environments. This knowledge is founded on spiritual-cultural instruction from ancient times and on generations of careful observation within an ecosystem of continuous residence. This course will help the student understand indigenous societies living in a sustainable manner.

*Transfer Curriculum Goal(s): none***ENVR 1400 Introduction to Environmental Studies****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course involves developing an understanding of the complexities of our environment. From the Galaxies our Universe and forces that hold it together to the various systems and process that are part of our planet and an understanding of how everything is tied together. This course will bring us a kaleidoscope of knowledge from the videos of NOVA on the Elegant Universe, to information from our on-line text - the Habitable Planet on environmental relationships of Atmosphere, Oceans and Ecosystems. Along with this are readings and discussions from Classics in Environmental Studies by Nelissen, Straaten and Klinkers.

*Transfer Curriculum Goal(s): 5,10***EMERGENCY MEDICAL TECHNOLOGY STUDIES****EMTS 1503 CPR****Credits: 1***Prerequisite: none**Co-Requisite: none*

This course in cardiopulmonary resuscitation is a combination of artificial respiration and artificial circulation. The student will learn to recognize respiratory and cardiac arrest and provide basic life support, with use of an AED (automated external defibrillators) until advanced life support is available. American Heart Association Certification will be

given on successful course completion. Course is offered on demand.

*Transfer Curriculum Goal(s): none*

### **EMTS 1504 Emergency Medical Technician**

**Credits: 6**

*Prerequisite: EMTS 1503 or CPR certification*

*Co-Requisite: none*

This course will prepare the student to participate in the Emergency Medical System at the entry level. This 160-hour course teaches the skills required to determine the severity of a traumatic and/or medical emergency along with basic life support treatment. The classroom experience includes lecture, practical experiences, online and written assignments. Successful completion of this course qualifies the student to sit for the National Registry of EMT's practical examination and then National Registry of EMT-Basic computer adaptive exam, and. Passing the NREMT exam fulfills the Minnesota EMS Regulatory Board requirements for certification as an Emergency Medical Technician-Basic.

*Transfer Curriculum Goal(s): none*

### **EMTS 1505 Emergency Medical Responder**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides advanced knowledge of initial emergency care needed to sustain life support for the victim(s) of serious illness or injury. This course fulfills the first aid requirement for law enforcement students and initial first responders. American Heart Association Healthcare Provider CPR Certification will be given on successful course completion. Students may earn National Registry Emergency Medical Responder certification.

*Transfer Curriculum Goal(s): none*

### **EMTS 1512 Emergency Medical Technician Refresher**

**Credits: 2**

*Prerequisite: EMT certification*

*Co-Requisite: none*

EMT Refresher meets for 24 hours and reviews the core concepts of the EMT curriculum. This course meets the requirements of Minnesota for recertification as an EMT.

*Transfer Curriculum Goal(s): none*

### **EMTS 1515 First Responder Refresher**

**Credits: 1**

*Prerequisite: First Responder certification*

*Co-Requisite: none*

First Responder Refresher meets for 16 hours and reviews the core concepts of the First Responder curriculum. This course meets the requirements of Minnesota for recertification as a First Responder.

*Transfer Curriculum Goal(s): none*

### **EMTS 1580 Special Topics**

**Credits: 1-6**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Emergency Medical Technology Studies. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **ENGINEERING**

### **ENGR 1500 Introduction to Engineering**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

History of engineering achievements, social impact of engineering, critical thinking and engineering problem solving; engineering careers and work opportunities, professional responsibilities and ethics. Introductions to the use of MS Word, Power Point, Excel and Mathematica in engineering.

*Transfer Curriculum Goal(s): none*

### **ENGR 1510 Introduction to Engineering Design**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces the student to the design processes in engineering. The student will develop problem solving skills through project management - planning, organizing, and designing a project within budget and time. The projects involve working in groups; they require effective teamwork development - professional organization, effective communication, standard documentation, time management, and decision making skills that are essential in working as a team.

*Transfer Curriculum Goal(s): none*

### **ENGR 1560 Digital Logic Design**

**Credits: 3**

*Prerequisite: MATH 1470 or concurrent enrollment*

*Co-Requisite: none*

This is a course on number systems, Boolean algebra, logic gates, combinational and sequential circuits, MSI based design, programmable logic and memory devices, VHDL synthesis, computer aided analysis, and simulation. The laboratory component reinforces concepts with hands-on design projects.

*Transfer Curriculum Goal(s): none*

### **ENGR 2547 Statics**

**Credits: 3**

*Prerequisite: MATH 1478 and PHYS 1411*

*Co-Requisite: none*

This course involves rigid-body mechanics and provides a necessary background for the study of the mechanics of deformable bodies. Statics deals with structures in equilibrium such as structures at rest or moving at a constant velocity. It develops the equations of equilibrium and applies them to the analysis of simple engineering structures and machines. Specific subjects include equilibrium of trusses, frames and machines, the analysis of friction forces and topics relating to the center of gravity and mass moments of inertia.

*Transfer Curriculum Goal(s): none*

### **ENGR 2548 Dynamics**

**Credits: 3**

*Prerequisite: ENGR 1412, ENGR 2547, MATH 1478*

*Co-Requisite: MATH 2459*

This course is the study of kinematics and kinetics as applied to the analysis of simple engineering structures and machines. Kinematics is the study of motion of particles and extended rigid bodies without reference to the causes of the motion. Kinetics is the study of the relationship between motion and the forces that cause the motion. Specific topics include motions in 1-, 2-, and 3-dimensions, relative motion of connected bodies, work, energy, momentum, and introduction to vibrations.

*Transfer Curriculum Goal(s): none*

### **ENGR 2549 Mechanics of Materials**

**Credits: 3**

*Prerequisite: ENGR 2547*

*Co-Requisite: none*

This course presents the study of mechanics of deformable bodies. It deals with the analysis of the stresses and of the corresponding deformation in various structural members. Axial, torsional, pure bending and transverse loadings will be considered. Analytical and computer solutions to problems will be employed. The course will also include laboratory determinations of stress-strain relationships. Multivariable calculus and Mathematica will be used to determine moments of inertia.

*Transfer Curriculum Goal(s): none*

### **ENGR 2569 Circuit Analysis I**

**Credits: 4**

*Prerequisite: ENGR 1412 or MATH 1478*

*Co-Requisite: none*

This course covers the linear circuits and their responses under some input and output conditions. The Ohm's Law, Kirchhoff's Current Law, and Kirchhoff's Voltage Law are used for analysis. The basic elements and networks containing dependent and independent sources are analyzed using standard circuit analysis techniques including the nodal analysis, mesh analysis, Thévenin's Theorem, Norton's Theorem, and the principle of superposition. Applications of operational amplifier are analyzed. The behavior of the inductor and capacitor are investigated as energy storage devices. Methods of analysis for first and second order circuits are investigated. Circuit analysis methods, including analytical and computer based solutions are employed. A lab supplements the analytical course material.

*Transfer Curriculum Goal(s): none*

### **ENGR 2570 Circuit Analysis II**

**Credits: 3**

*Prerequisite: ENGR 2569*

*Co-Requisite: none*

This course covers the following topics: sinusoidal sources, phasors, impedance and admittance, sinusoidal steady-state analysis, average power, RMS values, apparent power, complex power, mutual inductance, transformers, complex frequency, Laplace transforms, circuit analysis in the s-domain, poles, zeros and diagrams, filters, and two-port networks. The student is given simulated laboratory experience through the use of computer-aided analysis. The laboratory component reinforces concepts with hands-on design projects.

*Transfer Curriculum Goal(s): none*

### **ENGR 2580 Topics in Engineering**

**Credits: 1-3**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course will examine selected topics of interest in Engineering. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **ENGLISH**

### **ENGL 1410 Composition I**

**Credits: 4**

*Prerequisite: Accuplacer reading comprehension score of 78, or successful completion of READ 1500 with a grade of C or better, or successful completion of ENGL 1596 with a grade of C or better*

*Co-Requisite: none*

Composition I is a writing-intensive course that prepares students for writing effectively in a variety of academic and professional situations. Students will learn and employ a variety of rhetorical strategies, including (but not limited

to) description, narration, exposition, exemplification, classification, process analysis, comparison/contrast, and definition through formal papers written in edited Standard English, which will result in a total of at least 5,000 words. In addition, students may also be asked to write journals, a resume and letter of application, and to review grammar. Students will regularly engage in all stages of the writing process; learn how to successfully participate in an online, academic environment; and hone their ability to identify thesis, audience, tone, unity, coherence, and emphasis in their reading and writing. The course will also include a literature component to present basic terminology and foster critical thinking skills.

*Transfer Curriculum Goal(s): 1*

### **ENGL 1411 Composition II**

**Credits: 4**

*Prerequisite: ENGL 1410 or ENGL 1420*

*Co-Requisite: none*

Composition II focuses on research-based writing and information literacy. Students will learn and employ rhetorical strategies such as analysis (of ideas or human situations into comparable or constituent parts), cause and effect reasoning, inductive/deductive reasoning, and argument/persuasion. Subjects may include reaction, evaluation, and interpretation of literature and/or socio-cultural phenomena. Students will learn the principles of the academic research process such as developing a topic, understanding and applying outside sources, and defining and supporting a critical lens. During that process, students will learn how to locate, access, evaluate, and synthesize traditional and online library resources. Throughout the course, students will demonstrate a command of the writing and revision process and the APA (American Psychological Association) and the MLA (Modern Language Association) formats. Students will demonstrate these skills through formal papers written in edited Standard English, which will result in a total of at least 5,000 words.

*Transfer Curriculum Goal(s): 1*

### **ENGL 1420 Honors Composition I**

**Credits: 4**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

Honors Composition I is an enriched writing-intensive seminar course that prepares students for writing effectively in a variety of academic and professional situations. In addition to engaging in higher-level reading, students will learn to employ a variety of rhetorical strategies, including (but not limited to) description, narration, exposition, exemplification, classification, process analysis, comparison/contrast, and definition through formal papers written in edited Standard English, which will result in a total of at least 5,000 words. Students may also be asked to keep a journal, write a resume and letter of application, review grammar, and submit an end-of-term portfolio of polished work. Students will regularly engage in all stages of the writing process; learn how to successfully participate in an online, academic environment; and hone their ability to identify thesis, audience, tone, unity, coherence, and emphasis in their reading and writing. The course will also include a literature component to present basic terminology and foster critical thinking skills. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working

relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 1,6*

#### **ENGL 1421 Honors Composition II**

**Credits: 4**

*Prerequisite: ENGL 1410 or ENGL 1420*

*Co-Requisite: none*

Honors Composition II is a research-based writing-intensive course that teaches students how to write in a professional and public capacity through frequent writing experiences similar to the writing which they are likely to encounter in community or work situations. Through practice, students will master the research process and explore ways to share the results of their research with various audiences. For example, students will learn how to locate, access, evaluate, and synthesize traditional and online library resources and shape the results into a cohesive argument. Throughout the course, students will develop a command of the writing and revision processes and the APA (American Psychological Association) and the MLA (Modern Language Association) formats. Students will learn the foundational elements of argumentation and will develop researching, critical thinking, and collaborative writing strategies as they draft and revise multiple documents for multiple audiences. Students will demonstrate these skills through formal papers written in edited Standard English, which will result in a minimum of 5,000 words. The results of student learning will extend beyond the college classroom, reflecting common forms of civic engagement that exist in diverse and pluralistic societies. The capstone project for the course will include a presentation in public forum.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 1,9*

#### **ENGL 1422 Practical Writing**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will learn to structure business correspondence, including memos, letters, executive summaries and e-mails. Longer reports will include proposals, mechanism reports, and multi-step, collaborative reports. Students will learn to represent information for different audiences, such as co-workers, the public and upper-level administration, and they will use media such as power point presentations to enhance their messages. Because writing is often collaborative, the course will emphasize working in groups, treating group members ethically, developing time lines for projects and dividing work within the group.

*Transfer Curriculum Goal(s): 1,2*

#### **ENGL 1450 Introduction to Humanities**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introductory survey of the genres and themes of the humanities. Readings, lectures, and class discussions will focus on genres such as music, the visual arts, drama, literature, and philosophy. As themes, the ideas

of freedom, love, happiness, death, nature, and myth may be explored from a western and non-western point of view.

*Transfer Curriculum Goal(s): 6,8*

#### **ENGL 1452 Classical Mythology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

An introductory course presenting classical mythology as a means of understanding the human condition through general readings, with special emphasis on classical myth's continued presence in modern Western culture.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1454 Film Appreciation**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to film as art form, tracking theory—with emphasis on the evolution of directorial and cinematic technique through the context of film history. Critical evaluations and in class discussion will be integral parts of the course.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1460 Honors Literature: The Great Books**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

Honors Literature is a seminar course of the great books and literature of non-Western and Western writers and includes canonical, authoritative, and acclaimed texts across the ages such as epics, tragedies, novels, dramatic works for the stage, and poetry. The class will expose students to writers of genius, authors who have dreamed literature in all centuries and across all borders. It will invite students to inhabit verse and prose that represent values, systems of belief, and culture. Students will be called on to become readers, writers, discussants, and wonderers. Though literature is sometimes a mirror that works badly, the ultimate subject of this class is the students themselves, and it is up to them to name and understand the relationship between these extraordinary texts and our human condition.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1463 Introduction to Literature**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Introduction to literature is a survey course of great, creative literature, specifically prose, drama, and poetry. In addition to developing personal responses to the selected works in the course, students will become adept at discussing and analyzing literature and will develop fluency in literary concepts (plot, point of view, characterization, setting, symbolism, theme, tone, figurative language, stream-of-consciousness, Realism, et. al.). For students wishing to continue study in poetry, drama, American, or world literatures, this course is a necessary starting point. Students who wish to expand

their reading experience, develop a deeper appreciation for creative literature, and learn techniques for literary interpretation will also benefit greatly from this course.

*Transfer Curriculum Goal(s): 6,7*

#### **ENGL 1468 Poetry**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

A course designed to develop a deeper understanding and appreciation of poetry through reading, discussion, and critical analysis of selected poets ranging from Shakespeare to the present. A Minnesota poet may visit to read his/her poetry following a study and discussion of the poet's writings.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1470 Introduction to Science Fiction and Fantasy Literature**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56*

*Co-Requisite: none*

This course is a study of selected works of science fiction and fantasy literature. Focus will be on critical reading and the analysis of the literature. In addition, this course will address issues of historical and contemporary importance such as environmentalism, politics, religion, ethics, technology, individuality and conformity, and economics. By examining these issues through the lens of science fiction and fantasy literature, students will gain an alternative perspective on world history and how these issues affect their individual lives and the culture in which they live.

*Transfer Curriculum Goal(s): 6,9*

#### **ENGL 1477 Authors in Focus**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

ENGL 1477, 1478 and 1479 are one-credit mini-courses on selected writers and their works. Offered on demand.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1478 Authors in Focus**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

ENGL 1477, 1478 and 1479 are one-credit mini-courses on selected writers and their works. Offered on demand.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 1501 Writing Fundamentals for Healthcare Professionals**

**Credits: 1**

*Prerequisite: Accuplacer Reading Score of 56*

*Co-Requisite: none*

This course offers the student instruction leading to writing improvement through a better understanding of sentence-level grammar. The course emphasizes language structure, conventions, and the application of these to writing sentences, paragraphs, and program-specific documents. The primary goal of the course is to transform students who are competent readers and writers into subject matter experts in language mechanics and in so doing prepare students for success in the professional, increasingly technological, and text-focused workplace. In addition, the course offers students the opportunity to review the writing process and practice the most common editing and proofing techniques in order to generate documents that are free of errors, concise, and reflective of their intended meaning.

*Transfer Curriculum Goal(s): none*

#### **ENGL 1510 English for Academic Purposes**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course focuses on intermediate integrated English language skills (reading, writing, listening, and speaking) for academic purposes through culture using authentic language situations such as reading authentic academic language texts, writing authentic academic papers, listening to authentic lectures and participating in discussions, and asking questions. For non-native English speakers.

*Transfer Curriculum Goal(s): none*

#### **ENGL 1520 Language Fundamentals**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course offers the student instruction leading to writing improvement through a better understanding of sentence-level grammar. The course emphasizes language structure, conventions, and the application of these to writing sentences, paragraphs, and program-specific documents. The primary goal of the course is to ensure students can communicate effectively and thus prepare them for success in our increasingly technological, and text-focused workplace. The course will also review the editing process and explore the relationship between language structure and its meaning.

*Transfer Curriculum Goal(s): none*

#### **ENGL 1521 Technical Writing Fundamentals**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

#### **ENGL 1522 Writing Fundamentals for Diesel & Heavy Equipment Technicians**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course offers students the opportunity to study the writing process and practice in preparation for reading, understanding, communicating, and generating the most common writing documents. The course will utilize the writing process focusing on audience, purpose, and method in order to generate documents such as letters, proposals, email, memoranda, reviews, service logs, formal and informal reports, audits, and other intra- and inter-office communications. The course will also explore communicating with partners in alternative formats such as video conferencing, webinars, blogs, and ITV.

*Transfer Curriculum Goal(s): none*

#### **ENGL 1580 Topics in Humanities**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course offers the opportunity for focused study in one or more areas in the humanities.

*Transfer Curriculum Goal(s): none*

#### **ENGL 1596 Writing II**

**Credits: 3**

*Prerequisite: successful completion of READ 0591 with grade of C or better, Accuplacer scores of 78 or higher, or instructor approval*

*Co-Requisite: none*

This course offers the student instruction leading to writing improvement. Emphasis on sentence structure and usage, appropriate conventions, and application of these to writing sentences, paragraphs, and short essays will prepare students to succeed in college level writing courses (Composition I).

*Transfer Curriculum Goal(s): none*

#### **ENGL 2450 World Literature**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of selected works from Western and non-Western literary traditions. Focus will be on critical reading and discussion, literary elements, and analysis, interpretation, and evaluation of literature from different philosophies and cultures.

*Transfer Curriculum Goal(s): 2,8*

#### **ENGL 2451 Women in Literature**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Although many survey courses now include works by women authors, that has not always been the case. We begin this course by reading Virginia Woolf's text *A Room of One's Own*, which provides a touchstone for our understanding as to why so many women writers are missing, or have been missing, from those survey courses. We will investigate the importance of tradition and history for women writers as we consider how women have been characterized in literature and as we read literature written by women. Genres we will read include a novel, poetry, short stories, expository writing and we will view several films.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 2455 Native Indian Literature**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of selected works of Native American Literature. Students will be required to discuss, read, and write about Native American in a variety of genres that may include the following: fiction, memoir, nonfiction, poetry, and prose. By reading and studying the course materials, students will gain an appreciation and understanding of Indigenous self-representation in its historical, cultural, and political contexts.

*Transfer Curriculum Goal(s): 6,7*

#### **ENGL 2467 American Literature Pre-1861**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of North American literature prior to the modern era. Non-fiction and literary works (short stories, novellas, poetry, and drama) will encapsulate the colonial, revolutionary, and romantic literary periods. The course focuses on literature as a reflection of the history of American ideas.

*Transfer Curriculum Goal(s): 6,7*

#### **ENGL 2468 American Literature 1861-Present**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of the literature of the Realistic,

Naturalistic/Symbolic, and Modern periods (1865-1950). The emphasis will focus on the literature as a reflection of the history of American ideas.

*Transfer Curriculum Goal(s): 6,7*

#### **ENGL 2470 Creative Nonfiction**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

In this course students will work to define and explore the literary genre of creative nonfiction, developing the techniques used to gather information and the literary skills needed to turn bare facts into compelling, artful, purpose-driven prose. Through examination of example texts and immersion in the process of imaginative writing, participants will come to better understand and express themselves and their world.

*Transfer Curriculum Goal(s): 6*

#### **ENGL 2483 Creative Writing**

**Credits: 3**

*Prerequisite: Accuplacer reading comprehension score of 78*

*Co-Requisite: none*

In workshop format this course provides the study and practice of writing. From semester to semester, the course may emphasize fiction, nonfiction, poetry, or some combination of them. Students should consult instructor for further information.

*Transfer Curriculum Goal(s): 6*

### **FARM BUSINESS MANAGEMENT**

#### **FBMA 2200 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students to further develop their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in reducing potential risk, performing strategic planning, and revising business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs.

*Transfer Curriculum Goal(s): none*

#### **FBMA 2201 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: FBMA 2200*

*Co-Requisite: none*

This course is designed to assist students to further develop their skills in business management. It provides an opportunity for students to maintain the financial and enterprise database, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning, and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. This data also provides development and maintenance of farm business data, reports, and plans.

*Transfer Curriculum Goal(s): none*

#### **FBMA 2210 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop

their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in improving risk management plans, strategic plans, and business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2220 - Directed Studies - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2211 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in improving risk management plans, strategic plans, and business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2221 - Directed Studies - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2212 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in improving risk management plans, strategic plans, and business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2222 - Directed Studies - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2213 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in improving risk management plans, strategic plans, and business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2223 - Directed Studies - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2214 Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to investigate and apply tools that may be effective in improving risk management plans, strategic plans, and business plans in their farm business operations. Emphasis is placed on the research of business management alternatives to meet their business and personal needs. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2224 - Directed Studies - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2220 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to maintain the financial and enterprise data base, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning, and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2210 - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2221 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to maintain the financial and enterprise data base, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning, and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2211 - Current Issues in Farm Business Management.)

*Transfer Curriculum Goal(s): none*

#### **FBMA 2222 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop

their skills in business management. It provides an opportunity for students to maintain the financial and enterprise data base, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning, and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2212 - Current Issues in Farm Business Management.)  
*Transfer Curriculum Goal(s): none*

**FBMA 2223 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to maintain the financial and enterprise data base, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning, and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2213 - Current Issues in Farm Business Management.)  
*Transfer Curriculum Goal(s): none*

**FBMA 2224 Directed Studies - Current Issues in Farm Business Management**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist students further develop their skills in business management. It provides an opportunity for students to maintain the financial and enterprise data base, to generate financial statements, business analyses, and financial projections required for risk management planning, strategic management planning and farm business plan development. This data also provides the basis for commodity market planning and tax management planning. Emphasis is placed on the development and maintenance of farm business data, reports, and plans. (Students may enroll in a range of one to five credits during each enrollment, depending on their individual needs at the time. Students are encouraged to enroll in this course in sequence with FBMA 2214 - Current Issues in Farm Business Management.)  
*Transfer Curriculum Goal(s): none*

**FBMA 3100 Fund of Financial Management Relates Risk Management**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is intended to have the student enhance their decision-making skills relating to business risk management. This course will have the student further investigate tools available to their business that would be effective in reducing potential risk for their operation. Emphasis will be placed on having the student research risk management options that

will meet their business, family, and personal needs.

*Transfer Curriculum Goal(s): none*

**FBMA 3101 Applied Financial Management Relates Risk Management**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is intended to have the student apply concepts in financial management that can be used in the development of a business risk management program. The student is to implement risk management tools that will assist in meeting their business, family and personal needs.  
*Transfer Curriculum Goal(s): none*

**FBMA 3110 Fund Financial Mgmt/Strategic Plan Emphasis**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will enable students to identify the elements necessary to evaluate and create a strategic plan for the business. Determining uses for the plan today and tomorrow and developing a plan to locate those team members necessary for strategic plan creation.  
*Transfer Curriculum Goal(s): none*

**FBMA 3111 Applied Financial Management/Strategic Plan Emp**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide practical application of strategic planning skills. Application skills will be practiced upon and applied to the student's business and business plan.  
*Transfer Curriculum Goal(s): none*

**FBMA 3120 Fundamentals of Financial Mgmt/Bus Plan Emphasis**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide practical application of the business plan. Application skills will be practiced and applied as the student's business plan is prepared and implemented.  
*Transfer Curriculum Goal(s): none*

**FBMA 3121 Applied Financial Mgmt/Bus Plan Emphasis**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide the necessary instruction to put together and implement a business plan for the farm business.  
*Transfer Curriculum Goal(s): none*

**FBMA 3330 Directed Study - Decision Making**

**Credits: 2**

*Prerequisite: FBM Diploma*

*Co-Requisite: none*

This course will examine the individual, family and farm business decision-making processes with emphasis on upgrading and improving decision-making resources, tools and skills. Particularly, this course will lead the student to critically analyze information, applications, and implications of decision making as it related to their own situation. Students will evaluate their own decision making process.  
*Transfer Curriculum Goal(s): none*

**FBMA 3331 Directed Studies - Communications**

**Credits: 2**

*Prerequisite: FBM Diploma*

*Co-Requisite: none*

This course will assist the student in further acquiring and developing a higher level of communication skills. Students will review and evaluate various communication methods and techniques in dealing with and relating to individuals in both the public and private sector. Students will use this information in formulating an effective communication method and style. Additional course content may include student initiated or group activities.  
*Transfer Curriculum Goal(s): none*

**FBMA 3332 Directed Studies - Modern Agricultural Tech**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will deal with experiencing modern agricultural technological changes and determining if they fit into an individual's farming operation.  
*Transfer Curriculum Goal(s): none*

**FBMA 3333 Directed Studies - Farm Business Family Transition**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides the opportunity for the student to study the many aspects of farm business and/or family transition which occur in the typical farm business.  
*Transfer Curriculum Goal(s): none*

**FBMA 3334 Directed Studies - Personal Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will organize skills for effective management of farm employees and agribusiness personnel through development of handbooks, compensation/incentive packages, individual expectations/evaluations, and team meetings.  
*Transfer Curriculum Goal(s): none*

**FBMA 3335 Directed Studies - Enterprise Alternatives**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will assist those students wanting to make changes in their farm business through enterprise expansion, addition or enhancement. The course will develop a set of procedures for exploring and evaluating alternative choices.  
*Transfer Curriculum Goal(s): none*

**FBMT 1112 Foundations for Farm Business Management**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is an overview of the Farm Business Management Program. The student will be introduced to goal setting, self and business assessment, record keeping, and business projections to provide the foundation for personal and business management progress. Current issues affecting business management are an integral part of the course.  
*Transfer Curriculum Goal(s): none*

**FBMT 1121 Preparation for Farm Business Analysis**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will take the student through a step-by-step procedure to close out a complete year of farm business records. This course will emphasize tax planning, completing inputs to livestock and crop enterprises, and emphasizing cash and liabilities accuracy. A completed business and enterprise analysis will be the course focus.  
*Transfer Curriculum Goal(s): none*

**FBMT 1122 Implementing the System Management Plan**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course continues to build on the foundation of farm business management. The student will complete a farm business financial and enterprise analysis. Sound financial record keeping is an integral component.  
*Transfer Curriculum Goal(s): none*

**FBMT 1131 Managing and Modifying Farm System Data**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will help students refine their farm business data system and assist them in applying year end procedures for farm business analysis. Students improve accuracy in the following: farm enterprise analysis, tax planning and filing, and cash and liabilities checks.  
*Transfer Curriculum Goal(s): none*

**FBMT 1132 Interpreting and Using Farm System Data**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course provides an opportunity for the student to view the farm business and its various components through a number of vehicles such as balance sheets, farm personal and managerial inventories, enterprise reports and historical data.  
*Transfer Curriculum Goal(s): none*

**FBMT 1170 Intro to Farm Commodity Marketing**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to the various methods and tools to market farm commodities.  
*Transfer Curriculum Goal(s): none*

**FBMT 1171 Directed Study - Intro to Farm Commodity Marketing**

**Credits: 1**

*Prerequisite: FBMT 1170*

*Co-Requisite: none*

This course provides the student with the opportunity to use the various marketing methods and tools.  
*Transfer Curriculum Goal(s): none*

**FBMT 1172 Directed Study - Intro to Farm Commodity Marketing**

**Credits: 1**

*Prerequisite: FBMT 1170*

*Co-Requisite: none*

This course provides the student with the opportunity to use the various marketing methods and tools.  
*Transfer Curriculum Goal(s): none*



**FBMT 1173 Directed Study - Intro to Farm Commodity****Marketing****Credits: 2**

*Prerequisite:* FBMT 1170

*Co-Requisite:* none

This course provides the student with the opportunity to use the various marketing methods and tools.

*Transfer Curriculum Goal(s):* none

**FBMT 1180 Applying Commodity Marketing Fundamentals****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This course is designed to teach students to apply the various methods and tools to market farm commodities.

*Transfer Curriculum Goal(s):* none

**FBMT 1181 Directed Study - Applying Commodity Marketing Fundamentals****Credits: 1**

*Prerequisite:* FBMT 1180

*Co-Requisite:* none

This course provides students with the opportunity to apply marketing methods and tools to their individual farming operation.

*Transfer Curriculum Goal(s):* none

**FBMT 1182 Directed Study - Applying Commodity Marketing Fundamentals****Credits: 1**

*Prerequisite:* FBMT 1180

*Co-Requisite:* none

This course provides students with the opportunity to apply marketing methods and tools to their individual farming operation.

*Transfer Curriculum Goal(s):* none

**FBMT 1183 Directed Study - Applying Commodity Marketing Fundamentals****Credits: 2**

*Prerequisite:* FBMT 1180

*Co-Requisite:* none

This course provides students with the opportunity to apply marketing methods and tools to their individual farming operation.

*Transfer Curriculum Goal(s):* none

**FBMT 1190 Evaluating Farm Commodity Marketing Tools****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This course is designed to teach students to evaluate the various farm marketing tools and to select the tool appropriate to the present marketing situation.

*Transfer Curriculum Goal(s):* none

**FBMT 1191 Directed Study - Evaluating Farm Commodity Marketing Tools****Credits: 1**

*Prerequisite:* FBMT 1190

*Co-Requisite:* none

This course will allow the student to implement and use the marketing tools appropriate to the current marketing situation.

*Transfer Curriculum Goal(s):* none

**FBMT 1192 Directed Study - Evaluating Farm Commodity****Marketing Tools****Credits: 1**

*Prerequisite:* FBMT 1190

*Co-Requisite:* none

This course will allow the student to implement and use the marketing tools appropriate to the current marketing situation.

*Transfer Curriculum Goal(s):* none

**FBMT 1193 Directed Study - Evaluating Farm Commodity Marketing Tools****Credits: 2**

*Prerequisite:* FBMT 1190

*Co-Requisite:* none

This course will allow the student to implement and use the marketing tools appropriate to the current marketing situation.

*Transfer Curriculum Goal(s):* none

**FBMT 1211 Introduction to Farm Business Management****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course introduces basic farm business management concepts. Students will study the farm management planning cycle and develop an understanding of its relationship to: family and farm business goal setting, cash and enterprise accounting principles, and tax planning.

*Transfer Curriculum Goal(s):* none

**FBMT 1213 Managing A Farm System in A Global Economy****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course assists the students in achieving awareness of development in agricultural policies and practices throughout the world and assessing the impact of these policies and practices on the profitability and viability of their farm business.

*Transfer Curriculum Goal(s):* none

**FBMT 1223 Using System Analysis in Total Farm Planning****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course enables study of concepts related to farm business analysis, and exploration of possible implications and/or solutions to these concepts. A systematic method to assess farm business strengths and weaknesses based on the analysis will be used.

*Transfer Curriculum Goal(s):* none

**FBMT 1233 Application of Productive Enterprise Information****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course describes procedures for applying enterprise information provided by computerized analysis of farm business accounts.

*Transfer Curriculum Goal(s):* none

**FBMT 1253 Exploration of Value Added Enterprises****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course will provide the student with the basic understanding of what value added enterprises are and how they can affect the farm business. The student will gain the knowl-

edge of various value added enterprises and their relation to a farm management cycle.

*Transfer Curriculum Goal(s):* none

**FBMT 1254 Incorporating Value Added Enterprises****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course will provide the student with the knowledge of the farm management cycle with the incorporation of a value added enterprise and the outcomes of the financial and business analysis of the farm.

*Transfer Curriculum Goal(s):* none

**FBMT 1255 Management of Value Added Enterprises****Credits: 2**

*Prerequisite:* none

*Co-Requisite:* none

This course will provide the student with an in-depth knowledge of management aspects of value added enterprises.

*Transfer Curriculum Goal(s):* none

**FBMT 1260 Environmental Issues on Today's Farm****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This course will offer the student insights and responsibilities of being a steward of the land. With new environmental policies that are law, the student will learn the necessary requirements to meet the current environmental policies.

*Transfer Curriculum Goal(s):* none

**FBMT 2141 Interpreting and Evaluating Financial Data****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course continues to expand on preparation and evaluation of the farm business analysis. This course provides continued guidance and perfection of business record close-out procedures, tax implications of management decisions, and continues to monitor farm business and family goals.

*Transfer Curriculum Goal(s):* none

**FBMT 2142 Interpreting Trends in Business Planning****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course examines whole farm, enterprise, balance sheet, and inventory trends. Current analysis data is compared to historical data in making future farm business planning decisions. Financial ratios are used to indicate the farm financial structure.

*Transfer Curriculum Goal(s):* none

**FBMT 2151 Strategies in Farm System Data Management****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course will help the student focus on long-term strategies necessary to maintain and enhance the farm business and personal future financial goals. The student will complete the year by developing an accurate, usable business analysis.

*Transfer Curriculum Goal(s):* none

**FBMT 2152 Integrating System Information for Financial Planning****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course uses farm system information to develop a farm financial plan. Interpretation and analysis of the farm system data will enhance the reliability of the farm plan. The comprehensive farm plan will integrate historical trends, farm and personal goals, financial and enterprise performance of the farm business.

*Transfer Curriculum Goal(s):* none

**FBMT 2161 Examination of the Context of Farm System Management****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course is designed to assist students in preparation of improved farm system management procedures. Students in this course will evaluate several years of an improved farm system analysis.

*Transfer Curriculum Goal(s):* none

**FBMT 2162 Refining Farm System Management****Credits: 4**

*Prerequisite:* none

*Co-Requisite:* none

This course is the culmination of activities designed to enable the student to develop and implement a comprehensive farm business strategic plan. The student will use the components of the Farm Business Management Program to develop and support a farm business strategic plan.

*Transfer Curriculum Goal(s):* none

**FBMT 2170 Monitoring Farm Commodity Marketing Plans****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

The course is designed to teach students to monitor and refine current farm commodity marketing plans. Emphasis will be placed on current market conditions and pricing opportunities.

*Transfer Curriculum Goal(s):* none

**FBMT 2171 Directed Study - Monitoring Farm Commodity Marketing Plans****Credits: 1**

*Prerequisite:* FBMT 2170

*Co-Requisite:* none

This course will provide activities directed toward monitoring and refining the student's farm commodity marketing plan.

*Transfer Curriculum Goal(s):* none

**FBMT 2172 Directed Study - Monitoring Farm Commodity Marketing Plans****Credits: 1**

*Prerequisite:* FBMT 2170

*Co-Requisite:* none

This course will provide activities directed toward monitoring and refining the student's farm commodity marketing plan.

*Transfer Curriculum Goal(s):* none

**FBMT 2173 Directed Study - Monitoring Farm Commodity Marketing Plans****Credits: 2**

*Prerequisite:* FBMT 2170

*Co-Requisite:* none

This course will provide activities directed toward monitoring and refining the student's farm commodity marketing plan.

*Transfer Curriculum Goal(s):* none



**Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in crop management. This course focuses on the analysis of special topics in oilseed or biofuel crop management, the economics related to cost of production, and the potential for processing the oilseed crop on the farm. On-farm processing of energy crops will result in both a biodiesel supply and a by-product that has been approved for livestock feed in some states. This course will provide basic principles to assist in researching new biofuel crop opportunities, incorporating the energy crop into a normal rotation, and basic economics of production and processing on the farm.

*Transfer Curriculum Goal(s): none***FBMT 2230 Special Topics - Livestock****Credits: 1***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2231 Special Topics - Livestock****Credits: 1***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2232 Special Topics - Livestock****Credits: 1***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2233 Special Topics - Livestock****Credits: 1***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2234 Special Topics – Livestock****Credits: 1***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2235 Special Topics - Livestock****Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2236 Special Topics - Livestock****Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2237 Special Topics - Livestock****Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2238 Special Topics - Livestock****Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2239 Special Topics - Livestock****Credits: 2***Prerequisite: none**Co-Requisite: none*

These courses cover special topics of interest in livestock management.

*Transfer Curriculum Goal(s): none***FBMT 2243 Using Financial Instruments in Farm System Management****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course integrates the application of various financial instruments used in acquiring capital for use in the business and investigates the way in which both earnings and financial progress can be measured.

*Transfer Curriculum Goal(s): none***FBMT 2253 System Plans and Projections****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course enables the combination of concepts for preparing farm system plans and projections, and the interaction of possible implications and/or solutions of these concepts.

*Transfer Curriculum Goal(s): none***FBMT 2263 Evaluating Farm System Programs****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course develops an awareness of individuals and agencies, both public and private, which have expertise available to assist the farm operator to solve farm systems problems. It enables study and application of farm business evaluation concepts, and exploration of possible implications. Exact subject matter and time spent per topic will vary depending on student need, location, and time.

*Transfer Curriculum Goal(s): none***FBMT 2300 Computer Applications in Farm Management****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course is intended to have the student enhance their decision-making skills relating to business risk management. This course will have the student further investigate tools available to their business that would be effective in reducing potential risk for their operation. Emphasis will be placed on having the student research risk management options that will meet their business, family, and personal needs.

*Transfer Curriculum Goal(s): none***FBMT 2310 Environmental Interactions in Agriculture****Credits: 2***Prerequisite: none**Co-Requisite: none**Transfer Curriculum Goal(s): none***FBMT 2320 Family Wellness and Business Relationships****Credits: 2***Prerequisite: none**Co-Requisite: none**Transfer Curriculum Goal(s): none***FBMT 2325 Ethics in This Business of Agriculture****Credits: 2***Prerequisite: none**Co-Requisite: none**Transfer Curriculum Goal(s): none***FBMT 2330 Business Math Principles****Credits: 2***Prerequisite: none**Co-Requisite: none**Transfer Curriculum Goal(s): none***FBMT 2335 Labor Economics and Management****Credits: 2***Prerequisite: none**Co-Requisite: none**Transfer Curriculum Goal(s): none***GEOGRAPHY****GEOG 1400 Physical Geography****Credits: 3***Prerequisite: none**Co-Requisite: none*

In this course students will examine the earth as a set of subsystems working together to sustain life. Included are studies of the earth as a planet, weather patterns, climates and the resulting distribution of vegetation and soils, as well as plate tectonics, landforms, weathering, and glaciers.

*Transfer Curriculum Goal(s): 5,10***GEOG 1410 Maps and Places****Credits: 3***Prerequisite: none**Co-Requisite: none*

Basic geographic literacy is essential for the modern world citizen. We study the world's regions, countries, capitals, mountains and rivers so we know where places are. We also study and make many types of maps to see the ways they can be used, the kinds of information they can convey and how to create the best maps for given purposes.

*Transfer Curriculum Goal(s): 5,8***GEOG 1421 World Regional Geography****Credits: 3***Prerequisite: none**Co-Requisite: none*

World Geography is the study of the world's unique regions. Explore Europe, Russia and neighboring countries, Africa, Asia and Latin America through their natural landscapes and resources, cultures, economies and levels of development and their geopolitical importance. Globalization and the global importance of and connections between world regions are emphasized.

*Transfer Curriculum Goal(s): 5,8***GEOG 1459 Introduction to Geographic Information Systems****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course introduces the fundamentals and basic concepts of Geographic Information Systems (GIS) including basic cartographic principles, map projections and map scales coordinate systems, spatial (geographic) data structure, data sources, geo-referencing, metadata, global positioning system (GPS), and some remote sensing techniques using GIS tools, vendors, software, applications, and resources.

*Transfer Curriculum Goal(s): 2,5***GEOG 1459 Cultural Geography****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course examines cultural phenomena as they relate to the world's peoples and places. Cultural Geography studies world population and immigration, folk and popular cultures, the world's great religions, agriculture, political space, economic development and urban and industrial patterns. Connecting these phenomena to the landscapes they create is one of the key features of cultural geography.

*Transfer Curriculum Goal(s): 5,8***GEOG 1460 Honors Cultural Geography****Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

Cultural geography is the study of cultural phenomena and institutions and their interactions in space. The course will examine human population patterns and migration, religion, agriculture, politics, economic development and urban patterns. This honors course will feature an increased emphasis on the theoretical basis for cultural geography. This will be accomplished in part through the recognition of a variety of cultural groups and the unique landscapes they create. We will examine the ways in which those landscapes reflect and reinforce cultural identity. Students enrolled in this honors course will be required to read additional (topical) literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation. At least one extended field trip may be required.

*Transfer Curriculum Goal(s): 5,8***GEOG 1598 Topics in Geography****Credits: 1-2***Prerequisite: none**Co-Requisite: none*

This course will examine selected topics of interest in Geography. On demand.

*Transfer Curriculum Goal(s): none*

## **GEOG 1599 Topics in Geography**

**Credits: 1-2**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Geography. On demand.

*Transfer Curriculum Goal(s): none*

## **GLOBAL STUDIES**

### **GLST 1401 Introduction to Global Studies**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces students to the basic concepts, trends, perspectives and interconnections of global society. Through readings, discussions, videos, webcasts and other activities, students examine the interdependence of people around the world and global issues that affect these relationships. It will provide an overview of the history and theoretical approaches that have created a global society through topics such as global politics, human rights, the natural environment, population, disease, gender, information technology, war and peace. This is a required course for the Global Studies Emphasis.

*Transfer Curriculum Goal(s): 5,8*

### **GLST 1491 Global Studies Experience - International Travel**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

Students in this course will participate in a travel-study trip. Topics of study may include art, culture, natural history, geoscience, and geography of the country being visited. Classroom time prior to trip will involve basic lessons and preparation for travel. Post-trip classroom meetings will emphasize reflection of travel experience and learning.

*Transfer Curriculum Goal(s): 5,8*

### **GLST 2401 Global Studies Capstone**

**Credits: 1-3**

*Prerequisite: GLST 1401 and permission of instructor*

*Co-Requisite: none*

This course serves as the culminating academic experience for the Global Studies Certificate. Students expand, sharpen, and coordinate their comprehension by reviewing and discussing selected advanced readings in the field of Global Studies. Interdisciplinary perspectives and contemporary problems will be stressed. Students will be expected to draw upon and synthesize the knowledge they have acquired from their global experience. In addition, students in the capstone course will complete a research project using primary-source material. This research project will serve as the capstone experience project required of all students completing the Global Studies Certificate. These projects should address the principal factual data, historical events, problems, and ongoing challenges and concerns relevant to the subject selected. Students are also required to prepare and present a portfolio of their experience and research to CLC faculty, staff, students, friends, and family.

*Transfer Curriculum Goal(s): 8*

## **GRAPHIC DESIGN**

### **GDES 1105 Concepts of Design**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the principles and elements of design in

the media industry.

*Transfer Curriculum Goal(s): none*

### **GDES 1120 Publication Design**

**Credits: 3**

*Prerequisite: CART 1110, CART 1110, CART 1112, CART 1114*

*Co-Requisite: none*

Students will develop an understanding for the set-up and layout of multiple page publications. They will create designs from concept to completion for magazines, newsletters, books, and brochures by presenting information that is unified across the full range of pages. The proper use of appropriate software programs for publications will be developed. Industry production planning and process will be applied.

*Transfer Curriculum Goal(s): none*

### **GDES 1122 Graphic Design Production**

**Credits: 3**

*Prerequisite: CART 1110, CART 1112, CART 1114*

*Co-Requisite: none*

In this course students will learn advanced skills using Adobe Illustrator, Photoshop, and InDesign. Students will work with clients in producing real-world projects. Students will develop production skills for comprehensive solutions to various advertising media. Students will combine elements from all three software programs to create several real-world publications.

*Transfer Curriculum Goal(s): none*

### **GDES 1124 Corporate ID**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course explores the development of symbols, logos, and brand identity that reflects a product's or company's image. The student will explore and prepare multiple types of logo identities and apply them to multiple branding pieces.

*Transfer Curriculum Goal(s): none*

### **GDES 1126 Introduction to Adobe Creative Cloud**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basic levels of Adobe PhotoShop, Illustrator and InDesign software tools and techniques.

*Transfer Curriculum Goal(s): none*

### **GDES 1134 Typography**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces the process of design concepts with type. The student will learn how to research creative ideas using typography. They will use type to format different layouts of design projects.

*Transfer Curriculum Goal(s): none*

### **GDES 2100 Graphic Design I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course continues the process and purpose of graphic design. Students will develop an understanding of the creative process and how to generate ideas, problem solving methodologies and implementation of design principles and elements while designing across all medias. Students will

develop personal styles and approaches toward design and produce professional work in all forms of media.

*Transfer Curriculum Goal(s): none*

### **GDES 2102 Graphic Design II**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will continue to develop personal styles and approaches toward creating original designs. The goal will be to produce professional personal work for a consistent brand. Students will demonstrate an understanding of the business of graphic design and the careers that are available within the industry. Working together as a creative team and understanding giving and receiving constructive criticism will be applied. Students will create products to be displayed in their portfolios.

*Transfer Curriculum Goal(s): none*

### **GDES 2113 Art Direction**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides insight on working as an art director. Students will demonstrate advanced concept formulations as well as practice working under the direction of an art director to create requested requirements. These techniques will be applied to large graphic design projects where students will work as teams to create marketing campaigns and act as art directors. Students will also work directly with a photographer to art direct a photo shoot. Effective communication and learned skills will be demonstrated.

*Transfer Curriculum Goal(s): none*

### **GDES 2120 Packaging**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The purpose of this course is to provide an understanding of designing in three dimensions for a wide variety of products and preparing the design for different target markets. Students will also organize and plan a new product launch and create materials to aid the success of the launch.

*Transfer Curriculum Goal(s): none*

### **GDES 2124 Portfolio Production**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The purpose of this course is to assemble and demonstrate design abilities by producing a portfolio and a resume to showcase skills. The portfolio may take a variety of forms from two dimensional to digital. Students will be required to participate in professional portfolio reviews. Planning for the graphic design business and job hunting will also be discussed.

*Transfer Curriculum Goal(s): none*

### **GDES 2130 Media Production**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course demonstrates how to build motion graphics and animations for video productions, social media, and kiosks. Students will work in 3D space creating depth with lighting, shadows, and special effects with typography, photographs, graphics, and video footage.

*Transfer Curriculum Goal(s): none*

### **GDES 2132 Designs in Social Media**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basics of web site construction and maintenance. Using Adobe Muse software, students will design and implement web sites. Image manipulation, mobile devices, FTP software, and basic animation will also be covered.

*Transfer Curriculum Goal(s): none*

### **GDES 2350 Internship**

**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

### **GDES 2352 Shop Internship**

**Credits: 1-12**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

Students will work in a graphic design/print shop through Central Lakes College. They will work as a customer service representative, a designer, a job tracker, data entry specialist, billing specialist, a print broker and production specialist in the communication industry.

*Transfer Curriculum Goal(s): none*

### **GDES 2399 Special Topics**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Graphic Design. On demand.

*Transfer Curriculum Goal(s): none*

## **HEALTH**

### **HLTH 1501 Personal Health and Wellness**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to assist the student to establish a wholesome attitude toward the principles of healthful living and an interest in personal and community health. The students will evaluate health information correctly and work out solutions to immediate health problems to formulate a suitable program for daily living.

*Transfer Curriculum Goal(s): 11*

### **HLTH 1507 Drug Awareness**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Study of the use, misuse and abuse of drugs and how it affects our society. Topics reviewed are history, classification of drugs and their effects, first aid treatment and rehabilitation options and laws governing drug use.

*Transfer Curriculum Goal(s): 11*

### **HLTH 1510 Intro to Massage**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course presents basic Swedish technique for a full body massage and includes an overview of the history of massage.

*Transfer Curriculum Goal(s): 11*

#### **HLTH 1520 Principles of Nutrition**

**Credits: 3**

*Prerequisite: PREQ*

*Co-Requisite: none*

This course will emphasize the basic principles of nutrition including: nutrient categories and roles; dietary standards and guidelines; food selection criteria for an adequate, balanced diet; nutritional links to health; global nutrition concerns; and, food safety. Current issues in nutrition, such as the role of nutrition (and exercise) in disease prevention, and seeking reliable nutrition information will also be incorporated.

*Transfer Curriculum Goal(s): 11*

#### **HLTH 1531 Women's Health**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course approaches healthful living that is specifically related to women. Traditional health topics such as nutrition, exercise, drugs, medical care and environmental health will be covered. Additional topics that have a major impact on women will be covered such as birth control, menstruation, childbearing, menopause and aging, sexuality, body image and violence toward women.

*Transfer Curriculum Goal(s): 11*

#### **HLTH 1541 Human Sexuality**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

A study of human sexuality as it encompasses the physical, mental, emotional, social and spiritual aspects of one's health, relationships and lifestyle. Topics include sexual anatomy and physiology, relationships, gender issues, fertility management, STI's, sexual dysfunction, sexual coercion and commercial sex, as well as healthy sexual expression. Explanation of norms and beliefs will offer opportunities to explain personal values and choices.

*Transfer Curriculum Goal(s): 11*

#### **HLTH 2550 Internship in Health**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

#### **HLTH 2570 Topics in Health**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Health. On demand.

*Transfer Curriculum Goal(s): none*

## **HEALTHCARE ADMINISTRATIVE SPECIALIST**

#### **HINS 1120 Introduction to Health Information and Security**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce students to the Health Insurance Portability and Accountability Act (HIPAA), Health Information Technology for Economic and Clinical Health (HITECH) Act, and the American Recovery and Reinvestment Act (ARRA) and their requirements for health information privacy and security. The course will use real-world examples to explain the privacy and security rules and will enforce students' understanding of the compliance process.

*Transfer Curriculum Goal(s): none*

#### **HINS 1140 Healthcare Delivery Systems**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course describes the organization, financing, regulatory and delivery of the different healthcare services including the "continuum of care" concept. Items that will be studied include the healthcare delivery systems development, organization, performance, accreditation standards, and licensing/regulatory agencies. The course will study the historical organization, present and future of the U.S. Health System.

*Transfer Curriculum Goal(s): none*

#### **HINS 1142 Healthcare Information Systems**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will study the use of electronic health records systems, hybrid records, data exchanges, and the commonly available software tools used in healthcare. The course will provide students with an understanding of the electronic health record process, the role of health information technology, meaningful use, computer-assisted coding, health information data analysis, and health information exchange.

*Transfer Curriculum Goal(s): none*

#### **HINS 1144 Healthcare Pharmacotherapy**

**Credits: 2**

*Prerequisite: BIOL 1404 and HINS 1360*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

#### **HINS 1148 Introduction to Healthcare Technology**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to healthcare technologies and will explain the different healthcare applications and computer systems used in managing healthcare information. The course will give an introduction to administrative and clinical information systems, electronic health record, privacy and safety, and evolving and emerging technologies.

*Transfer Curriculum Goal(s): none*

#### **HINS 1150 Introduction to Diagnosis & Procedure Coding**

**Credits: 3**

*Prerequisite: BIOL 1404 or BIOL 1510*

*Co-Requisite: none*

This course will introduce students to the basic medical coding principles and conventions of ICD-10-CM/PCS, CPT, and HCPCS coding. Students will learn the application of coding principles using examples and hands-on exercises. The course will require students to apply their knowledge of medical terminology and human biology.

*Transfer Curriculum Goal(s): none*

#### **HINS 1163 Medical Office Procedures**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers administrative duties in the medical practice as well as how to bill payers and patients. The course introduces students to the revenue cycle of a medical office by focusing on scheduling, registration, and billing. Students will be introduced to and use a practice management program to complete medical office tasks. Students will be exposed to a clinic scenario to include patient interaction, third-party payer interaction, and provider interaction.

*Transfer Curriculum Goal(s): none*

#### **HINS 1165 Medical Records Management**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to procedures for managing medical records. The emphasis of this course is patient record formats and the contents of an inpatient, outpatient, and physician office medical record. The course will provide students with hands-on experience using a combination practice management and electronic health record system to manage the medical record content and to use the database to create reports to be used in administrative decision making.

*Transfer Curriculum Goal(s): none*

#### **HINS 1360 Medical Terminology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce the building of medical words including prefixes, suffixes, combining forms from Greek and Latin word parts, and the rules for connecting them to form medical terms. Definitions and spelling of word roots, prefixes, and suffixes emphasized. Emphasis is placed on spelling and defining medical words. A foundation is created for the continued development of medical vocabulary. Medical abbreviations are also presented for each medical specialty.

*Transfer Curriculum Goal(s): none*

#### **HINS 1380 Healthcare Independent Study**

**Credits: 1-6**

*Prerequisite: consent of instructor*

*Co-Requisite: none*

The intent of this course is to allow flexibility in providing learning experiences to meet the special needs and wants of the students. Students will meet with the instructor to set up their own course of study with the instructor's approval.

*Transfer Curriculum Goal(s): none*

#### **HINS 2140 Medical Coding II**

**Credits: 4**

*Prerequisite: HINS 1150 and BIOI 1404 or BIOL 2467 or BIOL 1510*

*Co-Requisite: none*

This course is a continuation of the introductory course and will reinforce the understanding and concepts of the coding rules for ICD-10 coding systems, CPT and HCPCS. The course will continue the explanation of coding concepts and use case scenarios to further challenge the students understanding of the coding systems. This will be authentic real-world coding, using coding scenarios and cases.

*Transfer Curriculum Goal(s): none*

#### **HINS 2142 Medical Coding III**

**Credits: 4**

*Prerequisite: HINS 1144, HINS 1150*

*Co-Requisite: none*

The focus of this class is to reinforce the coding rules for the CPT, ICD-10-CM, and ICD-10-PCS procedure coding systems and then apply the rules to code patient services. The course will use authentic coding using case scenarios. The course will introduce students to the auditing process for clinic services and inpatient and outpatient hospital services. The course will conclude with a certification exam prep/review for students interesting in pursuing a professional coding certification.

*Transfer Curriculum Goal(s): none*

#### **HINS 2144 Legal Aspects of Healthcare**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to breakdown the complexity of healthcare law and legal issues. The course will provide individuals with the fundamentals of laws, regulations and ethics surrounding the delivery of healthcare and the management and protection of health information.

*Transfer Curriculum Goal(s): none*

#### **HINS 2148 Healthcare Management and Organization**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide an introductory understanding of healthcare management and organization; its major functions, roles and responsibilities. The course will cover performance improvements, technologies, cost and revenue management, ethics, law, fraud and abuse, and skills for working in teams.

*Transfer Curriculum Goal(s): none*

#### **HINS 2172 Reimbursement Methodology**

**Credits: 3**

*Prerequisite: HINS 1150 and HINS 1163*

*Co-Requisite: none*

This course provides training as it relates to medical billing and health insurance. Topics covered will be statement preparation in the medical office, types of medical insurance companies, types of coverage, the claim process from beginning to end (includes generated the claim, clearing house, and getting reimbursed), and related ethical and legal issues. Topics such as rejection of claims and filing appeals will be discussed.

*Transfer Curriculum Goal(s): none*

#### **HINS 2190 Professional Practicum**

**Credits: 2**

*Prerequisite: permission of instructor*

*Co-Requisite: none*

Students will spend approximately 2 weeks/80 hours in a Patient Care Call Center, Scheduling Department and/or Preregistration Department within a local healthcare system. The practicum allows the student to experience the role in an introductory position. The collaborating healthcare system will determine the number of hours spent and student work schedule to be completed during the semester. This will challenge the students knowledge and skills to help prepare them for work in the industry. Student must be enrolled as a

Healthcare Administrative Specialist Certificate student.  
*Transfer Curriculum Goal(s): none*

### **HINS 2390 Healthcare Internship**

**Credits: 1-3**

*Prerequisite: consent of instructor*

*Co-Requisite: none*

Internship is an opportunity for students to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

## **HEAVY EQUIPMENT OPERATION AND MAINTENANCE**

### **HEOM 1101 Safety & First Aid**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the elements of construction safety needed for heavy equipment operators. Students will receive their American Red Cross First Aid/CPR/AED certification cards.

*Transfer Curriculum Goal(s): none*

### **HEOM 1102 Mechanical Theory**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover basic mechanical theories; e.g., how engines work, major external component identification, fuel, lubrication, intake, and cooling systems, power trains, basic hydraulic system and drive train fundamentals. Students will learn principles and various applications on construction equipment to expedite accurate maintenance and service. Service and maintenance manuals will be used as reference resources. This course is necessary for the student, in order to fulfill the technical requirement for the diploma option of the Heavy Equipment Operation and Maintenance Program.

*Transfer Curriculum Goal(s): none*

### **HEOM 1107 Tools, Fasteners & Shop Practices**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basics of how to identify and use hand tools, identification and use of power tools, fasteners (standard and metric), course and fine thread, hardness grades, fittings (types and threads), O rings and measuring tools. The student will learn general shop practices for completing assigned shop projects.

*Transfer Curriculum Goal(s): none*

### **HEOM 1108 Math/Estimating**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers construction math applicable to the excavation and grading industry. Earthwork volumes, slopes, conversions and geometric calculations are the primary focus. For entry-level operations.

*Transfer Curriculum Goal(s): none*

### **HEOM 1110 Preventative Maintenance**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to help students develop common

practices that will assist in making them better heavy equipment operators and employees. Students will learn maintenance techniques that minimize unscheduled repairs by investigating how and what to look for. This course helps students learn to identify how to maintain operating costs within a budget.

*Transfer Curriculum Goal(s): none*

### **HEOM 1151 HE Welding**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course covers basic fundamentals of MIG (wire) welding and ARC welding, oxyacetylene cutting and different applications for heavy equipment.

*Transfer Curriculum Goal(s): none*

### **HEOM 1165 CDL**

**Credits: 3**

*Prerequisite: Minnesota CDL Permit*

*Co-Requisite: none*

This course covers state standards for a commercial driver's license (CDL) road test.

*Transfer Curriculum Goal(s): none*

### **HEOM 1200 Introduction to Operations**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will give the students a brief introduction to various equipment types, their components and controls, pre-start inspections, basic equipment operation and equipment shutdowns. The focus will be on machine controls, component identification, basic operating technique and safety.

*Transfer Curriculum Goal(s): none*

### **HEOM 1211 Servicing I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will teach the student the importance and necessity of doing thorough and complete scheduled servicing of heavy equipment in accordance with manufacturer's recommendations. Course includes instructor guided servicing on equipment.

*Transfer Curriculum Goal(s): none*

### **HEOM 1212 Servicing II**

**Credits: 2**

*Prerequisite: HEOM 1211*

*Co-Requisite: none*

This course will teach the student the importance and necessity of doing thorough and complete scheduled services according to manufacturers' recommendations and is a continuance of HEOM 1211 Servicing I.

*Transfer Curriculum Goal(s): none*

### **HEOM 1261 General Lab**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: none*

Students will work in a shop setting on a variety of equipment repair projects. Type of projects will depend on machine availability.

*Transfer Curriculum Goal(s): none*

### **HEOM 1365 Class A CDL Permit**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Material to be covered will be the three sections required for the CDL permit: general knowledge, air brakes and combination tractor/trailer as per the Minnesota Commercial Driver's Manual put out by MNDOT.

*Transfer Curriculum Goal(s): none*

### **HEOM 2102 Survey/Blueprints**

**Credits: 5**

*Prerequisite: HEOM 1108*

*Co-Requisite: none*

This course covers the basic skills needed to identify and apply surveying techniques (mainly elevations and cuts and fills) required for the excavation and grading industry. Blueprint reading as it applies to excavating and grading will be taught to an application level.

*Transfer Curriculum Goal(s): none*

### **HEOM 2103 Soils & Compaction**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers common soils used in the construction industry. Soil makeup and characteristics; how soil is compacted, types of equipment and methods used. How compaction equipment produces compactive effort. How soil moisture, density and gradation is tested.

*Transfer Curriculum Goal(s): none*

### **HEOM 2110 Backhoe Theory**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: HEOM 2141, HEOM 2142*

This course covers the basic construction and preliminary operation instructions of excavators and tractor-loader-backhoe.

*Transfer Curriculum Goal(s): none*

### **HEOM 2111 Loader Theory**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: HEOM 2140*

This course will provide the student the opportunity to learn the values of a high production layout, pit operations, truck operations and loader components.

*Transfer Curriculum Goal(s): none*

### **HEOM 2134 Operations Theory**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: HEOM 2136, HEOM 2138*

This course covers machine types, pre-trip maintenance and common operator mistakes. Lecture, visual aids and hands-on training are used in order to instruct student.

*Transfer Curriculum Goal(s): none*

### **HEOM 2135 Construction Theory**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: HEOM 2136, HEOM 2138*

This course will give the student a brief overview of correct machine application and use based on current industry standards. Topics addressed but not limited to include: machine application and use, construction best practices, site preparation and road building, and construction site effective communications.

*Transfer Curriculum Goal(s): none*

### **HEOM 2136 Grading Lab I**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: HEOM 2134, HEOM 2135*

This course is the hands-on part of crawler dozers, motor graders and scrapers. Safe operations is taught and stressed along with the basic methods of operating these machines. Practice is emphasized with simple projects built individually under the guidance of the instructor. Machine control and care are the goal.

*Transfer Curriculum Goal(s): none*

### **HEOM 2138 Grading Lab II**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: HEOM 2134, HEOM 2135*

This course is the next level of operation for crawler dozers, motor graders and scrapers. More complex projects are attempted with production and multiple machines on projects. Industry standards for quality and production are goals.

*Transfer Curriculum Goal(s): none*

### **HEOM 2140 Excavation Lab I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: HEOM 2111*

This course covers basic construction and operation of bucket type equipment. Various operating methods, techniques and procedures will be covered.

*Transfer Curriculum Goal(s): none*

### **HEOM 2141 Excavation Lab II**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: HEOM 2110*

This course covers the basic construction and operation of bucket type equipment. Various operating methods, techniques and procedures will be covered. Students will further their skills on bucket type equipment and go into more detail on techniques used on the job.

*Transfer Curriculum Goal(s): none*

### **HEOM 2142 Excavation Lab III**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: HEOM 2110*

This course covers a more advanced level of operation for bucket type equipment. Various operating methods, techniques and procedures will be covered. Students will further develop their skills on bucket type equipment and go into more detail on techniques used on the job. The primary focus at this level is operating in a safe and productive manner and constructing project to within industry standard spec tolerance.

*Transfer Curriculum Goal(s): none*

### **HEOM 2150 Competent Person**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The primary focus of this course is the requirements found on O.S.H.A.'s subpart "P" Excavations. Additional topics covered will be those found in O.S.H.A. standards that pertain to the construction industry. This course allows students participating in the course to receive their O.S.H.A. 10 hour construction safety card.

*Transfer Curriculum Goal(s): none*

### **HEOM 2350 Operator Internship**

**Credits: 1-16**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

### **HEOM 2370 Special Topics**

**Credits: 1-3**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course will examine selected topics of interest in Heavy Equipment. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **HISTORY**

### **HIST 1412 World History I, From the Beginning to 1500**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine the development of world civilizations from pre history to 1500, and will compare the religion, politics, economy and culture of various world civilizations. Examples will be drawn from Africa, Europe, Asia and the Americas.

*Transfer Curriculum Goal(s): 5,8*

### **HIST 1413 World History II, 1500 to Present**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will explore the major developments in world history from 1500 to the present. Topics will include the development of major culture areas and cultural groups that existed in 1500, the influence of European expansion and colonialism, democratic revolutions, industrialization, movements for national liberation, and the rise of the global economy.

*Transfer Curriculum Goal(s): 5,8*

### **HIST 1472 U.S. History to 1865**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will acquaint students with the basic chronological narrative and themes of America's past from native North America through the Civil War. Social, political, economic and cultural developments will be covered. A multi-cultural perspective will be incorporated into the course, taking into account those Americans denied access to positions of political and economic power in the past. Analytical skills focusing on reading, writing and use of primary documents will be emphasized.

*Transfer Curriculum Goal(s): 5,7*

### **HIST 1473 U.S. History Since 1865**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will survey the history of the American people since Reconstruction. Social, political, economic and cultural developments will be covered. A multi-cultural perspective will be incorporated into the course, taking into account those Americans denied access to positions of political and economic power in the past. Analytical skills focusing on reading, writing and use of primary documents will be

emphasized.

*Transfer Curriculum Goal(s): 5,7*

### **HIST 1475 Honors U.S. History 1865 to Present**

**Credits: 3**

*Prerequisite: AAccuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This course will survey the history of the American people since 1865. Social, political, economic and cultural developments will be covered. A multi-cultural perspective will be incorporated into the course, taking into account those Americans denied access to positions of political and economic power in the past. Analytical skills focusing on reading, writing and use of primary documents will be emphasized. This honors course will feature an expanded reading load, seminar-style class discussions, and in depth writing assignments.

*Transfer Curriculum Goal(s): 5,7*

### **HIST 2404 Minnesota History**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will survey the history of people who have inhabited the land area we know today as Minnesota. Topics will include: Native North Americans, European exploration and the fur trade, early American settlement, Indian and white cultural interactions, post Civil War settlement, the growth of agriculture and industry, protest politics in the 19th and 20th centuries, and an examination of the "People of Minnesota". Minnesota will be a case study in which we will examine many of the historical processes which have shaped the Midwest and indeed much of the United States.

*Transfer Curriculum Goal(s): 5*

### **HIST 2411 American Indian History**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of pre-contact Native North America to the present. It will spend time examining the world of Indian peoples before the arrival of Columbus, the invasions of America by Europeans, the fur trade and interactions of Indians and whites during the colonial period, federal Indian policy in the early national period, conflict on the plains, efforts to "Americanize" the American Indian, twentieth century issues including urbanization and relations with the federal government.

*Transfer Curriculum Goal(s): 5,7*

### **HIST 2420 History of Women in the U.S.**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will explore the history of women in the United States from pre-European contact to the present. Our topics will be as diverse as are women themselves. We will explore women's changing roles in politics, the law, the labor force, the family and popular culture. The goal of the course is to acquire not just a richer understanding of women's experiences, but also an enhanced understanding of gender and a radically revised historical perspective. Because women differ from each other nearly as much as they differ from men, we will focus throughout the course on the relationships between groups of women divided by class, by race, and by ethnicity.

*Transfer Curriculum Goal(s): 5,7*

### **HIST 2570 Topics in History**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in History. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **HORTICULTURE**

### **HORT 1103 Ornamental Trees and Shrubs**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course deals with the identification of trees, shrubs, and vines grown in Minnesota. There will be an emphasis on their culture, care, use and classification.

*Transfer Curriculum Goal(s): none*

### **HORT 1104 Plant Science**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the biological considerations for growing and caring of plants. This class will cover plant characteristics, classification, and biology; soil considerations, components, uses, and characteristics; propagation types and strategies of woody and herbaceous plants.

*Transfer Curriculum Goal(s): none*

### **HORT 1106 Applied Plant Science Lab**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the horticulture industry and its practices. Lab time will be spent touring parts of the industry, interacting with guest speakers from the industry, and examining plants, their parts, and their needs.

*Transfer Curriculum Goal(s): none*

### **HORT 1108 Fundamentals of Floral Design**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers floral design principles required to create popular traditional flower arrangements. Mechanics, terms, and basic floral design techniques will be covered. Students will be actively involved in creating floral designs using the principles presented in class. This course also covers the identification, marketable units, handling requirements, and other characteristics of major fresh flowers and greens used in the floral industry.

*Transfer Curriculum Goal(s): none*

### **HORT 1110 Advanced Floral Design**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the theory and practice of floral designs requiring advanced techniques with emphasis on contemporary design styles. Students will use their lab time to create a variety of arrangements using this knowledge.

*Transfer Curriculum Goal(s): none*

### **HORT 1113 Annuals and Perennials**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the herbaceous and perennial flowering plants grown in the upper Midwest. Particular attention is placed upon identification of the plant materials and the classification of these plants according to cultural requirements and use characteristics. Students will identify the plants by live samples, pressed samples, and photos. A perennial garden and annual garden will be designed.

*Transfer Curriculum Goal(s): none*

### **HORT 1118 Indoor Flowering & Foliage Plants**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers identification, characteristics, cultural requirements, and use of potted flowering plants, and indoor foliage plants. The use and characteristics of materials used for permanent plants and containers will also be discussed. Particular attention is placed upon identification and classification of these materials according to cultural requirements and use.

*Transfer Curriculum Goal(s): none*

### **HORT 1150 Turf Management**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the proper establishment and maintenance practices for turfgrasses in the Upper Midwest. Topics include identification of turf, seeding and sodding practices, mowing techniques and equipment, fertilizing, aerating, and proper maintenance of turf.

*Transfer Curriculum Goal(s): none*

### **HORT 1180 Sustainable Landscaping**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the principles of sustainable living through our backyards. Students will be exposed to landscaping for wildlife, and shoreline protection from a habitat perspective. They will study the creation and management components of living roofs and walls. Sustainable landscape practices including, but not limited to wind breaks, rain gardens, building budgets and edible landscaping and square foot gardening will also be covered. Students will approach water quality from an environmental prospective down through a human recreational standpoint.

*Transfer Curriculum Goal(s): none*

### **HORT 1196 Sustainable Greenhouse Management**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course applies sustainable management and production practices to the controlled environment of a greenhouse. Crops covered include, but are not limited to bedding plants and other floral and food crops with peak production in the winter months. Topics include crop, root media, nutrition, and harvest management decisions as well as monitoring crop development stages. Financial and crop management strategies will be analyzed and put into practice. Greenhouse design, material and equipment selection, and construction will also be a major component of this class.

*Transfer Curriculum Goal(s): none*

### **HORT 1300 Fruits & Vegetables**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers those tree, bush, and vine fruit crops which may be grown in Minnesota. Selection, varieties, and cultural practices involved in their growing will be emphasized. The more common vegetables and herbs which are grown in Minnesota are also discussed, with emphasis on cultural methods and current varieties now being grown.

*Transfer Curriculum Goal(s): none*

#### **HORT 1310 Special Project**

**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course is designed so the student can put into practical use the various skills and knowledge gained in other course work. The course is independent study with no formal class hours.

*Transfer Curriculum Goal(s): none*

#### **HORT 1345 Internship**

**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course is designed to provide students with an opportunity to work on a full-time basis in some aspect of horticulture.

*Transfer Curriculum Goal(s): none*

#### **HORT 1398 Topics in Horticulture**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

Students will be exposed to many different topics in Horticulture. Some topics will be explored in more depth than they were touched on in other Horticulture classes, some topics are not covered in other Horticulture classes. Most topics will be covered by guest speakers.

*Transfer Curriculum Goal(s): none*

#### **HORT 1399 Gardens of the World**

**Credits: 4**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course is a travel experience to selected countries for the purpose of studying the plants, gardens, and culture of those countries. The goal of this experience is to better understand other parts of the world and their influence on the horticulture industry in the United States. Because the horticulture industry is influenced by global production, technology and design trends, this is an opportunity to experience these influences first hand.

*Transfer Curriculum Goal(s): none*

#### **HORT 2112 Sustainable Greenhouse Production**

**Credits: 5**

*Prerequisite: none*

*Co-Requisite: none*

This course prepares students to produce both ornamental and food crops in a controlled environment greenhouse. Special emphasis is placed on management decisions based on economic, environmental, and social sustainability. Traditional greenhouse growing techniques plus advanced technology methods such as hydroponics and aquaponics will be studied and practiced. Topics include growing system requirements, monitoring crop growth and development, variety selection, cultural requirements, nutrient management, and other pertinent information for growing and selling a high quality crop.

*Transfer Curriculum Goal(s): none*

#### **HORT 2116 Integrated Pest Management**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of insects and diseases that have an important economic impact in the fields of horticulture, floriculture, and forestry. It provides an introduction to the theory and practice of solving problems that affect many different types of crops. Management methods include detection, scouting procedures, economic thresholds, and cultural and biological control. Emphasis is also placed on assessing insects and diseases that are common to our crops, backyards, and greenhouses.

*Transfer Curriculum Goal(s): none*

#### **HORT 2125 Special Occasion/Wedding Design**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is provided for the experienced designer wishing to learn advanced techniques of creating floral designs for weddings, celebrations, and other special occasions. Students will create a variety of arrangements using these techniques.

*Transfer Curriculum Goal(s): none*

#### **HORT 2140 Arboriculture**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course looks at the various aspects of woody vegetation in urban areas. Focus is on the biology and physiology of woody vegetation and the various aspects of field work: pruning, planting, fertilizing, mulching, health evaluation, inventorying and mapping of urban trees.

*Transfer Curriculum Goal(s): none*

#### **HORT 2150 Retaining Wall & Fence Construction**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course presents construction techniques for a variety of retaining walls using several different construction materials. Smaller construction projects such as benches, arbors, and containers will be covered. Students will also learn basic garden pool construction procedures, as well as installation procedures. Practical hands-on training will be provided as much as time and weather permit.

*Transfer Curriculum Goal(s): none*

#### **HORT 2155 Deck, Patio & Pond Construction**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers techniques for designing, estimating costs, and building patios and walks, wooden decks, and water gardens. Proper planting, edging, mulching and other installation practices will also be covered. As much as time and weather permits, students will practice actual building and landscape installation techniques.

*Transfer Curriculum Goal(s): none*

#### **HORT 2165 Landscape Design**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

Students will learn to: 1) carefully analyze and integrate client and site information into the landscape design; 2) apply graphic design skills; and 3) develop the ability to assess the visual feel of the design. These skills are developed through the frequent application of graphic and design concepts to landscape design projects. This course is the first of two concentrating on landscape design and is focused on the application of design principles to basic residential and commercial landscape design projects.

*Transfer Curriculum Goal(s): none*

#### **HORT 2170 Advanced Landscape Design**

**Credits: 4**

*Prerequisite: HORT 2165*

*Co-Requisite: none*

This course is the second in a series of landscape design laboratory experiences and is focused in advanced design applications for commercial and residential landscape design. The design projects in this course are at a higher level of difficulty and require greater analysis and integration of skills than Landscape Design I.

*Transfer Curriculum Goal(s): none*

#### **HORT 2180 Computer Assisted Landscape Design**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will present information on the use of site Designer LANDCADD, Dynascape, and other landscape design software programs used for creating landscape drawings, pricing structures, and business management decisions. Topics include layout and design, estimating projects, and complete presentation packages.

*Transfer Curriculum Goal(s): none*

#### **HORT 2310 Advanced Special Project**

**Credits: 1-6**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed so the student can put into practical use the various skills and knowledge gained in other course work. The course is independent study.

*Transfer Curriculum Goal(s): none*

## **MACHINE TOOL TECHNOLOGIES**

#### **MTTS 1110 Principles of Machine Operations I**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Principles of Machine Operations I will expose students to multiple entry level facets of machine tool industries. Students will learn the background of machining processes, proper materials selection, machine operations and applications. Students will apply measuring technologies and analysis of product finishes. Creating order of operations in machining processes will be emphasized in this course.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1111 Principles of Machine Operations II**

**Credits: 2**

*Prerequisite: MTTS 1110*

*Co-Requisite: none*

In this course students will continue development of skills from MTTS 1110. Included will be strong emphasis on project scheduling and scheduling of production processes as done in industry. Standards for performance and production will be emphasized. Concepts of manufacturing efficiency and quality will be introduced in this course.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1120 Machine Operations I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

In this course students be introduced to lab operation of the machines used in the industry. Cutting tools will be applied to various materials through machining operations. Students will begin to apply quality analysis skills to products they create. Students will be introduced to milling, grinding, and turning processes throughout the course. In this course, students will also be introduced to industry standard safety practices.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1121 Machine Operations II**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will build on their experiences in MTTS 1120. More complex tooling applications, finishes, and product analysis will be introduced in this course. Students will begin application of directions found in industry prints and begin development of project plan and multi-component projects. Development of safety and maintenance programs will be incorporated in this course.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1122 Machine Operations III**

**Credits: 3**

*Prerequisite: MTTS 1120, MTTS 1121*

*Co-Requisite: none*

In this course, students will experience growth in project planning and complex operations. Tool performance and tool holding will be emphasized as project complexity grows. Machine and shop maintenance operations will be emphasized through safety plan development and implementation. Quality assessment of produced parts will incorporate coordinate measuring systems.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1124 Introduction to Engineering Graphics**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will explore the application of solid modeling to create computer renderings up to three-dimensional objects. Students will analyze two-dimensional planes and create 3D computer models. Multiple layered projects will be created with sub-assemblies. Students will generate computer animations of drawing components.

*Transfer Curriculum Goal(s): none*

#### **MTTS 1130 Print Reading**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will understand the language of industry prints. Beginning with basic symbols and lines, students will build their understanding to include multiple view prints. Dimensioning systems and conversions will be emphasized. Students will also explore multiple projection angles in the print interpretation.

*Transfer Curriculum Goal(s): none*



**MTTS 1131 Print Applications****Credits: 4***Prerequisite: MTTS 1121, MTTS 1130**Co-Requisite: none*

Building on the knowledge from MTTS 1130, students will expand their critical analysis of prints. This will include visualizing the end product, planning needed drawings to support the end product, and validating production quality.

*Transfer Curriculum Goal(s): none***MTTS 1134 CNC Operations****Credits: 3***Prerequisite: MTTS 1111**Co-Requisite: none*

In this course, students will begin development of CNC programs. Students will learn G- and M- codes, create programs, test and modify programs, and translate manual knowledge to CNC operations. Students will be introduced to the foundations of complete project management from design to production.

*Transfer Curriculum Goal(s): none***MTTS 1135 CNC Programming and Process Planning****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course introduces students to the coding aspects of the CNC operation. Students develop code to translate manual processes to CNC. Students will be introduced to varied methods to develop programs. Project management skills will continue to be developed. Application of various CNC machines will be clarified in this course.

*Transfer Curriculum Goal(s): none***MTTS 1140 CAD/CAM I****Credits: 2***Prerequisite: none**Co-Requisite: none*

Computer-aided manufacturing concepts are introduced through this course. Students will use computer programs to produce drawings, apply coordinates, build tool paths, and create transition documents for use in machining lab. Simulations will be demonstrated to validate accuracy of programs. Students will learn editing functions to increase efficiency or correct programs. Application of safety concepts will be emphasized.

*Transfer Curriculum Goal(s): none***MTTS 1264 Introduction to Machining Processes****Credits: 2***Prerequisite: none**Co-Requisite: none*

This course will introduce students to the machining processes. It will focus on the theory and process of squaring material, material removal, hole making, thread forms, fasteners, measurements, and abrasives used in manufacturing.

*Transfer Curriculum Goal(s): none***MTTS 2110 Geometric Dimensioning and Tolerancing****Credits: 1***Prerequisite: none**Co-Requisite: none*

The course designed to enable students to interpret ANSI standards. Students will learn the symbols, rules, and geometric controls shown on today's prints. Students will be given prints and exercises to enhance their skills in print reading and apply the principles of geometric dimensioning

and tolerancing.

*Transfer Curriculum Goal(s): none***MTTS 2112 Metallurgy****Credits: 1***Prerequisite: none**Co-Requisite: none*

In this course, students will gain deep understanding of the material types and applications used in the machining industry. Testing of materials and finished products will be emphasized. Students will analyze metal parts produced through various industry processes.

*Transfer Curriculum Goal(s): none***MTTS 2116 Introduction to Electric Discharge Machining****Credits: 2***Prerequisite: MTTS 1135**Co-Requisite: none*

Students will be introduced to the complex operations of electric discharge machining (EDM). Students will experience both wire and sink EDM operations and applications of these technologies for efficient production of highly technical processes. Electrical discharge machining, sometimes colloquially also referred to as spark machining, spark eroding, burning, die sinking, wire burning or wire erosion, is a manufacturing process whereby a desired shape is obtained using electrical discharges (sparks).

*Transfer Curriculum Goal(s): none***MTTS 2118 Jigs and Fixtures****Credits: 1***Prerequisite: MTTS 1122**Co-Requisite: none*

Complex machining processes require creativity to safely resolve industry challenges. In this course students will be faced with intricate industry situations to safely manufacture parts. The introduction of multiple jigs and fixtures and their potential applications will be discussed and practiced. The safe application of these tools will be emphasized.

*Transfer Curriculum Goal(s): none***MTTS 2130 CNC Milling and Turning****Credits: 4***Prerequisite: MTTS 1134, MTTS 1135**Co-Requisite: none*

Students will begin application of knowledge learned to integrate multiple computerized processes. Applying industry programming codes and CAM software, students will begin run of production of parts, build efficiency on machine setup and operation, and perform quality assessments of completed parts. Implementation of safety programs related to CNC operations will be emphasized.

*Transfer Curriculum Goal(s): none***MTTS 2134 CNC Operations Theory****Credits: 2***Prerequisite: MTTS 1130**Co-Requisite: none*

Students will analyze production of complex parts and apply appropriate geometry to constructing programs. Multiple axis machining and other complex operations will be introduced to the projects produced in this course. Principles of automation will be incorporated in work planning.

*Transfer Curriculum Goal(s): none***MTTS 2140 CAD/CAM II****Credits: 2***Prerequisite: MTTS 1140**Co-Requisite: none*

Building on skills from MTTS 1140, students will introduce multi-dimensional, multi- offset projects to the CAM studio. Programming will include test simulations of complex designs. Advanced jigs and fixtures will be required to manage safe production. Students will be challenged to maximize efficiency and productivity in their program designs.

*Transfer Curriculum Goal(s): none***MTTS 2155 Capstone Project****Credits: 1-6***Prerequisite: instructor's permission**Co-Requisite: none*

This course will examine selected topics and projects of interest in Machine Tool Technologies. Offered on demand.

*Transfer Curriculum Goal(s): none***MTTS 2190 Internship****Credits: 1-6***Prerequisite: instructor's permission**Co-Requisite: none*

Internship is an opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none***MANAGEMENT/MARKETING****MGMT 1011 Management Principles****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course offers a practical look at the management environment, business organizational structure, and the manager's role as planner, organizer, and leader. Topics include a review of the management environment, planning and problem solving tools, staffing, and teamwork.

*Transfer Curriculum Goal(s): none***MGMT 1101 Entrepreneurship****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course examines the risks and rewards of entrepreneurship with a study of the challenges and opportunities of managing a small business for profit.

*Transfer Curriculum Goal(s): none***MGMT 1108 Quality and Performance Management****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course is a study of continuous improvement in the quality, productivity, and performance of products and services. A systems approach combining management philosophy, teambuilding, and statistical tools are used to control and improve business processes.

*Transfer Curriculum Goal(s): none***MGMT 1110 Frontline Leadership****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course is an examination of people as the most valuable asset in any business with an emphasis on understanding the leadership role of management and developing core interpersonal skills to deal effectively with employees on the job.

*Transfer Curriculum Goal(s): none***MGMT 1114 Human Resource Management****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course studies the manager's role in working effectively with the human resources of the organization. Emphasis areas include personnel planning, job analysis and design, employee recruitment, selection, training, and employee/ management relations.

*Transfer Curriculum Goal(s): none***MGMT 1126 Financial Management****Credits: 3***Prerequisite: none**Co-Requisite: none*

This course is the entrepreneur's real world hands-on application of accounting fundamentals simulating the financial management of small service and merchandise businesses. Peachtree and QuickBooks Pro accounting software will be used. While not required, it is recommended that you complete BUSN 1102 before enrolling in this course.

*Transfer Curriculum Goal(s): none***MGMT 1150 Entrepreneurship Capstone****Credits: 1***Prerequisite: BUSN 1102, BUSN 1166, MGMT 1101, and MKTG 1011**Co-Requisite: none*

This course centers on the business planning process-opportunity recognition and business concept development. The Business Plan for a new/existing venture includes four major sections. Management and Organization Plan, Product/Service Plan, Marketing Plan, and Financial Plan. Students gain the knowledge, skills, concepts, and strategies relevant for start-up and early-stage entrepreneurs. The practical, hands-on approach encourages students to immerse themselves in the vision, research, and planning aspects of a new/existing venture. Students collaborate with Small Business Development consultants to produce a business plan.

*Transfer Curriculum Goal(s): none***MGMT 1312 Business Management Internship****Credits: 1-3***Prerequisite: instructor's consent**Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none***MARINE AND SMALL ENGINE TECHNOLOGY****MASE 1101 Basic Engines****Credits: 3***Prerequisite: none**Co-Requisite: MASE 1103*

This course is designed to provide the basic understanding of the theory and operation of two-stroke and four-stroke engines.

*Transfer Curriculum Goal(s): none***MASE 1103 Basic Engines Lab****Credits: 4***Prerequisite: none**Co-Requisite: MASE 1101*

Students will disassemble, test, repair, reassemble, and operate a variety of small engines. Must be taken concurrently

with MASE 1101 Basic Engines.  
*Transfer Curriculum Goal(s): none*

#### **MASE 1106 Introduction to Electronics**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

The focus of this course is a basic understanding of electricity and electronics using electrical instruments and electronic testing.

*Transfer Curriculum Goal(s): none*

#### **MASE 1109 Trade & Industry Math**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers an introduction to applied mathematics. Work will be done in percents, decimals and fractions. Lines & angles, two- and three-dimensional shapes, ratio and proportion. An introduction to statistics will also be addressed.

*Transfer Curriculum Goal(s): none*

#### **MASE 1120 Lawn & Garden**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

This course covers chain saws, weed trimmers, and basic drive systems used in lawn and garden equipment. Students will perform maintenance procedures, tune up, and chain saw sharpening.

*Transfer Curriculum Goal(s): none*

#### **MASE 1130 Marine Outboard I**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: MASE 1132 and MASE 1134*

This course is an introduction to marine power and the theory and operation of an outboard powerhead.

*Transfer Curriculum Goal(s): none*

#### **MASE 1132 Marine Outboard II**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: MASE 1130 and MASE 1134*

This course covers advanced theory and repair of the electrical systems, carburetion, and tune-up of the outboard engine.

*Transfer Curriculum Goal(s): none*

#### **MASE 1134 Marine Lower Unit**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: MASE 1130 and MASE 1132*

This course covers the design and operation of lower units on a wide variety of marine engines. Propellers, rigging, and boat performance are also covered in this course.

*Transfer Curriculum Goal(s): none*

#### **MASE 1136 Industry Certifications I**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

This required course allows students the opportunity to earn manufacturer industry certifications in the marine and small engine field. These certificates are required in certain sectors of the industry.

*Transfer Curriculum Goal(s): none*

#### **MASE 1140 Snowmobile Systems & Lab**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is designed to provide the student with a growing knowledge of today's modern snowmobile. The emphasis of the course is carburetion, clutches and drive systems, and suspension.

*Transfer Curriculum Goal(s): none*

#### **MASE 1370 Open Lab I**

**Credits: 1-4**  
*Prerequisite: none*  
*Co-Requisite: none*

This elective course allows students the opportunity to work on individualized projects for college credit. With a plan in place between instructor and student, supervised lab experience is gained in this class.

*Transfer Curriculum Goal(s): none*

#### **MASE 1371 Open Lab II**

**Credits: 1-4**  
*Prerequisite: none*  
*Co-Requisite: none*

This elective course allows students the opportunity to work on individualized projects for college credit. With a plan in place between instructor and student, supervised lab experience is gained in this class.

*Transfer Curriculum Goal(s): none*

#### **MASE 2133 Advance Marine**

**Credits: 3**  
*Prerequisite: MASE 1130, MASE 1132 and MASE 1134*  
*Co-Requisite: none*

This course introduces the student to marine stern drives, inboard engines, and controls. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2134 Advance Marine & Personal Water**

**Credits: 3**  
*Prerequisite: MASE 1130, MASE 1132 and MASE 1134*  
*Co-Requisite: none*

This course covers advanced systems in marine such as oil injection, power trim and tilt, steering and remote controls along with an introduction to personal watercraft vehicles.

For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2135 Machine Shop**

**Credits: 2**  
*Prerequisite: MASE 1130, MASE 1132*  
*Co-Requisite: none*

This course introduces the student to many of the specialized repairs that are done to MASE engines, such as: cylinder boring, honing, deglazing, and crankshaft repair. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2136 Industry Certifications II**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

This required course allows students the opportunity to earn manufacturer industry certifications in the marine and small engine field. These certifications are required in parts of the industry.

*Transfer Curriculum Goal(s): none*

#### **MASE 2143 Diagnostic Trouble Shooting**

**Credits: 3**  
*Prerequisite: for second year MASE students only*  
*Co-Requisite: none*

This course covers diagnostic troubleshooting and repair of fuel, electrical, suspension and drive systems. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2162 ATV Motorcycle Systems I**

**Credits: 4**  
*Prerequisite: for second year MASE students only*  
*Co-Requisite: none*

This course introduces the student to the ATV and small motorcycle engine, clutch, and transmission. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2164 ATV Motorcycle Systems II**

**Credits: 4**  
*Prerequisite: for second year MASE students only*  
*Co-Requisite: none*

This course covers final drives, suspension, tire repair, balancing, and also mechanical and hydraulic brakes that are used on ATV/motorcycles. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2169 MASE Tune Up**

**Credits: 3**  
*Prerequisite: MASE 1130, MASE 1132 and MASE 1134*  
*Co-Requisite: none*

This course allows the student to perform tune-up procedures on MASE equipment that has already been covered. For second-year Marine & Small Engine students only.

*Transfer Curriculum Goal(s): none*

#### **MASE 2300 Special Project**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This elective course allows students the opportunity to work on individualized projects for college credit.

*Transfer Curriculum Goal(s): none*

#### **MASE 2350 Internship**

**Credits: 1-8**  
*Prerequisite: Instructor's Permission*  
*Co-Requisite: none*

This internship provides students with on-the-job experience in the student's career major. A competency-based training plan will be developed for each student in collaboration with the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation.

*Transfer Curriculum Goal(s): none*

#### **MASE 2370 Open Lab III**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This elective course allows students the opportunity to work on individualized projects for college credit. With a plan in place between instructor and student, supervised lab experi-

ence is gained in this class.

*Transfer Curriculum Goal(s): none*

#### **MASE 2371 Open Lab IV**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This elective course allows students the opportunity to work on individualized projects for college credit. With a plan in place between instructor and student, supervised lab experience is gained in this class.

*Transfer Curriculum Goal(s): none*

## **MATH**

### **MATH 0790 Beginning Algebra**

**Credits: 3**  
*Prerequisite: Accuplacer Arithmetic score of 20 or greater*  
*Co-Requisite: none*

Review of the mathematical skills needed for the study of algebra as well as an introduction to algebra. Topics include the arithmetic of integers, fractions, and percents; applications of these arithmetic skills to problems involving measurement; and ratios, proportions, and percents. The introduction to algebra consists of operations on signed numbers, algebraic expressions, solving linear equations and inequalities, an introduction to graphing, and an introduction to polynomials.

This is a pre-college level course that is not eligible for Federal Financial Aid.

*Transfer Curriculum Goal(s): none*

### **MATH 0800 Fundamentals of Math**

**Credits: 3**  
*Prerequisite: Accuplacer Arithmetic score of 40 or greater*  
*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

### **MATH 0810 Math Pathways**

**Credits: 3**  
*Prerequisite: Accuplacer Arithmetic score of 65 or greater, or Accuplacer Elementary Algebra score of 52 or greater, or MATH 0790 or MATH 0800*  
*Co-Requisite: none*

This course will review several pre-algebra topics and introduce topics from elementary algebra, set theory, counting, probability, and basic statistics. Use of the TI-84 Plus graphing calculator will be emphasized in all topic areas. Successful completion of this course will prepare the student for MATH 1441 Concepts of Math and MATH 1460 Introduction to Statistics.

*Transfer Curriculum Goal(s): none*

### **MATH 0820 Intermediate Algebra**

**Credits: 4**  
*Prerequisite: Accuplacer Arithmetic score of 80 or greater, Accuplacer Elementary Algebra score of 52 or greater, or MATH 0790 or MATH 0800*  
*Co-Requisite: none*

This course will review many introductory algebra topics as well as introduce more advanced topics in algebra. Topics taught in this course include: linear equations and inequalities, graphing equations and inequalities, writing equations of lines, functions, systems of equations, exponents, polynomials, factoring, rational expressions and equations, complex numbers, radicals, and quadratic functions. Additional topics may also be covered.

*Transfer Curriculum Goal(s): none*

**MATH 1441 Concepts in Mathematics****Credits: 3**

*Prerequisite:* Accuplacer College Level Math score of 50 or greater, or MATH 0810, or MATH 0820, or MATH 1520

*Co-Requisite:* none

This is a college level math course that demands a fundamental algebra background and familiarity with a calculator. Topics include at least four of the following: geometry, trigonometry, graphs, logic, probability, statistics, finance, numeration systems, and set theory.

*Transfer Curriculum Goal(s): 4*

**MATH 1460 Intro to Statistics****Credits: 4**

*Prerequisite:* Accuplacer College Level Math score of 50 or greater, or MATH 0810, or MATH 0820, or MATH 1520

*Co-Requisite:* none

This course covers descriptive statistics, sampling, probability, probability distributions, normal probability distributions, estimates and sample size, hypothesis testing, correlation and regression, inferences of two samples, and process control.

*Transfer Curriculum Goal(s): 4*

**MATH 1461 Honors Introduction to Statistics****Credits: 4**

*Prerequisite:* Accuplacer score of 50 or higher on the college level math exam or MATH 1505, MATH 1506, and Admission to the Honors Program

*Co-Requisite:* none

This course covers descriptive statistics, sampling, probability, probability distributions, normal probability distributions, estimates and sample sizes, hypothesis testing, correlation and regression, inferences of two samples, and process control. Much of the content of this course will involve independent learning with classroom lecture involving more in-depth involvement with statistical data. Students enrolled in this course will be required to do additional reading of statistical writings, participate in group projects, present projects to the class, and develop an original survey. Daily assignments will involve use of online homework to accompany the readings from the course. A student must be accepted into the honors program prior to registration.

*Transfer Curriculum Goal(s): 2,4*

**MATH 1470 College Algebra****Credits: 3**

*Prerequisite:* Accuplacer College Math score of 50 or higher, or completion of MATH 0820 or MATH 1520

*Co-Requisite:* none

This course covers topics such as functions and graphs, equations and inequalities, polynomial functions, rational functions, inverse functions, exponential functions, logarithmic functions, sequences and series, systems of equations and inequalities, and problem solving. A graphing approach is used and therefore the use of a graphing calculator will be highly emphasized.

*Transfer Curriculum Goal(s): 4*

**MATH 1472 Precalculus****Credits: 5**

*Prerequisite:* Accuplacer score of 63-85 on the college-level math exam, ACT Math score of 24 or above, or MATH 1470

*Co-Requisite:* none

This course is intended to provide the essential mathematical background needed in calculus. Topics include equation solving, functions (polynomial, radical, rational, exponential, logarithmic, trigonometric, and inverse trig), identities, ap-

plications, and parametric/polar graphing.

*Transfer Curriculum Goal(s): 4*

**MATH 1477 Calculus I****Credits: 5**

*Prerequisite:* MATH 1472 or Accuplacer score of 86 or higher on college-level math exam

*Co-Requisite:* none

Review of the concept and properties of a function. Emphasis on the graphing and behavior of a function. Limits are introduced and developed. The derivative of a function is defined and applied to algebraic and trigonometric functions. Anti-differentiation and elementary differential equations. Definite integral as a limit of a sum and as related to anti-differentiation via the Fundamental Theorem of Calculus. Applications to maximum, minimum and related rates. Differentiation and integration of exponential and logarithmic functions.

*Transfer Curriculum Goal(s): 4*

**MATH 1478 Calculus II****Credits: 5**

*Prerequisite:* MATH 1477 or MATH 1480

*Co-Requisite:* none

Math 1478 is a second course in the Calculus of one variable. Topics include differentiation and integration of inverse trigonometric function and hyperbolic function. This course also includes slope fields and first order linear differential equations. Applications of integration will be used to calculate the area between curves, volume using the disk and shell method, arc length and surfaces of revolution, work, moments and centers of mass. It incorporates integration by parts, trigonometry integration, trigonometric substitution, partial fraction, indeterminate forms, L'hospital's Rule and improper integrals. Math 1478 also works with Infinite series, p-series, test for convergence and divergence, Taylor Polynomials and the representation of functions by power series and applications of calculus to parametric and polar equations.

*Transfer Curriculum Goal(s): 4*

**MATH 1480 Honors Calculus I****Credits: 5**

*Prerequisite:* Accuplacer College Math score of 86 or higher

*Co-Requisite:* none

This honors course is a first course in calculus, covering topics with greater depth than the traditional course. Course topics include: the definition of a limit and processes for determining limits; the definition of the derivative; rules of differentiation using algebraic, trigonometric, exponential and logarithmic functions; applications of the derivative; anti-differentiation, elementary differential equations, and the Fundamental Theorem of Calculus. Students enrolled in this course will be required to do supplementary reading of articles pertaining to calculus, study substantial problems involving calculus theory and/or application, and present the results of their investigations to the class. Communicating mathematically, whether through in-class presentation, tutoring on-campus, or tutoring in the wider community, will be strongly encouraged.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways."

*Transfer Curriculum Goal(s): 4*

**MATH 1500 Applied Mathematics****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This course provides an overview of foundational topics in mathematics. These topics include at least six of the following: numerical properties, percent calculations, calculator usage, problem-solving, estimation, data conversions, real number system, geometry, ratios and proportions, statistics and trigonometry.

*Transfer Curriculum Goal(s): none*

**MATH 1510 Math for Elementary Teachers I****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This is the first of two math courses providing a background for teaching in the elementary school. It emphasizes the use of mathematics manipulatives for modeling the basic operations. Topics will include addition, subtraction, multiplication and division of whole numbers, number theory related to fractions, fractions, decimals, and integers.

*Transfer Curriculum Goal(s): none*

**MATH 1512 Math for Elementary Teachers II****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This is the second of two math courses providing a background for teaching in the elementary school. It emphasizes the use of mathematics manipulatives for modeling the basic operations. Topics will include decimals, percents, topology, transformations, geometry, discrete mathematics, probability, and statistics.

*Transfer Curriculum Goal(s): none*

**MATH 1520 Introduction to College Algebra****Credits: 3**

*Prerequisite:* Accuplacer Elementary Algebra score of 76 or greater, Accuplacer College Math score of 35 or greater, or MATH 0820 Intermediate Algebra

*Co-Requisite:* none

This course is intended for students who have completed Intermediate Algebra but are not fully prepared for College Algebra, or whose placement test score is in the top range for Intermediate Algebra. It includes introductory college-level topics, but not at the rigor, pace, and depth of College Algebra. Many of the topics from Intermediate Algebra are reviewed within the coverage of these college-level topics.

*Transfer Curriculum Goal(s): none*

**MATH 1580 Topics in Math****Credits: 1-3**

*Prerequisite:* none

*Co-Requisite:* none

This course will examine selected topics of interest in Math. Offered on demand.

*Transfer Curriculum Goal(s): none*

**MATH 2457 Linear Algebra****Credits: 3**

*Prerequisite:* MATH 1477 or MATH 1480

*Co-Requisite:* none

This course covers systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors.

*Transfer Curriculum Goal(s): 4*

**MATH 2458 Multivariable Calculus****Credits: 4**

*Prerequisite:* MATH 1478

*Co-Requisite:* none

This course covers vectors, dot and cross products, surfaces; vector-valued functions and curves; functions of several variables, partial and directional derivatives, double and triple integration, line and surface integrals; and applications to extrema, area, volume, moments, and centroids.

*Transfer Curriculum Goal(s): 4*

**MATH 2459 Differential Equations****Credits: 4**

*Prerequisite:* MATH 1478

*Co-Requisite:* none

This course covers existence and uniqueness theorem; ordinary first order differential equations, linear equations of higher orders, and initial value problems; systems of differential equations, Laplace transforms, and power series methods applications.

*Transfer Curriculum Goal(s): 4*

**MEDICAL ASSISTANT****MEDA 1100 Body Structure and Function I****Credits: 3**

*Prerequisite:* none

*Co-Requisite:* none

This course is an introduction to the structure and function of the human body from its chemical structure to the organization of the whole body. Focus will be on the study of each individual organ system and the interaction of each system with the rest of the body. Understanding the medical terminology related to the human body is important. The body systems that will be studied include the integumentary, skeletal, muscular, nervous, sensory, and endocrine systems. Such knowledge is basic to understanding common disease processes. Causes, signs and symptoms of various diseases related to each body system will be studied.

*Transfer Curriculum Goal(s): none*

**MEDA 1105 Body Structure and Function II****Credits: 3**

*Prerequisite:* MEDA 1100

*Co-Requisite:* none

This course is a continuation of Body Structure and Function I. It will cover the circulatory, lymphatic, respiratory, digestive, urinary and reproductive systems, including the interaction of each system with the rest of the body. Such knowledge is basic to understanding common disease processes. Causes, signs and symptoms of various diseases related to each body systems will be studied.

*Transfer Curriculum Goal(s): none*

**MEDA 1110 Clinical Procedures I****Credits: 3**

*Prerequisite:* CPR certificate

*Co-Requisite:* none

This course will cover the fundamentals of medical assisting, including medical asepsis, the physical examination, federal regulations, emergencies, patient assessment including vital signs, and documentation skills. Students will learn how to obtain appropriate patient medical information through effective communication.

*Transfer Curriculum Goal(s): none*

**MEDA 1115 Clinical Procedures II**  
**Credits: 3**

*Prerequisite: MEDA 1110*

*Co-Requisite: none*

This course covers clinical duties that are performed by the medical assistant. Emphasis will be on assisting with ambulatory surgery, assisting with specialty examinations, medication administration, providing patient education, assisting in primary care areas of family practice, internal medicine and obstetrics and gynecology. Students will learn how to obtain appropriate information through effective communication.

*Transfer Curriculum Goal(s): none*

**MEDA 1120 Laboratory Techniques I**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: MEDA 1100, SECM 1360*

This course will focus on safety and regulations in the medical laboratory, introduction to the laboratory, special laboratory tests and urinalysis testing. Students will be responsible for obtaining specimens, testing, and learning to prepare specimens to be sent to an independent laboratory. It is important for medical assistants to be qualified to perform laboratory procedures accurately.

*Transfer Curriculum Goal(s): none*

**MEDA 1125 Laboratory Techniques II**  
**Credits: 3**

*Prerequisite: MEDA 1120*

*Co-Requisite: none*

This course builds on laboratory skills learned from Laboratory Techniques I. Emphasis will focus on basic microbiology, including setting up slides for microscopic analysis of urine and blood, streaking culture plates, performing complete hematology tests. Students will be responsible for obtaining specimens, testing, and learning to prepare specimens to be sent to an independent laboratory. It is important for medical assistants to be qualified to perform laboratory procedures accurately.

*Transfer Curriculum Goal(s): none*

**MEDA 1128 Medical Terminology**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course teaches students to recognize and build medical terms after learning the meaning of word parts. The course is based on a systems approach.

*Transfer Curriculum Goal(s): none*

**MEDA 1130 Ethics and Issues**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover legal and ethical issues as they relate to the medical field. The importance of legal knowledge to medical office personnel, standard of care, HIPPA, negligence, malpractice, and informed consent represent some of the topics that will be discussed.

*Transfer Curriculum Goal(s): none*

**MEDA 1132 Phlebotomy**  
**Credits: 2**

*Prerequisite: Concurrent enrollment with MEDA 1110 and MEDA 1120*

*Co-Requisite: none*

This course will cover the collection of patient blood specimens and processing for testing. Various methods of collection will be taught and practiced. Students will be expected to participate both as a phlebotomist and as a patient. Difficult draws, adverse reactions and pediatric patients will also be discussed and simulated. The specimens collected will be handled and processed according to laboratory standards for accurate testing.

*Transfer Curriculum Goal(s): none*

**MEDA 1134 Phlebotomy Technician Internship**  
**Credits: 1-6**

*Prerequisite: consent of instructor*

*Co-Requisite: none*

This course will provide on-the-job experience to students. The students will be assigned to work in a hospital or clinical laboratory for a total of 135 clock hours. The students will work under the supervision of laboratory personnel doing tasks related to the student's program curriculum.

*Transfer Curriculum Goal(s): none*

**MEDA 1135 Administrative Procedures I**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers administrative duties that are performed by the medical assistant. Emphasis will be on understanding the facility environment, computers in the ambulatory care setting, telecommunications, patient scheduling, medical records management, written communications, and medical documents, including electronic medical records.

*Transfer Curriculum Goal(s): none*

**MEDA 1137 Administrative Procedures II**  
**Credits: 2**

*Prerequisite: MEDA 1135*

*Co-Requisite: none*

This course is a continuation of the Administrative Procedures I duties that are performed by the medical assistant. Emphasis will be on understanding medical insurance and necessary coding for billing, daily financial practices, billing and collections, accounting practices, and the role of the medical assistant as an office and human resources manager.

*Transfer Curriculum Goal(s): none*

**MEDA 1141 Disease Conditions**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The study of human diseases is important to understanding a variety of topics in the healthcare field. Diseases can range from mild to severe and may be acute or chronic. Some diseases affect one part of the body, a specific body system, or several body systems at the same time. There are many factors that predispose the body to a disease process. Some factors can be controlled, but some are related to heredity. Diseases are diagnosed by health care providers using various techniques and tests.

*Transfer Curriculum Goal(s): none*

**MEDA 1142 Pharmacology**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course develops the students' awareness of basic pharmacological concepts. It covers drug laws, standards and safe medication administration. Students learn about

the actions of medications in the body; i.e., absorption, biotransformation, metabolism, and excretion. The various classifications of medications are discussed, along with how to use medication references.

*Transfer Curriculum Goal(s): none*

**MEDA 2150 Medical Assistant Internship**  
**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course will provide on-the-job experience to students. The students will be assigned to work in a physician's office for a total of 225 clock hours. The students will work under the supervision of clinic and clinic office personnel doing tasks related to the student's program curriculum. The students will be required to attend an eight hour in class review day in July to review what they learned on their internships and to prepare for either the CMA or RMA National Certification Exams.

*Transfer Curriculum Goal(s): none*

## MUSIC

**MUSC 1403 American Popular Music**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

From its beginnings in the blues, to modern rock and popular music, this course will study characteristics of the music and the artists who create it. From class lectures, demonstrations and listening examples, students will demonstrate the ability to identify and describe musical examples. Each student will demonstrate knowledge of the diverse cultural backgrounds represented by the musical examples.

*Transfer Curriculum Goal(s): 6,7*

**MUSC 1405 Jazz Band**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This performing group encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a Jazz Band setting. The group prepares and performs traditional and contemporary Jazz literature in public performance with one concert per semester and other public performances as opportunities present.

*Transfer Curriculum Goal(s): 6*

**MUSC 1408 Community Band**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This performing group encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a concert band setting. The group prepares and performs traditional and contemporary band literature in public performance with one concert per semester.

*Transfer Curriculum Goal(s): 6*

**MUSC 1415 Brass Ensemble**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This performing group encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a brass ensemble setting. The group prepares and performs traditional and contemporary brass ensemble literature in public performance with one concert per year plus public performances in varying venues as opportunities arise.

*Transfer Curriculum Goal(s): 6*

**MUSC 1418 Woodwind Ensemble**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This performing group encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a woodwind ensemble setting. The group prepares and performs traditional and contemporary woodwind ensemble literature in public performance with one concert per year plus public performances in varying venues as opportunities arise.

*Transfer Curriculum Goal(s): 6*

**MUSC 1421 Cantare' Concert Chorale**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Cantare Concert Chorale is a mixed choral group that rehearses and performs diverse styles of music such as classical, jazz, multicultural, musical theater, and more. Achieving vocal excellence and choral blend, collaborative group participation, successful and inspiring concert performances, and a love for singing are the objectives of this course.

*Transfer Curriculum Goal(s): 6*

**MUSC 1431 Chamber Singers**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is a mixed choral ensemble that rehearses and performs various vocal styles of music such as chamber, madrigal, jazz, American pop, multicultural, musical theater, and more. Achieving vocal excellence and choral blend, productive group rehearsals, and participation in one or more public performances per semester are the objectives of this course. This course is open to all students with some prior vocal experience, and there will be a brief voice audition by the instructor the first week of class.

*Transfer Curriculum Goal(s): 6*

**MUSC 1441 Applied Music - Guitar**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

**MUSC 1450 Music in World Cultures**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will study the music of different cultures in the context of human life. Students will be introduced to the music and customs of diverse cultures such as African, Latin, Bosnian, Indian, and many others. Class activities will include music listening and playing of multicultural instruments, guest speakers and performers, and other projects that enhance the ethno musicological awareness of the many differences and similarities of non-Western and Western hemisphere indigenous cultures.

*Transfer Curriculum Goal(s): 6,8*

### **MUSC 1452 Intro to Music Industry**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This class focuses on the study of the music industry including music in the marketplace, songwriting, publishing, copywriting, licensing, merchandizing, recording, music management, agents, unions and guilds, television, radio and career development. In addition, it focuses on the ethical questions inherent in each of these areas such as intellectual property rights, (illegal downloading) artistic responsibility (effects of content on listeners), artistic restrictions, (Wal-Mart effect, censorship), industry monopolies (Clear Channel Radio, corporate ownership of public media).

*Transfer Curriculum Goal(s): 6,9*

### **MUSC 1453 Audio Recording I**

**Credits: 3**

*Prerequisite: basic music reading and computer skills*

*Co-Requisite: none*

This course leads students through introductory audio recording software elements in Protools, a comprehensive digital audio recording, editing, and mixing software. The techniques studied are set in the context of giving voice to artistic expression through the medium of recorded sound.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1455 Voice Training**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course offers class instruction for the experienced and the inexperienced singer, covering the basic fundamentals of voice training, vocal building exercises and activities, and improving confidence in the student's vocal ability. Students will learn vocal health tips and become familiar with various vocal styles such as jazz, classic, pop, musical theater, and folk. This course also offers exposure to guest artists, one private vocal consultation with the instructor, and other vocal building activities. Students are not required to do solo performances, but there will be opportunities to do so throughout the semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1457 Music Appreciation**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This class is the study of all types of music from classical to rock and roll. Students will learn the many differences and similarities of diverse styles of music through music listening, group activities, guest performers, concerts, musical theater productions and other projects that enhance the understanding and appreciation of all kinds of music past and present.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1459 Fundamentals of Music**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basics of music theory, aural perception, and sight singing. Emphasis is placed on rhythmic exercises, notation, tonality, phrase structure, simple form, fundamental harmony, and basic keyboard facility.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1464 Applied Music - Brass**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified(brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1475 Applied Music - Woodwind**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified(brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1481 Applied Music - Piano**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified(brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1485 Applied Music - Instrumental**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified(brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 1491 Applied Music - Voice**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified(brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

*Transfer Curriculum Goal(s): 6*

### **MUSC 2401 Evolution of Jazz**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the history of Jazz from its roots to today including musical styles, musicians, historical and social contexts of the various styles and times. Included in this are pre-jazz elements, New Orleans Dixieland, Chicago

Dixieland, Swing, Bop, Cool, Hard Bop, Free Jazz, Fusion and Avant-Garde and the present day manifestations of these styles, the social, racial and historical relations between the music and the times.

*Transfer Curriculum Goal(s): 6,7*

### **MUSC 2580 Topics in Music**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Music. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **NATURAL RESOURCES**

### **NATR 1106 Intro to Natural Resources Law Enforcement**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover the role that law enforcement plays in managing natural resources, as well as basic field equipment (i.e., binoculars, spotting scopes, blinds, etc.) used in the process. Discussions will be held with local conservation officers to learn about their jobs and the roles they play within the Natural Resources community. Ethical considerations to prevent harm to the individual animal and still have a quality viewing experience will also be covered.

*Transfer Curriculum Goal(s): none*

### **NATR 1112 Land Measurement**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course develops skills in legal descriptions, pacing, and chaining, using compasses, maps, aerial photos, and connects to our Introduction to GPS/GIS class. It involves field-work each week to develop these skills and includes learning to read and write legal descriptions from plat maps, as well as learning to use topographic maps, aerial photos, and creating maps, both by hand and computer. Differential leveling using old style transits are discussed, demonstrated and practiced along with chaining techniques used in measuring parcels of land. With the transit, learning to read the leveling rod as well as the horizontal and vertical verniers are also a part of this process. Some plot work that ties in with dendrology, plant taxonomy and other classes may also be done to help the students further develop their skills in compassing pacing and reading legal descriptions, as well as their overall understanding as to how all of this relates to any particular Natural Resource occupation.

*Transfer Curriculum Goal(s): none*

### **NATR 1115 Plant Taxonomy**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course involves learning to identify vascular plants as well as develop an understanding for their morphology through dissection. The course will discuss botanical nomenclature, vegetative terminology, botanical descriptions, collecting and preserving, and a survey of vascular plant families. We will also discuss the use of keys.

*Transfer Curriculum Goal(s): none*

### **NATR 1120 Dendrology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The course focus is on the characteristic features of trees and shrubs and the purpose of these features. Students will be able to readily identify 60 to 70 species of trees and shrubs by Latin (family, genus and species) and Common names found within the U.S. They will learn to use various keys to identify trees and shrubs with. Key features for study will include: leaves, twigs, buds, flowers, fruit, stem and bark. Most of our studies will be of trees in Minnesota, and the Eastern U.S. However, we will discuss Southern and Western species as well.

*Transfer Curriculum Goal(s): none*

### **NATR 1125 Ichthyology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will review the biology, ecology, and identification of fish, with special emphasis on Minnesota fish. Students will explore taxonomy and evolutionary relationships of fish, anatomy and physiology, life history, diversity, behavior, and ecology of fish. Lab sessions will introduce students to the more than 150 species of fish native to Minnesota with emphasis on taxonomy and identification.

*Transfer Curriculum Goal(s): none*

### **NATR 1130 Mammalogy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the identification and biology of mammals. Students learn taxonomic relationships, evolution, basic anatomy and life history. Labs focus on identification by pelage and skull characteristics, age and sex criteria, and small mammal trapping and handling.

*Transfer Curriculum Goal(s): none*

### **NATR 1135 Ornithology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the identification, biology, and ecology of birds in Minnesota. Students will learn basic anatomy and life history, as well as family and species characteristics and songs. Labs emphasize identification of Minnesota birds.

*Transfer Curriculum Goal(s): none*

### **NATR 1140 Limnology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course develops basic knowledge in the study of freshwater systems. It discusses the physical, chemical and biological characteristics of streams and lakes; as well as the influence of water in our environment and the ecology related to organisms and ecosystems through which it flows. The importance of aquatic productivity is also considered.

*Transfer Curriculum Goal(s): none*

### **NATR 1150 Aquatic Invertebrate Ecology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will review the taxonomy, diversity and life histories of aquatic macro-invertebrates in the upper Midwest. Ecological relationships of aquatic invertebrates with water quality and fisheries will also be investigated. Measures and metrics for determining the health of macro-invertebrate communities and ecological health will be covered.

*Transfer Curriculum Goal(s): none*

### **NATR 1152 Field Methods in Freshwater Studies**

**Credits: 2**

*Prerequisite: NATR 1140 or NATR 1150 or NATR 1125*

*Co-Requisite: none*

This course will place students directly in the field collecting and interpreting aquatic data. Through this course, students may collect water samples, inventory aquatic vegetation, assess aquatic invertebrate communities, or map watersheds. Students will also work with cooperating agencies, lake associations, or LUGs to schedule sampling, present results, or provide other elements of customer service.

*Transfer Curriculum Goal(s): none*

### **NATR 1200 Introduction to Natural Resources**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will develop an holistic awareness of our Natural Resources. Includes information in Forestry, Fisheries, Wildlife and Parks & Recreation, as well as Soils and Water. Ideas and attitudes that revolve around Conservation and Preservation and their historical background are discussed, and each area of resource concern is followed up with careers in that particular field often with guest speakers that work in those areas or students that have participated in summer internships.

*Transfer Curriculum Goal(s): none*

### **NATR 1280 Introduction to GPS & GIS**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The objective of this class is to provide students with an introductory understanding of GIS software (ArcGIS 10.0) and GPS technology. The main emphasis will be on learning practical applications for the software. Lectures will provide examples of GIS techniques, how the processes work and the applications for which they may be used. The laboratory will provide hands-on training to learn various GIS processes which will focus on collecting, organizing, managing, analyzing, and presenting spatial data.

*Transfer Curriculum Goal(s): none*

### **NATR 1300 Summer Field Experience**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a trip type of experience mainly for Natural Resource Students and Environmental Science Students. It involves presentations from DNR personnel and other agencies as well as camping, canoeing and backpacking at various locations from Mille Lacs Kathio to Lake Superior, and the BWCA from Ely to Grand Maris.

*Transfer Curriculum Goal(s): none*

### **NATR 1302 Fall Field Experience**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is an elective course mainly for students in the Natural Resources program, but is open to other students. The course will involve chainsaw safety and certification, along with 10 hours of service learning/natural resource work. Six hours will be through The Nature Conservancy and the other four hours will be during a camping trip to Itasca State Park. The service learning work will include trail maintenance, fire

prevention, seed collection, budcapping, and plant survival checks.

*Transfer Curriculum Goal(s): none*

### **NATR 1305 Winter Field Experience**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course helps the student develop an understanding for working outdoors in adverse conditions; and the importance of working as a team. It develops an understanding for hypothermia and knowledge of winter first aid. The course discusses preparing for and spending a night out in the field; going over equipment, clothing, food and water, and how to pack and pull a sled. And – most important – having a good time and enjoying the Winter Environment.

*Transfer Curriculum Goal(s): none*

### **NATR 1310 Internship**

**Credits: 1-8**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to provide students with an opportunity to work on a full time basis in some aspect of environmental management.

*Transfer Curriculum Goal(s): none*

### **NATR 1315 Basic Wildland Fire S-130, S-190**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is a combination of the S-130, S-190 Basic Fire-fighter training taught by the DNR and U.S. Forest Service personnel. It is a federal course that all wildland fire fighters must take to be hired on fire crews. It includes basic fire weather, fire equipment, and basic fire suppression tactics. Students completing the class will receive a federal certificate to allow them to be hired on various fire crews.

*Transfer Curriculum Goal(s): none*

### **NATR 1340 Special Project**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed so the student can put into practical use the various skills and knowledge gained in other course work. The course is independent study with no formal class hours.

*Transfer Curriculum Goal(s): none*

### **NATR 1341 Seminar**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce students to the variety of disciplines and topics included in natural resource management through weekly presentations, field trips, readings, multimedia, and active discussions. Students will also explore elements of communicating effectively in groups using oral, written, and multimedia presentations and will create their own presentations.

*Transfer Curriculum Goal(s): none*

### **NATR 1350 Independent Study**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This student-generated course is an opportunity to study

particular areas of interest not covered in the general curriculum.

*Transfer Curriculum Goal(s): none*

### **NATR 1360 Animal Behavior**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers interspecific and intraspecific dynamics that allow animals to be successful in a natural world. This information is critical in making animal observations and interpreting what you see in order to understand the well-being of the animal.

*Transfer Curriculum Goal(s): none*

### **NATR 2110 Herpetology**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introductory class in Herpetology, that covers classification, and characteristics of amphibians and Reptiles, that include the different kinds frogs, salamanders, turtles, lizards, and snakes. Discussion of the species of Minnesota is an important aspect of this course, but many other species are included as well.

*Transfer Curriculum Goal(s): none*

### **NATR 2120 Wetland Ecology**

**Credits: 3**

*Prerequisite: BIOL 2416, NATR 1140*

*Co-Requisite: none*

This course covers the biological, physical, and chemical interactions in wetlands. It includes delineation, classification systems, and plant and animal identification.

*Transfer Curriculum Goal(s): none*

### **NATR 2130 Wildlife Management**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The course covers the biological principles that form the basis of current wildlife management, management techniques, and societal factors affecting management decisions. Topics include population dynamics, management techniques, non-game and endangered wildlife, and conservation biology.

*Transfer Curriculum Goal(s): none*

### **NATR 2140 Fisheries Management**

**Credits: 3**

*Prerequisite: NATR 1125, NATR 1140*

*Co-Requisite: none*

This course covers the basic concepts of modern fisheries management with special emphasis on aquatic ecology, watershed and habitat management, exotic species, and laws and regulations. Also included in laboratory activities are principles of fisheries population dynamics and management, with special emphasis on population estimation, age and growth analysis, mortality estimation, and recruitment and yield.

*Transfer Curriculum Goal(s): none*

### **NATR 2155 Soil Science**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The course is designed to give students an awareness of

soil characteristics and techniques to evaluate physical and chemical properties. Practical uses of soil information and soil conservation techniques will be emphasized. Physical and chemical analysis, soil survey techniques and soil conservation practices are included in the lab.

*Transfer Curriculum Goal(s): none*

### **NATR 2160 Watershed Management**

**Credits: 3**

*Prerequisite: NATR 1280*

*Co-Requisite: none*

This course will review the role watersheds play in water quality in lakes and rivers. The effects of land use practices, hydrology, infrastructure development, and development will all be explored. The roles various governmental units play in the watershed will also be investigated. Students will utilize GIS and GPS applications in exploring watershed influences in lab activities.

*Transfer Curriculum Goal(s): none*

### **NATR 2161 Ecosystem Management**

**Credits: 2**

*Prerequisite: NATR 1140, NATR 1200, NATR 2120*

*Co-Requisite: none*

This course is designed to assess the ecological and social factors of ecosystem management. Students will prepare a management plan after collecting ecosystem data and resolving conflicting objectives.

*Transfer Curriculum Goal(s): none*

### **NATR 2170 Advanced GPS/GIS**

**Credits: 2**

*Prerequisite: NATR 1280*

*Co-Requisite: none*

The objective of this class is to provide you with an advanced understanding of GIS software (ArcGIS 9.3) and GPS technology. The main emphasis will be on learning practical applications for the software. Lectures will provide examples of GIS techniques, how the processes work and for what applications they may be used. The laboratory will provide hands-on training to learn various GIS processes which will focus on collecting, organizing, managing, analyzing, and presenting spatial data.

*Transfer Curriculum Goal(s): none*

### **NATR 2201 Introduction to Parks & Interpretation**

**Credits: 2**

*Prerequisite: NATR 1200*

*Co-Requisite: none*

This is a holistic course on the importance of parks and outdoor recreation. It will discuss the basic areas of management such as natural resources, people, facilities, law enforcement, and finances. It will also touch on topics such as the foundation of outdoor recreation, psychology and the natural environment, the social aspects and economics of outdoor pursuits, and federal, state and local management policies and agencies. The course will also cover various curricula available for the naturalist (Project Wild, Project Wild Aquatic, Project Learning Tree, and Nature Scope). The class will visit or have a presentation by local park managers to see and discuss how they are used by the public. The student will prepare and teach selected topics with the class and with elementary students in the area.

*Transfer Curriculum Goal(s): none*

### **NATR 2235 Silviculture & Forest Management**

**Credits: 3**

*Prerequisite: NATR 1120, NATR 1112*

*Co-Requisite: none*

This course is a combination of lecture and lab designed to familiarize students with basic silvicultural techniques and forest management considerations needed to take care of today's forests. Topics include cultural techniques used in harvesting, thinning, TSI (Timber Stand Improvement) and regeneration. Management considerations for wildlife, watershed, and recreation will be discussed as well. Other topics of discussion will include yearly management and allowable cut information.

*Transfer Curriculum Goal(s): none*

### **NATR 2321 Ecological Classification of Native Plant Communities**

**Credits: 2**

*Prerequisite: NATR 2155 and NATR 1115*

*Co-Requisite: none*

This course will train students in the use of soils and herbaceous vegetation to identify native plant communities for use in land management, surveying, or research. Extensive field trips will be taken throughout the course to identify different plant communities across Minnesota and investigate the ecological succession of these communities. Students will also use the natural history of native plant communities to develop forest management guidelines.

*Transfer Curriculum Goal(s): none*

## **NURSING**

### **NURS 1540 Professional Nursing Fundamentals**

**Credits: 3**

*Prerequisite: Admission to Nursing Program*

*Co-Requisite: none*

This is the first nursing course in the traditional program which explores the beginning fundamental concepts to the professional nurse. This course focuses on the pathophysiology and RN role for the following concepts: patient attributes and resources, patient personal preferences, attributes and roles of the nurse, care competencies, psychosocial nursing, scope of practice, caring, infection control, Maslow's Hierarchy of Needs, Head to Toe Assessment, and documentation. Application of the content will be made in the Professional Nursing Fundamentals Lab.

*Transfer Curriculum Goal(s): none*

### **NURS 1541 Professional Nursing Fundamentals Lab**

**Credits: 2**

*Prerequisite: Admission to Nursing Program*

*Co-Requisite: none*

This course is designed to allow for the psychomotor application of concepts learned in the Fundamentals Course. Content includes patient attributes and resources, patient personal preferences, attributes and roles of the nurse, care competencies, psychosocial nursing, scope of practice, caring, infection control, Maslow's Hierarchy of Needs, Head to Toe Assessment, and documentation. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as students begin their journeys in the RN role. This course provides for hands-on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, audio power points, skills test-out, and simulation.

*Transfer Curriculum Goal(s): none*

### **NURS 1542 Medication Administration Concepts**

**Credits: 1**

*Prerequisite: Admission to Nursing Program*

*Co-Requisite: none*

This course offers a basic review of math and dimensional analysis as applied by health care professionals. Topics include the metric system, preparation of solutions, pediatric dosage, I.V. solutions, and advanced I.V. titration of medications. Application will be made through subsequent nursing courses.

*Transfer Curriculum Goal(s): none*

### **NURS 1544 Professional Nursing Concepts I**

**Credits: 4**

*Prerequisite: NURS 1540, NURS 1541, and NURS 1542 or NURS 2522*

*Co-Requisite: none*

This is the beginning course in a three-semester sequence which emphasizes use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: Nursing Process, Teaching and Learning, QSEN, Evidence Based Practice, Pharmacology, Pediatrics, Gerontology, Surgical, and Activity-Exercise Pattern: Musculoskeletal.

*Transfer Curriculum Goal(s): none*

### **NURS 1545 Professional Nursing Practicum I**

**Credits: 2**

*Prerequisite: NURS 1540, NURS 1541, and NURS 1542 or NURS 2522*

*Co-Requisite: none*

This course is the clinical component that focuses on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process, including assessment, planning, intervention, and evaluation with individuals across the lifespan experiencing acute and chronic illness in order to provide safe, quality, patient-centered care and promote human flourishing. The clinical site will be in a long-term care setting. Satisfactory/Unsatisfactory grading.

*Transfer Curriculum Goal(s): none*

### **NURS 1547 Professional Nursing Role Transition**

**Credits: 3**

*Prerequisite: Acceptance into Advanced Standing Nursing Program*

*Co-Requisite: none*

This course is designed to build on concepts, clinical reasoning, and skills attained in the fundamentals courses. Content includes the integration of advanced communications skills, critical thinking and nursing judgment, the educator role, and nursing leadership and management skills. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated, learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student transitions to the

RN role. This course focuses on the hands-on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, audio power points, skills test out, and simulation.

*Transfer Curriculum Goal(s): none*

### **NURS 2500 Professional Nursing Leadership**

**Credits: 2**

*Prerequisite: NURS 2501, NURS 2513, NURS 2520*

*Co-Requisite: none*

This course examines the complexity and nursing judgment required of the professional nursing role. The course focuses on leadership and management, delegation and supervision, teaching, ethical and legal concepts and the use of informatics in the provision of evidenced-based nursing practice, and the processes of critical thinking and synthesis. This course focuses on the many roles of the professional nurse and builds on all previously learned concepts as the student develops their own art and science of nursing and professional identity. Current trends and issues in nursing will be researched and shared.

*Transfer Curriculum Goal(s): none*

### **NURS 2501 Professional Nursing Concepts Through the Lifespan I**

**Credits: 6**

*Prerequisite: admission to ADN Program*

*Co-Requisite: NURS 2513*

This is the beginning course in a two-semester sequence which emphasizes the use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to surgical nursing, teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health, and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: Nursing Process, Teaching and Learning, Pharmacology, Nutritional-Metabolic Pattern: Fluid and Electrolytes, Elimination Pattern: Renal and Urinary Tract Function, Activity-Exercise Pattern: Cardiovascular, Circulatory and Hematological Function, Activity-Exercise Pattern: Gas Exchange and Respiratory Function, and Normal and High Risk Ante/Intra/Postpartum and Newborn Care.

*Transfer Curriculum Goal(s): none*

### **NURS 2502 Professional Nursing Concepts Through the Lifespan II**

**Credits: 6**

*Prerequisite: NURS 2501, NURS 2513, NURS 2518, NURS 2519*

*Co-Requisite: NURS 2514*

This is the second course in a two-semester sequence in which complexity, application of knowledge, and evidence-based practice will be emphasized. There will be continued focus on use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality, patient-centered care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology

and RN role for the following concepts: Cognitive-Perceptual Pattern: Mental Health, Pediatrics, Nutritional-Metabolic Pattern: Immunologic Function, Nutritional-Metabolic Pattern: Oncology, Nutritional-Metabolic Pattern: Endocrine Function, Cognitive-Perceptual Pattern: Neurologic Function, Nutritional-Metabolic Pattern Skin/Integrity: Integumentary, Cognitive-Perceptual Pattern: Sensorineural Function, Nutritional-Metabolic Pattern: Digestive and Gastrointestinal Function, Nutritional-Metabolic Pattern: Metabolic Function, and Activity-Exercise Pattern: Musculoskeletal.

*Transfer Curriculum Goal(s): none*

### **NURS 2513 Professional Nursing Practicum I**

**Credits: 3**

*Prerequisite: admission to AND Program*

*Co-Requisite: NURS 2501*

This course is the clinical lab component that focuses on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process, including assessment, planning, intervention, and evaluation with individuals across the lifespan experiencing acute and chronic illness in order to provide safe, quality, patient-centered care and promote human flourishing. Clinical sites may include acute and long term care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading.

*Transfer Curriculum Goal(s): none*

### **NURS 2514 Professional Nursing Practicum II**

**Credits: 3**

*Prerequisite: NURS 2501, NURS 2513, NURS 2518, NURS 2519*

*Co-Requisite: NURS 2502*

This course is the clinical lab component that focuses on integration of knowledge, skills, and theoretical principles, with continued emphasis on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process while caring for individuals across the lifespan experiencing acute and chronic illness and families experiencing childbearing in order to provide safe, quality, patient-centered care and promote human flourishing. Additional course emphasis includes the application of leadership skills, including prioritization, delegation, supervision, and the management components necessary to promote professional development and a spirit of inquiry in the transition to the graduate AD registered nursing role. Clinical sites may include acute care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading.

*Transfer Curriculum Goal(s): none*

### **NURS 2518 Clinical Reasoning & Skills Lecture**

**Credits: 1**

*Prerequisite: admission to ADN Program*

*Co-Requisite: NURS 2519*

This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking and nursing judgment, educator role, and nursing leadership and management skills are integrated. This course focuses on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, and audio PowerPoints. The theoretical concepts taught in this course will be applied in NURS 2519.

*Transfer Curriculum Goal(s): none*

### **NURS 2519 Clinical Reasoning & Skills Lab**

**Credits: 1**

*Prerequisite: admission to ADN Program*

*Co-Requisite: NURS 2518*

This course is designed to build on concepts, clinical reasoning and psychomotor skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking, educator role, and nursing leadership and management skills are integrated. Students entering the course will have basic nursing competencies upon which this course will build. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student transitions to the RN role. This course focuses on hands on application of clinical reasoning and skills through skills test out and simulation. Pass/Fail Grading.

*Transfer Curriculum Goal(s): none*

**NURS 2520 Concepts in Role Transition for the Professional Nurse****Credits: 1**

*Prerequisite: admission to ADN Program*

*Co-Requisite: none*

This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking and nursing judgment, educator role, and nursing leadership and management skills are integrated. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student transitions to the RN role. This course focuses on hands-on applications of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, audio power points, skills test out and simulation.

*Transfer Curriculum Goal(s): none*

**NURS 2522 Medication Admin Concepts****Credits: 1**

*Prerequisite: admission to ADN Program, PNUR 1134 or PNUR 1140 or LPN license*

*Co-Requisite: none*

This course offers a basic review of math and dimensional analysis as applied by healthcare professionals. Topics include the metric system, preparation of solutions, pediatric dosage, I.V. solutions, and advanced I.V. titration of medications. Application will be made through subsequent nursing courses.

*Transfer Curriculum Goal(s): none*

**NURS 2525 AD****Progression Proficiency****Credits: 1**

*Prerequisite: admission to ADN Program*

*Co-Requisite: none*

This course is designed for students needing AD Nursing

course work remediation to meet proficiency expectations for program re-admission and progression. This includes all topic content from NURS 2501, NURS 2518, and NURS 2519. It is expected that the student will prepare and remediate independently all of the topics and skills prior to testing out. To successfully pass this course, the student must complete all unit exams, receive 80% on NURS 2501 final exam and pass all skills proficiency testing at a satisfactory level.

*Transfer Curriculum Goal(s): none*

**NURS 2540 Professional Nursing Concepts II****Credits: 6**

*Prerequisite: NURS 1544, NURS 1545*

*Co-Requisite: none*

This is the second course in a three-semester sequence which emphasizes use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: Cognitive-Perceptual Pattern: Mental Health, Activity-Exercise Pattern: Cardiovascular, Circulatory, and Hematological Function, Activity-Exercise Pattern: Gas Exchange and Respiratory Function, Normal /Intra/Postpartum and Newborn Care, and Nutritional-Metabolic Pattern: Fluid and Electrolytes.

*Transfer Curriculum Goal(s): none*

**NURS 2541 Professional Nursing Practicum II****Credits: 3**

*Prerequisite: NURS 1544, NURS 1545*

*Co-Requisite: none*

This course is the clinical component that focuses on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process, including assessment, planning, intervention, and evaluation with individuals across the lifespan experiencing acute and chronic illness in order to provide safe, quality, patient-centered care and promote human flourishing. Clinical sites may include acute care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading.

*Transfer Curriculum Goal(s): none*

**NURS 2542 Advanced Skills for the Professional Nurse****Credits: 1**

*Prerequisite: NURS 1544, NURS 1545*

*Co-Requisite: none*

This course is designed to build on concepts, clinical reasoning, and skills attained in the fundamentals courses. Content includes the integration of advanced communications skills, critical thinking and nursing judgment, the educator role, and nursing leadership and management skills. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student continues to transition in the RN role. This course focuses on the hands-on application of clinical reasoning and psychomotor skills through quizzes,

worksheets, exams, videos, audio power points, skills test out, and simulation.

*Transfer Curriculum Goal(s): none*

**NURS 2545 Professional Nursing Concepts III****Credits: 6**

*Prerequisite: NURS 2540, NURS 2541, NURS 2542*

*Co-Requisite: none*

This is the third course in a three-semester sequence in which complexity, application of knowledge, and evidence-based practice will be emphasized. There will be continued focus on use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality, patient-centered care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: High Risk Ante/Intra/Postpartum and Newborn Care, Sexuality-Reproductive, Nutritional-Metabolic Pattern: Elimination Pattern: Renal and Urinary Tract Function, Immunologic Function, Nutritional-Metabolic Pattern: Oncology, Nutritional-Metabolic Pattern: Endocrine Function, Cognitive-Perceptual Pattern: Neurologic Function, Nutritional-Metabolic Pattern Skin/Integrity: Integumentary, Cognitive-Perceptual Pattern: Sensorineural Function, Nutritional-Metabolic Pattern: Digestive and Gastrointestinal Function, and Nutritional-Metabolic Pattern: Metabolic Function.

*Transfer Curriculum Goal(s): none*

**NURS 2546 Professional Nursing Practicum III****Credits: 3**

*Prerequisite: NURS 2540, NURS 2541, NURS 2542*

*Co-Requisite: none*

This course is the clinical lab component that focuses on integration of knowledge, skills, and theoretical principles with continued emphasis on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process while caring for individuals across the lifespan experiencing acute and chronic illness and families experiencing childbearing in order to provide safe, quality, patient-centered care and promote human flourishing. Additional course emphasis includes the application of leadership skills including prioritization, delegation, supervision, and the management components necessary to promote professional development and a spirit of inquiry in the transition to the graduate AD registered nursing role. Clinical sites may include acute care settings, clinics and/or various community service agencies. Satisfactory/Unsatisfactory grading.

*Transfer Curriculum Goal(s): none*

**NURS 2547 Professional Nursing Leadership****Credits: 2**

*Prerequisite: NURS 2540, NURS 2541, NURS 2542*

*Co-Requisite: none*

This course examines the complexity and nursing judgment required of the professional nursing role and focuses on leadership and management, delegation and supervision, teaching, ethical and legal concepts and the use of informatics in the provision of evidenced-based nursing practice, and the processes of critical thinking and synthesis. This course focuses on the many roles of the professional nurse and builds on all previously learned concepts as the student develops their own art and science of nursing and profes-

sional identity. Current trends and issues in nursing will be researched and shared.

*Transfer Curriculum Goal(s): none*

**OCCUPATIONAL SKILLS****OSKL 1103 Topics in Occupational Skills****Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Occupational Skills. On demand.

*Transfer Curriculum Goal(s): none*

**OSKL 1142 Communication I****Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students are exposed to curriculum focusing on verbal, written and non-verbal communication skills utilized on the job and in the community. Topics covered include telephone skills, self advocacy skills, self esteem, understanding written schedules, manners and etiquette, and body language.

*Transfer Curriculum Goal(s): none*

**OSKL 1144 Critical Reasoning Skills I****Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

Students learn about decision making and problem solving skills used in the workplace and in their personal life. Topics covered include accessing community services, personal safety and maintenance skills, responding to emergencies and workplace safety, budgeting/consumer skills and citizenship, nutrition and meal preparation. Students will also be required to participate in a minimum of 5 hours of Service Learning, as well as a student club or organization.

*Transfer Curriculum Goal(s): none*

**OSKL 1146 Critical Reasoning Skills II****Credits: 3**

*Prerequisite: OSKL 1144*

*Co-Requisite: none*

Students learn about decision making and problem solving skills used in the workplace and in their personal life. Topics covered include: relationship choices and dynamics, Stress and anger management techniques, goal setting, time management and development of personal filing system. Students will also be required to participate in a minimum of 5 hours of Service Learning, as well as a student club or organization.

*Transfer Curriculum Goal(s): none*

**OSKL 1148 Employability Skills I****Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students learn skills needed to seek and maintain entry-level competitive employment. Skills covered include: self advocacy skills at work, development of interpersonal skills with employer, co-workers and customers, adapting to the worksite and demonstrating personal accountability at the worksite and exploration of entry-level job opportunities to solidify job goals.

*Transfer Curriculum Goal(s): none*

**OSKL 1150 Employability Skills II****Credits: 4**

*Prerequisite: OSKL 1148*



*Co-Requisite: none*

Students learn skills needed to find, secure and maintain employment. Topics covered include how to find employment, successful job application and interviews, and adapting to employer needs while maintaining the job. Students participate in job club at the end of the semester to assist with the job seeking process.

*Transfer Curriculum Goal(s): none*

#### **OSKL 1154 Supervised Pre-Internship I**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: OSKL 1152*

This course utilizes a college or community worksite to perform job skills needed to maintain entry-level employment. Students will secure employment or participate in a paid or non-paid experience established by OSP department or employment secured by student with OSP department approval. Limited (1-2 days) job coaching is available for students enrolled in this course. Specific training goals are developed for each student with the employer based on student needs.

*Transfer Curriculum Goal(s): none*

#### **OSKL 1156 Supervised Pre-Internship II**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course utilizes a college or community worksite to build on the skills learned in Employability Skills I. This course utilizes a college or community worksite to perform job skills needed to maintain entry-level employment. Students will secure employment or participate in a paid or non-paid experience established by OSP department or employment secured by student with OSP department approval. Job coaching is available as needed for students enrolled in this course. Specific training goals are developed for each student with the employer based on student needs. Students work 12 hours per week.

*Transfer Curriculum Goal(s): none*

#### **OSKL 1162 Study Skills I**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Students learn skills related to manage their time and improve organizational skills at the worksite and in the community. Skills taught include time management, personal planner usage, and using task lists. Students also work in groups with a tutor to clarify assignments given in other OSP courses.

*Transfer Curriculum Goal(s): none*

#### **OSKL 1164 Study Skills II**

**Credits: 1**

*Prerequisite: OSKL 1162*

*Co-Requisite: none*

Students learn skills related to manage their time and improve organizational skills at the worksite and in the community. Skills taught include time management, personal planner usage, and using task lists. Students also work in groups with a tutor to clarify assignments given in other OSP courses.

*Transfer Curriculum Goal(s): none*

#### **OSKL 1166 Communication II**

**Credits: 3**

*Prerequisite: OSKL 1142*

*Co-Requisite: none*

Students are exposed to experiences focusing on diversity, verbal, written, electronic and non-verbal communication skills utilized on the job and in the community.

*Transfer Curriculum Goal(s): none*

## **OJIBWE**

#### **OJIB 1401 Beginning Ojibwe I**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the language of the Ojibwe. Emphasis to be placed on linguistics and phonetics to familiarize the student with the language. Written and oral skills, non-linguistic aspects of the cultural background and surroundings are also explored. Must be taken in sequence or with the consent of the instructor. Course is offered on demand.

*Transfer Curriculum Goal(s): 8*

#### **OJIB 1402 Beginning Ojibwe II**

**Credits: 4**

*Prerequisite: OJIB 1401*

*Co-Requisite: none*

This course covers the language of the Ojibwe. Emphasis to be placed on linguistics and phonetics to familiarize the student with the language. Written and oral skills, non-linguistic aspects of the cultural background and surroundings are also explored. Must be taken in sequence or with the consent of the instructor. Course is offered on demand.

*Transfer Curriculum Goal(s): 8*

#### **OJIB 1598 Topics in Ojibwe**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Ojibwe studies. Offered on demand.

*Transfer Curriculum Goal(s): none*

#### **OJIB 2401 Intermediate Ojibwe I**

**Credits: 4**

*Prerequisite: OJIB 1402*

*Co-Requisite: none*

This course is a continuation of OJIB 1402 and continues to develop Ojibwe language skills. Emphasis is on linguistics and phonetics. Cultural background and surroundings are explored.

*Transfer Curriculum Goal(s): 8*

#### **OJIB 2402 Intermediate Ojibwe II**

**Credits: 4**

*Prerequisite: OJIB 2401*

*Co-Requisite: none*

This course is a continuation of OJIB 1402 and continues to develop Ojibwe language skills. Emphasis is on strengthening linguistics and phonetics. Cultural background and surroundings are explored.

*Transfer Curriculum Goal(s): 8*

#### **OJIB 2500 Conversational Ojibwe**

**Credits: 3**

*Prerequisite: OJIB 2402*

*Co-Requisite: none*

This course is designed to promote oral communication in the language. Grammar review and vocabulary building are structured to the needs of the students.

*Transfer Curriculum Goal(s): none*

## **PHILOSOPHY**

#### **PHIL 1411 World Religions**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course offers a framework for understanding the diversity of beliefs found in the modern world. Major religious traditions such as Hinduism, Buddhism, Judaism, Islam and Christianity are examined, with special attention paid to historical development and examination of fundamental beliefs from both metaphysical and ethical perspectives.

*Transfer Curriculum Goal(s): 6,8*

#### **PHIL 1415 Philosophy and Popular Culture**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine ways in which a variety of popular sources—films, novels, music, television—can offer insights into compelling philosophical questions such as the nature of knowledge, the meaning of reality, what it means to live ethically, and the meaning and possibilities of justice. Philosophical ideas and questions provide a pervasive underpinning for much of our popular culture. And, equally importantly, popular culture increasingly presents itself as the platform for shared discourse within our society and the world.

*Transfer Curriculum Goal(s): 6*

#### **PHIL 1417 Immortality and the Afterlife**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course examines concepts of the afterlife, personal survival and immortality from the perspectives of religion, philosophy and science. Examination of afterlife beliefs of major world religions will include detailed investigation of concepts of paradise, physical resurrection, reincarnation, and cosmic unity. Philosophical arguments for and against survival as well as analysis of theories of self and mind as seen from the perspectives of dualism, materialism, hypophenomenalism and functionalism will be examined in terms of their relationship to various types of survival, contemporary views derived from near death experiences, quantum physics and probability will also be considered.

*Transfer Curriculum Goal(s): 2,6*

#### **PHIL 1421 Critical Thinking**

**Credits: 3**

*Prerequisite: Accuplacer Reading Score of 78 or greater*

*Co-Requisite: none*

This course helps students develop analytical and reasoning skills that will permit them to more effectively understand and discern the logical content of various types of persuasive communication, which will empower them to: 1) defend themselves from deceptive arguments and attempts to persuade, as well as 2) to more precisely clarify and evaluate their own thoughts, beliefs, values and goals. Students will learn about uses and misuses of language, common cognitive errors, recognition and formal analysis of good and bad arguments, and how to articulate and critically assess moral implications of claims.

*Transfer Curriculum Goal(s): 1,2*

#### **PHIL 1422 Honors Critical Thinking**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

*Co-Requisite: none*

Honors Critical Thinking focuses on teaching skills needed for effective evaluation of belief, better decision-making, and precision communication. Course content is divided into three areas: (1) principles of informal logic; (2) psychological pitfalls that distort thought; and (3) uses and abuses of language. Students will learn to construct bias-free, sound, and cogent arguments. Emphasis will be on communication, presenting and defending arguments in class debate, short presentations, and a series of written assignments. Each semester will feature a class-determined investigative project dealing with a single topic such as, for example: the lures of pseudoscience, medical quackery, deception in advertising, and media and institutional bias.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 1,2*

#### **PHIL 1460 Logic**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to the basic concepts, principles, and methods of argument analysis and evaluation, including deductive and inductive reasoning, validity, soundness, truth tables, Aristotelian logic, Venn diagrams, indirect deductive proofs, and principles of induction.

*Transfer Curriculum Goal(s): 2,4*

#### **PHIL 2410 Introduction to Philosophy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is a first course in philosophy explains what it means to be a philosopher and to think philosophically about questions that aren't immediately answerable. Possible topics include the nature of reality, idealism, the difference between a priori and empirical knowledge, values, social philosophy, and the value of philosophy from any answers it may provide.

*Transfer Curriculum Goal(s): 2,6*

#### **PHIL 2420 Ethics**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Course content will include discussion and analysis of what results when one attempts to think philosophically about questions of morality and value. This course will examine issues of moral motivation and responsibility, and explore an array of possible answers to questions of right and wrong, and good and bad by looking at classical and contemporary moral theories. It will involve responding through discussion forums, class activities, and writing assignments or tests.

*Transfer Curriculum Goal(s): 6,9*

#### **PHIL 2421 Honors Ethics**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

The purpose of this course is to examine a variety of contemporary moral issues from a philosophical standpoint and to

explore some of the many approaches and methods that can be used to clarify our thinking about these and other ethical issues, as well as to assist us in making reasoned moral judgments.

*Transfer Curriculum Goal(s): 6,9*

#### **PHIL 2422 Medical Ethics**

**Credits: 3**

*Prerequisite: Accuplacer Reading Score of 78+*

*Co-Requisite: none*

This course examines moral issues arising in connection with medical practice, research, and emerging bio-technologies. Topics such as the right to healthcare, definition of health and illness, genetic counseling, bio-engineering, euthanasia, abortion, contraception, surrogate motherhood, codes of professional conduct, and allocation of scarce medical resources will be discussed within the framework of classic and contemporary ethical theories.

*Transfer Curriculum Goal(s): 6,9*

#### **PHIL 2430 Contemporary Moral Problems**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The purpose of this course is to examine a variety of contemporary moral issues from a philosophical standpoint and to explore some of the many approaches and methods that can be used to clarify our thinking about these and other issues, as well as to assist us in making reasoned moral judgments.

*Transfer Curriculum Goal(s): 6,9*

## **PHOTO TECHNOLOGY**

#### **PHIM 1114 Digital Darkroom**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course focuses on the use of image editing software such as Adobe Photoshop and Lightroom as it applies to digital photography. Students will develop skills in Adobe Bridge, Lightroom and Photoshop to manage photographic workflow, image editing and compositing and file management techniques.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1119 Matting & Framing**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

Students learn to “finish” images using folders, frames, matting, lamination, and spray. A variety of skills are used to fit industry needs.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1120 Intro to DSLR Cameras**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This focus of this course is the operation of digital single lens reflex cameras. Students will create single and video imagery. Equipment capabilities, HD video, visual storytelling, exposure control, production, and concepts of communication will be discussed in this course.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1122 Photo Composition**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course focuses on developing picture-taking skills. Students learn principles of visual art, Gestalt psychology, composition, elements of design, perspective, and digital camera controls. Students reinforce their learning through printing their own images.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1126 Intro to Adobe Creative Cloud**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the basic levels of Adobe PhotoShop, Illustrator and InDesign software tools and techniques.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1128 Business of Media**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will explore effective business practices relating to the media industry. The course is designed to assist students in gaining employment. Topics of study include: career options, small business development, accounting procedures, marketing techniques, portfolio creation, resumes, cover letters and business plans, and interview techniques.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1160 Basic Photo & Processing**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is to instruct students in general skill of image capture and output. Single lens reflex cameras, processing and printing variables, black and white and color materials, and practices of quality control are covered. This course provides traditional darkroom experience as well as basic digital photography training.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1164 Survey of Photography**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is the study of the imaging industry in general. Students study key players of photography (capture & output), graphics, reprographics, and video to develop a historical perspective of the industry, which corresponds to the current marketplace. An assessment of workplace competencies is given, which provides a starting point for additional instructional assessment, for each individual in the program.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1172 Photo Printing Systems**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is to learn about imaging systems of output or printing. Chemistry, ink, and dye sublimation equipment will be presented. Topics of study include color theory, quality control, product standards, workflow, and problem solving. This course also provides students with an introduction to image capture, print matting and archival presentation.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1174 Studio Photographics**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is focused on operations and control of photographic studio equipment and cameras. Studio lighting tools and techniques are covered as well as backgrounds and props. Still and video topics are covered. Professional lab products and workflow are emphasized.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1176 Visual Relationships**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is visual art expressed through the medium of photography. Topics of study include: image capture and output, lighting, design, perception and imaging, matting/framing presentation, typography, color relationships as expressed through use of a color wheel, and related topics. Students will be assessed in workplace competencies. No prerequisite -- although CART 1105 is helpful.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1178 Business Topics**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine business principles as it applies to portrait photography. Students will become familiar with business types and models, simple marketing, pricing and serving clients.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1284 Digital & Video Photographics**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is digital capture, output, and related software. Students build upon previous knowledge to incorporate advanced topics in camera control, lighting, photographic printing, production, and software found in Adobe Creative Suites.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1310 Portrait Photography**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is the art of photographing people in a studio environment. Concepts of posing, basic lighting and modifiers, along with participation in related seminars are additional topics.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1315 Photo Inkjet Printing**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides instruction on printing photographs with inkjet printers and experience in photographic interest areas such as nature, macro, and fine art photography. Students must have a working knowledge of digital cameras and be able to work independently. This is an elective course and may be taken in an independent setting with instructor consent.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1316 Creative Camera/Darkroom**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers color management in digital inkjet and alternative digital printing methods. The mechanics of the color photographic process and the operation of equipment used in photographic printing will also be covered. Color management systems and profiling techniques are emphasized.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1368 Image Editing**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is an introduction to the use of image editing software such as Photoshop and Photoshop Elements. Tool functions, file handling, retouching, image manipulation and printing techniques are topics addressed.

*Transfer Curriculum Goal(s): none*

#### **PHIM 1390 Internship**

**Credits: 1-3**

*Prerequisite: instructor's approval*

*Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

#### **PHIM 2110 Color Management Systems**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course covers information and tools used in color balancing and image profiling. Silver halide and digital systems are discussed topics. Students will take the Society of Photographic Engineers exam, an industry standard. A laptop computer is required.

*Transfer Curriculum Goal(s): none*

#### **PHIM 2111 Art Direction**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

The purpose of this course is to provide an opportunity for art directors and photographers to work together to create products. Commercial photography techniques are emphasized. Students will demonstrate learned skills, share information, and provide effective communication.

*Transfer Curriculum Goal(s): none*

#### **PHIM 2112 Fine Art Printing**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

The focus of this course is to gain knowledge and experience in problem-solving in computers, software, and fine art inkjet printing systems used in photographic and art reproduction applications.

*Transfer Curriculum Goal(s): none*

#### **PHIM 2175 Photographic Certification and Business**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

In this course students will be completing the Certified Photographic Counselor (CPC) and/or the Society of Photofinishing Engineers certification as well as the SkillsUSA

Photography assessment. Students apply basic photographic knowledge and skills to advanced exercises such as evaluating camera and printing equipment, developing solutions to color problems, formulating customer service techniques, and analyzing small business set up.  
*Transfer Curriculum Goal(s): none*

**PHIM 2276 Presentations**  
**Credits: 3**

*Prerequisite: none*  
*Co-Requisite: none*  
This focus of this course is the preparation of personal presentation as it relates to employment. Students evaluate the economic condition of the industry, evaluate niche markets, and develop employment strategies as they pertain to an individual's goals. Photo business cards, product pricing, American culture, organizational change, and business philosophy are likely topics of discussion.  
*Transfer Curriculum Goal(s): none*

**PHIM 2286 Outdoor Photography**  
**Credits: 3**

*Prerequisite: none*  
*Co-Requisite: none*  
This is an advanced course in photography which provides students opportunity to photograph in various outdoor lighting situations. Composition and capture skills are practiced and fine-tuned. Aerial photography may be also introduced. Students must have the flexibility to travel and spend additional time in the field and know how to operate output equipment for creating gallery displays.  
*Transfer Curriculum Goal(s): none*

**PHIM 2296 Corporate Communication**  
**Credits: 4**

*Prerequisite: none*  
*Co-Requisite: none*  
The focus of this course is the development of a student portfolio. Students will create a personal presentation for employment. Students will learn marketing terminology, strategies, and related concepts common in the imaging workplace.  
*Transfer Curriculum Goal(s): none*

**PHIM 2320 Photography in Social Media**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
The focus of this course is to develop introductory picture-taking, computer enhancement, and social media skills. During this process, students will learn how to link their camera exposures with their personal computer devices and share images in various mediums. In addition to single images, basic principles of video capture and output will also be discussed. This class is an elective course.  
*Transfer Curriculum Goal(s): none*

## PHYSICAL EDUCATION

**PHED 1502 Circuit Training**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This is a course designed to develop cardio-respiratory endurance, flexibility, muscle endurance and muscle strength. A circuit of selected weight machines and aerobic stations will be used. It allows each individual an appropriate starting point and rate of progression.  
*Transfer Curriculum Goal(s): 11*

**PHED 1505 Fitness Walking**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course emphasizes the basics of fitness and conditioning with regard to cardio fitness. Students will begin at their level of fitness and work at their own speed.  
*Transfer Curriculum Goal(s): 11*

**PHED 1508 Bicycling**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course is designed to stimulate interest in cycling as a recreational activity and its contribution to the physical well-being of the participant. Must furnish own cycle.  
*Transfer Curriculum Goal(s): 11*

**PHED 1510 Beginning Skiing/Snowboarding**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course is an introduction to the basics of downhill (alpine) skiing. Clothing, equipment selection and safety will be discussed and demonstrated. Basic techniques of snowplowing, tow ropes and chair lifts will be taught. Extra fee will be collected. Additional time outside of class will be required.  
*Transfer Curriculum Goal(s): 11*

**PHED 1511 Advanced Skiing/Snowboarding**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course is for experienced skiers/snowboarders to enhance their skills on the slopes. Safe practices, controlling turns, learning to jump and maneuver in the terrain park will be covered. Students will have a chance to teach/assist others.  
*Transfer Curriculum Goal(s): 11*

**PHED 1512 Beginning Yoga**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course introduces yoga poses (asanas), relaxation, and breathing techniques. The practice of yoga promotes proper posture, strength, flexibility and stress relief for people of all ages and abilities. Yoga is a non-competitive activity.  
*Transfer Curriculum Goal(s): 11*

**PHED 1513 Aerobic Conditioning**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This is an overview of various training techniques for aerobic conditioning. An elevated heart rate will be achieved daily through interval training, circuit training, calisthenics, yoga poses, and cardio machines. Students will monitor their improvement in cardiovascular fitness.  
*Transfer Curriculum Goal(s): 11*

**PHED 1514 Cardio Sampler**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course offers an aerobic sampler. We will split up into

different sections. Every few weeks the aerobic style will change from traditional step aerobics to resistance aerobics, Boso Ball aerobics, boot camp aerobics, and callisthenic aerobics.  
*Transfer Curriculum Goal(s): 11*

**PHED 1516 Yoga for Stress Relief**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course teaches yoga with an emphasis on gentle and restorative asanas (poses), pranayama (breathing) and an introduction to meditation for any age and fitness level. The American Heart Association, Office of Veterans Affairs, and the American Psychological Association all recommend yoga and/or breathing and meditation as a way to reduce and deal with stress or anxiety.  
*Transfer Curriculum Goal(s): 11*

**PHED 1520 Vinyasa (Flow) Yoga**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course emphasizes putting poses together into a series (vinyasanas) and is for students with some previous yoga experience. Knowledge of basic standing poses and relaxation techniques is recommended. Expertise in strength and flexibility is not required, but students should be generally fit. Students will be encouraged to explore yoga theory and learn the Sanskrit name for each asana.  
*Transfer Curriculum Goal(s): 11*

**PHED 1521 Body Conditioning**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course provides progressive fundamental conditioning of the body for health and strength through systematic use of free weights.  
*Transfer Curriculum Goal(s): 11*

**PHED 1522 Weight Training**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course is an advanced course in body conditioning and training with the use of free weights.  
*Transfer Curriculum Goal(s): 11*

**PHED 1523 Strength Training for Women**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course is an introduction to the weight room and its uses as well as a comprehensive approach to strength training for women of all ages.  
*Transfer Curriculum Goal(s): 11*

**PHED 1524 Recreational Sampler**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course will introduce a wide variety of recreational pursuits in the lakes area and the opportunity to try a number of them in an instructional and safe setting. The goal is to assist students in finding enjoyable, lifelong pursuits that add quality to their lives.  
*Transfer Curriculum Goal(s): 11*

**PHED 1525 Personal Protection Awareness**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course teaches the physical and mental aspects of self-defense, relating to citizens. Students will learn to recognize threats and respond appropriately. This is not traditional martial arts. It is a no-nonsense, practical self-defense system. Emphasis is placed on clear thinking, effective strategy, and physical techniques. These concepts are critical to personal protection.  
*Transfer Curriculum Goal(s): 11*

**PHED 1534 Beginning Golf**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This is a course for those interested in learning the fundamentals of golf. Emphasis will be placed on proper footwork, approach, delivery, and scoring. Rules and etiquette governing play will be stressed.  
*Transfer Curriculum Goal(s): 11*

**PHED 1536 Advanced Golf**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This is a course for those interested in learning the fundamentals of golf. Emphasis will be placed on proper footwork, approach, delivery, and scoring. Rules and etiquette governing play will be stressed.  
*Transfer Curriculum Goal(s): 11*

**PHED 1541 Bowling**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This is a course for those interested in learning the fundamentals of bowling. Emphasis will be placed on proper footwork, approach, delivery, and scoring. Rules and etiquette governing play will be stressed.  
*Transfer Curriculum Goal(s): 11*

**PHED 1544 Basketball - Coed**  
**Credits: 1**

*Prerequisite: none*  
*Co-Requisite: none*  
This course provides the basic skills and strategies of competitive basketball. Emphasis will be placed on proper passing, shooting, and defensive techniques, as well as rules of the game. Individual skills and team play will be covered.  
*Transfer Curriculum Goal(s): 11*

**PHED 1553 Power Volleyball**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*  
This course provides the basic skills and strategies of competitive volleyball. Emphasis will be placed on proper passing, setting and hitting techniques, as well as rules of the game. Individual and team play will be covered.  
*Transfer Curriculum Goal(s): 11*

**PHED 1570 Theory of Coaching**  
**Credits: 2**

*Prerequisite: none*  
*Co-Requisite: none*

This course presents the theory and techniques of coaching competitive sports. The fundamental concepts and basic trends in the field of coaching will be presented. Coaching history, philosophy, psychology, pedagogy, and physiology, will be examined and analyzed.

*Transfer Curriculum Goal(s): none*

#### **PHED 1583 Athletic Training**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers prevention, care, taping techniques of ankles, knees, wrist, fingers etc. and rehabilitation of athletic injuries.

*Transfer Curriculum Goal(s): none*

#### **PHED 1594 Fitness for Life**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This is a course for students of all ages that covers all aspects of exercise and physical fitness. The focus is on self-evaluation and personal program planning. Exercise quackery, guidelines for exercise and the health benefits of exercise will be discussed. Other topics such as nutrition, stress management, and life styles for healthy living are also covered.

*Transfer Curriculum Goal(s): 11*

#### **PHED 1597 Honors Fitness for Life**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This is a course for students of all ages and fitness levels introducing the main components of wellness and of physical fitness – cardio respiratory endurance, muscular strength and endurance, flexibility, body composition, and nutrition. Students will focus on self-evaluation in each component and personal program planning for living a healthier life. Current topics in wellness and/or fitness will be addressed. Students will choose a capstone project which will be either a written or oral research based study, or service learning activity based project.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 11*

#### **PHED 1599 Topics in Physical Education**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in physical education. Offered on demand.

*Transfer Curriculum Goal(s): none*

#### **PHED 2501 Varsity Sports - Football**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate football. Students practice daily and compete in the Minnesota College Athletic

Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2502 Varsity Sports - Volleyball**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate volleyball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2503 Varsity Sports - Men's Basketball**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is first year athletic participation in intercollegiate basketball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2504 Varsity Sports - Women's Basketball**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is the first season of athletic participation in intercollegiate basketball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2505 Varsity Sports - Baseball**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate baseball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2506 Varsity Sports - Softball**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate softball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2507 Varsity Sports - Golf**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is first year athletic participation in intercollegiate golf. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need

instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2511 Varsity Sports - Football II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate football for a second season. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2512 Varsity Sports - Volleyball II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate volleyball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2513 Varsity Sports - Men's Basketball II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is the second season of athletic participation in intercollegiate basketball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2514 Varsity Sports - Women's Basketball II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This is the second season of athletic participation in intercollegiate basketball. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2515 Varsity Sports - Baseball II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Second season of athletic participation in intercollegiate baseball.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2516 Varsity Sports - Softball II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Athletic participation in intercollegiate baseball for a second season. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

#### **PHED 2517 Varsity Sports - Golf II**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is the second season of athletic participation in intercollegiate golf. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

*Transfer Curriculum Goal(s): 11*

## **PHYSICS**

#### **PHYS 1401 College Physics I**

**Credits: 4**

*Prerequisite: MATH 1470 or Accuplacer College Math score of 63 or higher*

*Co-Requisite: none*

This course is an algebra-based introductory physics and covers the mechanics and mechanical waves component of classical physics. The course topics include: kinematics in one- and two-dimensions, vectors, force, dynamics, circular motion, gravitation, work and energy, linear momentum, rotational motion, rotational work and energy, angular momentum, static equilibrium, periodic motion, waves, and sound. The course emphasizes conceptual understanding and problem-solving. The laboratory component is designed to reinforce conceptual understanding with hands-on experiences and physical measurements, and to provide opportunities for scientific report writing. The course uses digital data acquisition and simulations to help students visualize and understand abstract concepts.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1402 College Physics II**

**Credits: 4**

*Prerequisite: MATH 1470 and PHYS 1401*

*Co-Requisite: none*

This course is an algebra-based introductory physics. It is a continuation of PHYS 1401. The course topics include: Fluids, thermodynamics, electromagnetism, AC and DC circuit, electromagnetic waves and light, optics, modern physics including atomic and nuclear physics. In addition to the emphases placed in the first semester physics course, an oral presentation of the student project is required. Knowledge of trigonometry is needed for a successful completion of this course.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1407 Principles of Physics**

**Credits: 3**

*Prerequisite: College Math Accuplacer score of 50 or higher, or ACT score of 22*

*Co-Requisite: none*

This course introduces major concepts in physics through algebra-based description, problem-solving, and experimentation. Topics covered include motion, force, energy, momentum, mechanical waves, sound, properties of matter and fluid, heat, electricity & magnetism, atomic physics, and radiation and radioactivity. The hands-on laboratory experiments and experimental projects involve group work, measurements, analysis, report writing, and presentation. Students will develop critical thinking skills, apply scientific methods, and learn communication skills through oral presentations and written reports.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1411 Classical Physics I**

**Credits: 5**

*Prerequisite: MATH 1477 or MATH 1480*

*Co-Requisite: none*

This course is a calculus-based introductory physics. The topics include kinematics in three-dimensions, vectors, force, dynamics, circular motion, gravity, energy, linear momentum, rotational motion, rotational energy, angular momentum, equilibrium and elasticity, fluid mechanics, periodic motion, waves, and sound. The course emphasizes conceptual understanding, critical thinking skills, and problem-solving. The laboratory component reinforces conceptual understanding through scientific inquiry, physical measurements, and scientific modeling. The course also emphasizes formal report writing based on student projects. The simulations and digital/wireless data acquisitions are used to help students visualize and understand abstract concepts.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1412 Classical Physics II**

**Credits: 5**

*Prerequisite: PHYS 1411; MATH 1477 or MATH 1480, and MATH 1478*

*Co-Requisite: none*

This course is a calculus-based introductory physics. The course is a continuation of the first semester physics course. The topics include ideal gas law, kinetic theory of gases, thermodynamics, electricity, magnetism, AC and DC circuits, electromagnetic waves, optics, and relativity. In addition to the emphases placed in the first semester physics course, an oral presentation of the student project is required.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1425 Honors Astronomy/Physics**

**Credits: 4**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This course introduces concepts in astronomy and physics through demonstration, description, experimentation, and modeling. The topics in physics include motion, gravity as force, energy, properties of matter, heat, electromagnetism, light, relativity, quantum theory, and structure of matter. The astronomy topics include stars and stellar evolution, galaxies, galactic clusters, the structure of the local universe, the laws governing the universe, cosmology, the early universe, and the rationale and evidence for black holes, dark matter, and dark energy. The laboratory activities provide opportunities for developing basic measurement and analysis skills. The student will develop critical thinking skills, apply scientific methods, and learn communication skills through oral presentation and written reports. Students in this course will be required to attend the Nobel Conference as a part of the course activity.

Students enrolled in this Honors course will be required to read additional scientific literature, participate in in-depth discussions, complete a capstone project including but not limited to: (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 1430 Concepts of Physics: A Universe of Hidden Charm**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces concepts in physics through demonstration, description, experimentation, and proportional relation. The topics covered include motion, Newton's Laws of Motion, energy, gravity, waves, sound, properties of matter,

heat, electricity, magnetism, and light. Selected topics from relativity, quantum theory, and structure of matter are also covered. The laboratory component provides opportunities for developing basic measurement and analysis skills, and conducting experiments in mechanics, heat, waves, sound, electricity, magnetism, optics, atomic structure, and radiation. The student will develop critical thinking skills, apply scientific methods, and learn communication skills through oral presentation and written reports. Mathematics at high school algebra level is used to unveil models of the known physical world.

*Transfer Curriculum Goal(s): 3*

#### **PHYS 2537 Modern Physics**

**Credits:**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): 3*

## **POLITICAL SCIENCE**

#### **POLS 1430 Introduction to Political Science**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to the basic concepts, philosophies, institutions and processes of government and politics. Topics of study include key concepts and facts, including the significant ideologies that influence modern governments. Study will also include comparative governmental systems with special emphasis placed on political leadership, terrorism, and types of warfare between nations. An examination of citizen participation in politics, political behavior, and political ideologies will also be included.

*Transfer Curriculum Goal(s): 5,9*

#### **POLS 1435 American Government and Politics**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course examines the players and institutions of contemporary American government and politics. Topics of study include: American political thought, the U.S. Constitution, federalism, civil liberties and civil rights, public opinion, interest groups, political parties, campaigns and elections, the mass media, Congress, the presidency, bureaucracy, and the judiciary. A special emphasis is placed on the role of citizen participation.

*Transfer Curriculum Goal(s): 5,9*

#### **POLS 1439 State and Local Government**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This is a general survey course on state and local government. Topics of study include federalism, state constitutions, political parties, interest groups, elections, state agencies, local government, and policy making. The course covers state legislatures and law-making with special emphasis on the Minnesota Legislature. The office of governor is examined as is the Minnesota State Constitution and state government's relationship to Minnesota's local units of government.

*Transfer Curriculum Goal(s): 5,9*

#### **POLS 1440 Society and Law**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces students to the basic concepts of the

law and the legal system in American society. Topics include the history of law, court organization, criminal law and procedure, constitutional law, administrative law, contracts and family law. This course examines how the law reflects society's values, why the law is closely connected to the political system and how the laws are enforced. Specific laws are analyzed and discussed.

*Transfer Curriculum Goal(s): 5,9*

#### **POLS 2401 Federal Indian Policy**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Surveys the development of United States Indian Policy. Examines the treaties, laws, and institutions that have been the basis of the trust relationship between the Indian people and the federal government. Course is offered on demand.

*Transfer Curriculum Goal(s): 5*

#### **POLS 2402 Tribal Government**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide an introduction to regional tribal governments by providing a history of their development, an overview of their structures, functions, powers and procedures. The course will compare and contrast these governments to other local, state and federal government, and discuss the varying approaches different tribal government have taken toward tribal business entities and the use of tribal business proceeds.

*Transfer Curriculum Goal(s): 5,9*

#### **POLS 2450 International Relations**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to the concepts and practice of international relations, especially politics between different nations. Topics of study include globalization; differing national systems, interests and motivations; foreign policy and diplomacy; war and threats to international security; international law and organizations; global economics and technology; and the future of international relations.

*Transfer Curriculum Goal(s): 5,8*

#### **POLS 2581 Topics in Political Science I**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Political Science. On demand.

*Transfer Curriculum Goal(s): none*

## **PRACTICAL NURSING**

#### **PNUR 1130 Life Span**

**Credits: 1**

*Prerequisite: Score of 78 or higher on Accuplacer Reading*

*Co-Requisite: none*

This course covers theories of human development and the progressive stages of physical, emotional, intellectual and social development during the life span.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1132 Infection Control**

**Credits: 1**

*Prerequisite: Score of 78 or higher on Accuplacer Reading*

*Co-Requisite: none*

This course covers scientific concepts related to the causes of infectious diseases, transmission of these diseases and methods of controlling their spread. In addition, the student will study how the human body responds and protects itself from these diseases.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1134 Pharmacology**

**Credits: 2**

*Prerequisite: admission to PN or Medical Assistant program*

*Co-Requisite: none*

This course develops the student's awareness of basic pharmacological concepts. It teaches the Practical Nursing students how to calculate medication dosages and perform conversions between measurement systems. It covers drug laws and standards and safe medication administration. Students learn about the actions of medications in the body, i.e. absorption, biotransformation, metabolism, and excretion. The various classifications of medications are discussed along with how to use medication references.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1138 Medical Terminology**

**Credits: 1**

*Prerequisite: Score of 78 or higher on Accuplacer Reading*

*Co-Requisite: none*

This course teaches students to recognize and build medical terms after learning the meaning of word parts. The course is based on a systems approach. Students will also learn to interpret and use common medical abbreviations.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1140 Medication Calculations for Health Care**

**Careers**

**Credits: 1**

*Prerequisite: Score of 65 or higher on Accuplacer Arithmetic or 52 or higher on Accuplacer Elementary Algebra*

*Co-Requisite: none*

This course is to introduce students to medical dosage calculations and the terminology associated with medication orders. Theory, skill, and terminology related to calculating medication dosages will be the focus of this course. Students will learn how to perform conversions between measurement systems. Students will review basic mathematical concepts related to medication administration.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1149 Clinical I**

**Credits: 3**

*Prerequisite: PNUR 1130, PNUR 1140*

*Co-Requisite: none*

In this beginning clinical laboratory course, the student will take care of selected adult clients at an entry level. This clinical experience will take place primarily in a long term care setting. The student will implement cares and skills that have been learned in prior laboratory and Practical Nursing theory courses. In addition, the student will demonstrate effective communication skills, maintain patient safety, and document cares accurately.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1150 Clinical II**

**Credits: 3**

*Prerequisite: PNUR 1132, PNUR 1138, PNUR 1140, PNUR 1149, PNUR 1168, PNUR 1265*

*Co-Requisite: none*

In this clinical course the student will be expanding upon the

knowledge, skills and attitudes necessary to assist individuals experiencing common health care problems that were started in PNUR 1149. The student will demonstrate skill in problem solving through the use of the nursing process as they provide care for a variety of clients throughout the life span and in different stages of the health/illness continuum appropriate to the role of the practical nurse. Observational experiences are provided in selected areas to enrich the clinical experience. Student will work full shifts that may include day and/or evening hours.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1151 Clinical Lab I**

**Credits: 2**

*Prerequisite: PNUR 1160*

*Co-Requisite: none*

In this beginning clinical laboratory course, the student will take care of selected adult clients at an entry level. This clinical experience will take place in a long term care setting. The student will implement cares and skills that have been learned in prior laboratory and Practical Nursing theory courses. In addition, the student will demonstrate effective communication skills, maintain patient safety, and document cares accurately.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1152 Clinical Lab II**

**Credits: 5**

*Prerequisite: PNUR 1134, PNUR 1151, PNUR 1265*

*Co-Requisite: none*

In this clinical course the student will be expanding upon the knowledge, skills and attitudes necessary to assist individuals experiencing common health care problems that were started in PNUR 1151. The student will demonstrate skill in problem solving through the use of the nursing process as they provide care for a variety of clients throughout the life span and in different stages of the health/illness continuum appropriate to the role of the practical nurse. Observational experiences are provided in selected areas to enrich the clinical experience. Student will work full shifts that may include day and/or evening hours.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1160 Practical Nursing Skills Lab**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers more complex nursing procedures. Concepts and rationales for clean/sterile techniques are explored along with instruction in procedures such as dressing changes, catheterization, suctioning, IV therapy, oxygen therapy, etc. Administration of oral and parenteral medications will also be taught. Documentation of these as well as other types of patient data will be covered, all within the context of the nursing process.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1161 Clinical Lab I**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

In this beginning clinical laboratory course, the student will take care of selected adult clients at an entry level. This clinical experience will take place in an acute care setting. The student will implement cares and skills that have been learned in prior laboratory and Practical Nursing theory courses. In addition, the student will demonstrate effective communication skills, maintain patient safety, and document

cares accurately.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1162 Clinical Lab II**

**Credits: 4**

*Prerequisite: PNUR 1134, PNUR 1161, PNUR 1265*

*Co-Requisite: none*

In this clinical course the student will be expanding upon the knowledge, skills and attitudes necessary to assist individuals experiencing common health care problems that were started in PNUR 1161. The student will demonstrate skill in problem solving through the use of the nursing process as they provide care for a variety of clients throughout the life span and in different stages of the health/illness continuum appropriate to the role of the practical nurse. Observational experiences are provided in selected areas to enrich the clinical experience. Student will work full shifts that may include day and/or evening hours.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1163 Clinical Lab III**

**Credits: 3**

*Prerequisite: PNUR 1162, PNUR 1166, PNUR 1175, PNUR 1270*

*Co-Requisite: none*

In this clinical laboratory, additional skills are performed, including IV therapy and professional responsibilities. Students will work full shifts in a clinical setting demonstrating correlation of theory and skills expected of new graduates. Clinical shifts will include day and evening hours.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1166 Gerontological Nursing**

**Credits: 2**

*Prerequisite: Admission to the PN program*

*Co-Requisite: none*

This course covers aging and the aging process. Students will identify physical, psychosocial and health needs of the elderly population. The course emphasizes the role of the nurse in health promotion of older adults, focusing on maximizing potential and minimizing the effects of aging. Some topics covered include; medication interaction with the elderly, elder abuse, community resources and common illnesses of the elderly.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1168 Psychosocial Nursing**

**Credits: 3**

*Prerequisite: Admission to the PN program*

*Co-Requisite: none*

This course presents general principles of communication in the health care setting. The course will build on the student's basic skills and assist in developing skills in the care of emotional/mental illness, substance abuse, and social problems emphasizing nursing interventions in all health care settings.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1175 Maternal Child Health**

**Credits: 2**

*Prerequisite: PNUR 1161, PNUR 1134, PNUR 1265*

*Co-Requisite: none*

This course describes signs of pregnancy, prenatal care, labor and delivery, and postpartum care. Complications of pregnancy, labor and delivery and postpartum, as well as fundamental nursing care of the neonate will be presented. The pediatric portion of the course describes the child's experience of hospitalization and health care adaptations for child and family. Care of the child with pediatric disease

conditions will be presented.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1265 Medical-Surgical Nursing I**

**Credits: 5**

*Prerequisite: admission to the PN program*

*Co-Requisite: none*

In this course a framework for nursing practice is explored. This framework, titled the nursing process, provides a systematic problem-solving method for nurses enabling them to identify and meet patient needs. Complex nursing procedures are discussed within this framework, as well as selected diseases of the various body systems. The role of nutrition in prevention of disease and its application in treatment of disease is included.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1270 Medical-Surgical Nursing II**

**Credits: 6**

*Prerequisite: PNUR 1134, PNUR 1161, PNUR 1265*

*Co-Requisite: none*

This course continued on where Medical-Surgical Nursing I finished. In this course selected diseases of the remaining various body systems are discussed within the framework of the nursing process. The role of nutrition in prevention of disease and its application in treatment of disease is included.

*Transfer Curriculum Goal(s): none*

#### **PNUR 1303 PN Refresher**

**Credits: 3**

*Prerequisite: Must be currently licensed or must apply to MN Board of Nursing for relicensure prior to beginning class*

*Co-Requisite: none*

This course is designed to refresh Licensed Practical Nurses who have been inactive or need to re-register their licenses with the Minnesota Board of Nursing. Topics covered in this class are the role of the LPN, the State of Minnesota Nurse Practice Act, legal and ethical issues, modalities in nursing care delivery systems, nursing process, and update in clinical practice with review of body systems and related skills. Clinical experience will be provided in the acute care setting.

*Transfer Curriculum Goal(s): none*

#### **PNUR 2360 Independent Study**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This student-generated course is an opportunity to study particular areas of interest not covered in the general curriculum.

*Transfer Curriculum Goal(s): none*

## **PSYCHOLOGY**

#### **PSYC 1423 Positive Psychology: The Science of Well-Being**

**Credits: 3**

*Prerequisite: Reading Accuplacer Score of 56 or higher*

*Co-Requisite: none*

This course will emphasize using science in the pursuit of optimal human functioning and a meaningful life, with a focus on human strengths and promoting the fulfilling lives of healthy people. This course will first present an introduction to the science of psychology and examine research findings in positive psychology, and then move on to explore applications that are personally relevant to the lives of students in areas such as school, work, close relationships and the community.

*Transfer Curriculum Goal(s): 5,9*

#### **PSYC 1425 Environmental Psychology**

**Credits: 3**

*Prerequisite: Reading Accuplacer Score of 56 or higher*

*Co-Requisite: none*

This course investigates the psychology of environmental problems as an interdisciplinary blend of psychology and environmental science by viewing current environmental issues through eight major psychological approach lenses. This course facilitates student understanding of how human consciousness and behavior contribute to, and result from, environmental threats. Learners will investigate how humans can choose to live in a manner that will ensure a sustainable future and how humanity is related to nature in terms of global interdependence, as well as how agriculturists can produce food sources to sustain a growing global population. Students who are interested in their roles as stewards of the preservation of nature for future generations can explore how psychology and the environment are interrelated. Learners will create individualized self-control projects (Behavior Change Plans) based on the seven aspects of personal lifestyle that most significantly impact the environment. They will describe how they can alter their daily lifestyles to live more responsible, sustainable, and conscious lives.

*Transfer Curriculum Goal(s): 5,10*

#### **PSYC 2421 General Psychology**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This class presents a general introduction to psychology as a biosocial science. This survey course will familiarize the student with the basic principles of psychology, show how psychologists employ the scientific method, and equip the beginning student of psychology with a working vocabulary of psychological terminology and critical thinking skills. Areas to be covered include research, the nervous system, learning, personality, memory, psychological disorders and therapy.

*Transfer Curriculum Goal(s): 2,5*

#### **PSYC 2423 Honors General Psychology**

**Credits: 4**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This honors class presents a general introduction to psychology as a biosocial science. This survey course will familiarize the student with the basic principles of psychology, show how psychologists employ the scientific method, and equip the beginning student of psychology with a working vocabulary of psychological terminology and critical thinking skills. Areas to be covered include research, the nervous system, learning, personality, memory, psychological disorders and therapy. Students will be introduced to psychological research and writing.

*Transfer Curriculum Goal(s): 2,5*

#### **PSYC 2431 Human Development**

**Credits: 3**

*Prerequisite: PSYC 2421*

*Co-Requisite: none*

This course is a lifespan approach to understanding human behavior. This course will cover theories and research findings in the field of psychology relevant to the psychological development of individuals across the lifespan. Areas to be

covered include physical, cognitive, emotional and social development. The course will examine similarities and differences between individuals in the various stages of the lifespan.

*Transfer Curriculum Goal(s): 5*

### **PSYC 2435 Educational Psychology**

**Credits: 3**

*Prerequisite: PSYC 2421*

*Co-Requisite: none*

This course investigates the psychology of learning as an interdisciplinary blend of psychology and education by focusing on how cognition and learning can be applied to the lives of students. This course facilitates the student's understanding of the educational journey of a typical student. Learners will investigate methods of teaching, theories of learning, and assessment methods. Students interested in child development, parents of children currently in school, and students interested in understanding their own educational process, can explore how psychology can be applied in the classroom, through a lens of diversity and cultural sensitivity.

*Transfer Curriculum Goal(s): 5,7*

### **PSYC 2470 Abnormal Psychology**

**Credits: 3**

*Prerequisite: PSYC 2421 or PSYC 2423*

*Co-Requisite: none*

This course examines psychological disorders, their causes and available treatments. Topics covered include anxiety, mood disorders, substance-related disorders, eating disorders, schizophrenia and disorders of childhood and adolescence. The difference between normal and disordered functioning and relevant social, economic, cultural and historical contexts will also be discussed. Applicable research will be reviewed in terms of cultural diversity implications from both historical and current perspectives.

*Transfer Curriculum Goal(s): 5,7*

### **PSYC 2570 Topics in Psychology**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics in psychology.

*Transfer Curriculum Goal(s): none*

## **READING**

### **READ 0591 Reading I**

**Credits: 4**

*Prerequisite: Accuplacer reading comprehension score of 40 or higher*

*Co-Requisite: none*

This course is designed for students to improve their basic reading and writing skills. Coursework includes developing a set of strategies for reading and responding to different types of college-level reading materials with an emphasis on general comprehension of print material, vocabulary development, and effective reading and study techniques. The course will consist of a combination of individual and group work, with an emphasis on student participation and interaction. This course develops integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, and critical thinking strategies.

*Transfer Curriculum Goal(s): none*

### **READ 0592 Reading II**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 56 or greater*

*Co-Requisite: none*

This course emphasizes critical reading strategies and college-level vocabulary. It presents college reading as information processing and focuses on strategies for improving comprehension, selection, organization, and recall. Reading materials represent a variety of academic disciplines and occupational areas. Course material will focus on textbooks and other types of reading materials prevalent in college. A combination of individual and group work will use both printed material and computers.

*Transfer Curriculum Goal(s): none*

### **READ 1401 College Reading**

**Credits: 3**

*Prerequisite: READ 1500*

*Co-Requisite: none*

This course is designed to help students understand fundamental academic reading strategies. Students will analyze and interpret what they read through discussion, writing and reading. Additionally, students will have the opportunity to: identify and use a wide variety of strategies for reading your college assignments, develop a repertoire of discipline-specific reading skills, know what to do when they don't understand something you read, apply appropriate strategies when you encounter new or technical words, participate effectively in a community of academic readers, summarize and evaluate critically the ideas presented in textbooks.

*Transfer Curriculum Goal(s): 2*

### **READ 1597 Topics in Reading**

**Credits: 1-5**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

### **READ 1598 Topics in Reading**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Reading. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **ROBOTICS**

### **RAST 1101 Industrial Electronics I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: RAST 1111*

This course covers resistance, capacitance, and inductance and their relationships with DC and AC voltages. The course begins with DC theory and covers Ohm's law, series circuits, Kirchhoff's law, series-parallel Circuits and networks. AC generation, RC/RL circuits, rectification and the use of test equipment will also be addressed. Active devices such as diodes will be covered on an introductory level.

*Transfer Curriculum Goal(s): none*

### **RAST 1102 Industrial Electronics II**

**Credits: 3**

*Prerequisite: RAST 1101*

*Co-Requisite: RAST 1212*

This course continues where Industrial Electronics I left off by covering resistive, inductive, and capacitive circuits. This course also includes digital electronics by covering numbering systems, logic gates, Boolean Algebra, sequential logic circuits, encoders, decoders, and digital to analog converters.

*Transfer Curriculum Goal(s): none*

### **RAST 1103 Motors and Drives**

**Credits: 3**

*Prerequisite: RAST 1101*

*Co-Requisite: RAST 1113, RAST 1206*

This course covers electrical safety, commonly used industrial electrical symbols, and industrial electrical design using wiring and line (ladder) diagrams. The course also covers industrial equipment such as: pushbuttons, relays, contactors, motor starters, and variable frequency drives. Preventive maintenance and troubleshooting techniques will also be covered.

*Transfer Curriculum Goal(s): none*

### **RAST 1104 Introduction to Automation**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to start-up, operation and simple programming of industry standard robots in the robot lab. Additional topics include robot safety, robot types, robot move types, program structure, motion control, decision making, peripheral control, robot control modes, and program examples.

*Transfer Curriculum Goal(s): none*

### **RAST 1105 Blueprint Reading**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the skills necessary to interpret drawings and make technical sketches. Projection systems, drawing symbols, working drawings, assembly drawings, piping drawings, schematics, block diagrams, cable drawings, wire lists and multipage drawings are studied as they relate to robotics and automation.

*Transfer Curriculum Goal(s): none*

### **RAST 1109 Computers in Industry**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers an introduction hardware and software components of personal computers. Items covered include the development of computers, working with multiple Microsoft operating systems, the use of Microsoft Office products, networking, data transmission, basic replacement of hardware, software installation, and working with peripherals such as floppy/hard/CD drives.

*Transfer Curriculum Goal(s): none*

### **RAST 1110 Introduction to Manufacturing**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides a basic overview of basic manufacturing processes and career opportunities within manufacturing. Students will participate in a manufacturing simulation in which they will analyze the manufacturing process for a product and redesign the process to incorporate a teaming approach. Students will be given an introduction to the critical nature of safety in manufacturing and to the role of the individual in maintaining a safe work environment. This course provides students with an opportunity to develop their interpersonal skills through interactive exercises conducted in a team setting. Debriefing these exercises with all members of the class helps ensure that the exercises translate into personal and interpersonal learning for the

participants.

*Transfer Curriculum Goal(s): none*

### **RAST 1111 Industrial Electronics Lab I**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: RAST 1101*

This course covers hands-on skills in basic electronics. A proto-board is used in conjunction with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the companion theory course. The laboratory procedure teaches the student basic test and measurement techniques.

*Transfer Curriculum Goal(s): none*

### **RAST 1113 Motors & Drives Lab**

**Credits: 3**

*Prerequisite: RAST 1111*

*Co-Requisite: RAST 1103, RAST 1206*

This course uses electrical safety procedures, electrical drawings, and commonly used symbols for hands on learning. The use of contactors, motor starters, relays, motors, limit switches, solenoids, and indicators will enhance the hands on learning experience and wiring of various circuits. Troubleshooting and repairing techniques will also be covered.

*Transfer Curriculum Goal(s): none*

### **RAST 1114 Math for Industrial Technology**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers topics such as calculator usage, SI unit conversions, algebraic applications of Ohm's & Power Laws, trigonometric functions, & dimensional analysis.

*Transfer Curriculum Goal(s): none*

### **RAST 1120 Introduction to Engineering Graphics**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces students to parametric modeling using the Solid Works program. Solid Works is prominent in industry and the theory it uses to create models is typical of this type of software.

*Transfer Curriculum Goal(s): none*

### **RAST 1130 Introduction to Automation**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

### **RAST 1206 Programmable Logic Controllers I**

**Credits: 3**

*Prerequisite: RAST 1101, RAST 1109*

*Co-Requisite: RAST 1103, RAST 1113*

This course covers the basic concepts of operation common to PLCs. Content will include basic uses of PLC operation, wiring input and output devices, sequencing, timing systems, countering systems, math functions, and programming techniques. This course introduces the Ladder Logic programming environment. Troubleshooting programs along with wiring will be practiced in the lab.

*Transfer Curriculum Goal(s): none*

### **RAST 1212 Industrial Electronics Lab II**

**Credits: 2**

**Prerequisite:** RAST 1111

**Co-Requisite:** RAST 1102

This course continues were “Industrial Electronics Lab I” left off by teaching hands-on skills in measuring and calculating resistive, inductive, and capacitive circuit parameters. This course also includes digital electronics by constructing circuits that demonstrate numbering systems, logic gates, Boolean Algebra, sequential logic circuits, encoders, decoders, and digital to analog converters.

*Transfer Curriculum Goal(s): none*

**RAST 2101 Application Planning & Layout**

**Credits:** 2

*Prerequisite:* RAST 1102, RAST 1212

*Co-Requisite:* none

This course covers the specifics of how a robotic application / automated manufacturing cell is designed. Included in the course are robotic placement within cell, types of robot(s) used within the cell, safety devices, electrical interfacing of controls, programming flow charting, developing timelines, fixture design, robot tooling design.

*Transfer Curriculum Goal(s): none*

**RAST 2105 Transducers**

**Credits:** 2

*Prerequisite:* RAST 1101, RAST 1104, RAST 1111

*Co-Requisite:* none

This course covers basic sensing terminology, both contact and non-contact sensing devices will be covered in both lecture and lab activities. These include inductive, photo, capacitive, analog, and machine vision. Students will during the lab portion of the class wire and measure sensor parameters using manufacturers data sheets, and sensor software. Included in the labs students will integrate the sensors as they would be used in common automated manufacturing systems. This includes integrating the devices into robot and plc I/O, programming plc, sensors and robots that give learners a practical understanding of how different sensors are used in the automated manufacturing environment.

*Transfer Curriculum Goal(s): none*

**RAST 2106 Industrial Electronics III**

**Credits:** 2

*Prerequisite:* RAST 1102

*Co-Requisite:* RAST 2116

This course covers bipolar transistors, voltage/current BJT operation, BJT characteristics, basic uses of BJT, BJT amplifier circuits. FET's, MOS FET's, power FET's, operational amplifiers, optoelectronics, robot I/O types, I/O setups, and configurations.

*Transfer Curriculum Goal(s): none*

**RAST 2116 Industrial Electronics Lab III**

**Credits:** 2

*Prerequisite:* RAST 1212

*Co-Requisite:* RAST 2106

This course requires that the student construct, connect, measure, and document parameters and operation of content covered and discussed in RAST 2106, such as bipolar junction transistors and amplifiers, field-effect transistors, op-amps, opto-electrical devices, and robot I/O.

*Transfer Curriculum Goal(s): none*

**RAST 2120 Offline Programming and Simulation**

**Credits:** 3

*Prerequisite:* MTRD 1130, RAST 2132

*Co-Requisite:* none

The course will introduce students to offline or virtual

programming utilizing a 3-D graphical simulation software platform utilized by a major robotics manufacturer. The student will utilize the simulation software package to virtually model an existing robotic system in order to simulate a robotic process, create and modify robot code, and conduct feasibility studies.

*Transfer Curriculum Goal(s): none*

**RAST 2121 SCADA Programming**

**Credits:** 2

*Prerequisite:* RAST 2355

*Co-Requisite:* none

This course will train students in higher programming levels of supervisory computer and data acquisition (SCADA). Students will design and create graphical user interfaces in order to control complex automated processes. Students will monitor multiple processes in order to provide status indication, process control, data collection, and historical data trending. Students will set up industrial network communication in order to read and write data points to and from other processors such as industrial robots, programmable logic controllers, vision systems, and other computer-based operating systems.

*Transfer Curriculum Goal(s): none*

**RAST 2122 HMI Programming**

**Credits:** 2

*Prerequisite:* RAST 2132, RAST 2355

*Co-Requisite:* none

This course will train students to design and program graphical user interfaces to control industrial robotic and automated systems. Students will create operator interface stations for local cell operators to provide input, control, and production information. Students will also create necessary complimentary code and driver setup for the required robot or controller communications.

*Transfer Curriculum Goal(s): none*

**RAST 2123 Robotic Vision Programming**

**Credits:** 2

*Prerequisite:* RAST 2132

*Co-Requisite:* none

The course will train students to design and program machine vision systems in order to integrate them into robotic and automated systems. Students will learn how to acquire data points to identify product, positioning, orientation, size, and various quality assurance measurements. Students will create and set up certain industrial networks in order to communicate required information.

*Transfer Curriculum Goal(s): none*

**RAST 2124 Lenses, Lighting, and Vision Hardware**

**Credits:** 2

*Prerequisite:* RAST 2132

*Co-Requisite:* none

This course will aid students in the application and design of machine vision systems. Students will learn different techniques in lighting product using multiple lighting sources, including visible, infrared, and ultra-violet. Students will learn about matching filters to lighting sources and camera lens focal lengths, and will be exposed to various physical camera hardware platforms in both two-dimensional and three-dimensional environments.

*Transfer Curriculum Goal(s): none*

**RAST 2132 Robotic Programming**

**Credits:** 3

*Prerequisite:* RAST 1104

*Co-Requisite:* none

This course is designed to begin the programming process used to develop complex robotic cell operations. These include program structure, program elements, special program software features and functions depending on controller application software such as welding, material handling, machine vision, interconnection of robot controller programs and programmable logic controller program handshakes that are commonly used in industry. This will include software and hardware motion control and cell user interfaces.

*Transfer Curriculum Goal(s): none*

**RAST 2134 Robotic Arc Welding**

**Credits:** 3

*Prerequisite:* RAST 1104, WELD 1117

*Co-Requisite:* none

*Transfer Curriculum Goal(s): none*

**RAST 2150 Introduction to Robot Operations**

**Credits:** 2

*Prerequisite:* none

*Co-Requisite:* none

This is an introductory course which will focus lecture and lab activities on operation of a robot within an existing automated manufacturing cell. Students will learn correct power up procedures for robot controllers, e-stop recovery, motion types, tooling control, teaching positional data, conditional program control, I/O types, references and addresses as they relate to robots and integrated automated machine processes.

*Transfer Curriculum Goal(s): none*

**RAST 2151 Robotics Integration Lab I**

**Credits:** 6

*Prerequisite:* RAST 2101

*Co-Requisite:* none

The robotics integration lab course begins the process of student working within application groups implementing the robotic automated manufacturing application designed and developed in RAST 2101 Application Planning and Layout. This will include building electrical control center, building robot end of arm tooling, product fixturing, programming of all programmable devices within the cell which can include multiple robots, programmable logic controllers, sensors and other devices. During the course students will document cell progress, evaluate operation of electrical, mechanical and programmed devices. Applications can be welding, material handling, assembly, CNC machine load unload, and replicate actual automated manufacturing processes in industry.

*Transfer Curriculum Goal(s): none*

**RAST 2153 Applied Robotic Certification Lab**

**Credits:** 6

*Prerequisite:* RAST 2101, RAST 2151

*Co-Requisite:* none

This course is designed for students desiring to expand their knowledge of specific advanced robotic applications used in industry. These applications may include vision guided robot applications, robotic welding integration, SCADA, robotic offline programming, robot cell simulations, and HMI (human machine interface). Once students select a specific application area, they will plan, document, program and interface the robot(s) and related software and equipment into a completed, functional robotic cell specific for that application.

*Transfer Curriculum Goal(s): none*

**RAST 2154 Robot Controller Maintenance**

**Credits:** 2

*Prerequisite:* RAST 1102, RAST 1212

*Co-Requisite:* none

This course covers normal maintenance and trouble shooting of robot controller components. Included are lab exercises in trouble shooting real and simulated faults within the controller using electrical and software trouble shooting procedures outlined within the manufacturers' manuals. Safe trouble shooting procedures will be discussed in lecture and practiced in the lab.

*Transfer Curriculum Goal(s): none*

**RAST 2165 Fluid Power**

**Credits:** 2

*Prerequisite:* PHYS 1401

*Co-Requisite:* none

This course covers fluid power and pneumatic symbols, basic circuits, properties of both fluid and compressed air. Storage, connections, valves, fitting, pressure area volume will be examined and explained. Actuating devices and controlling devices used in common automated systems will be covered.

*Transfer Curriculum Goal(s): none*

**RAST 2355 Programmable Logic Controllers II**

**Credits:** 2

*Prerequisite:* none

*Co-Requisite:* none

This course expands on the use of plc's covered in RAST 1106. Included in the course is integration of the plc hardware and programs to control complex robot applications. Included in the course are the use of advanced program functions within the plc software structure, examples include masked memory moves, sub routines, sequencers, math function, data types, data move commands, hardware / software communication parameters, external programming devices. Trouble shooting of both plc hardware, software and program logic will be covered.

*Transfer Curriculum Goal(s): none*

**RAST 2370 Topics in Robotics**

**Credits:** 1-6

*Prerequisite:* none

*Co-Requisite:* none

This course will examine selected topics of interest in Robotics. Offered on demand.

*Transfer Curriculum Goal(s): none*

**RAST 2371 Topics in Robotics**

**Credits:** 1-6

*Prerequisite:* none

*Co-Requisite:* none

*Transfer Curriculum Goal(s): none*

**RAST 2390 Robotics Internship**

**Credits:** 1-6

*Prerequisite:* instructor's consent

*Co-Requisite:* none

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

**RAST 2395 Advanced Robot Controller Programming**

**Credits:** 2

*Prerequisite:* RAST 1102, RAST 1212

*Co-Requisite:* none

This course covers the advanced move types while teaching



robot point data, system files, tool offsets, I/O mapping, file manipulation that a technician would be required to understand and program a complete robotic application such as welding, painting or assembly.  
*Transfer Curriculum Goal(s): none*

#### **RAST 2399 Independent Study**

**Credits: 1-5**  
*Prerequisite: instructor's consent*  
*Co-Requisite: none*

This student-generated course is an opportunity to study particular areas of interest not covered in the general curriculum.

*Transfer Curriculum Goal(s): none*

## **SOCIOLOGY**

#### **SOCL 1401 Introduction to Sociology**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

This foundation course is highly recommended as the starting point from which students may logically proceed to higher level sociology classes. Students will be introduced to the fundamental concepts of the sociological perspective, including culture, socialization, organization, authority, deviance and inequality. Using the scientific method, students will hone their critical thinking skills by interpreting, analyzing, and evaluating the social world.

*Transfer Curriculum Goal(s): 2, 5*

#### **SOCL 1403 Honors Introduction to Sociology**

**Credits: 3**  
*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This foundation Honors course is highly recommended as the starting point from which students may logically proceed to further study of sociology. Students will be introduced to the fundamental concepts of the sociological perspective, including culture, socialization, organization, authority, deviance and inequality. Students in the honors course will be required to write papers reflecting a substantial understanding of the principle concepts of the sociological perspective.

*Transfer Curriculum Goal(s): 5,8*

#### **SOCL 1472 Sociology of the Family**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course examines contemporary issues facing families in the United States. Students will examine key topics in the sociology of families such as marriage, cohabitation, divorce, teen pregnancy and family violence. Attention will also be given to the variations in families by race, class, gender, and sexual orientation. Throughout the course, students will refine their "sociological imaginations" in relation to family life. How are families shaped by their social environments? Why are families changing? Are the changes as dramatic as some social commentators claim? Is "the family" indeed breaking down?

*Transfer Curriculum Goal(s): 5*

#### **SOCL 2405 Criminology**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

Students will study the nature and origins of crime, past and

present theories of crime, the social construction of criminality, the social costs of incarceration, and cross-cultural strategies for addressing crime issues and decriminalization of consensual crimes.

*Transfer Curriculum Goal(s): 5*

#### **SOCL 2411 Social Problems**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

In this course students will examine current social problems from a sociological perspective. Students will focus on how social problems come to be defined, the ramifications of these problems, and possible solutions. Who is poor and why? Why do some people engage in criminal activities while others do not? Is the "War on Drugs" working? The answers to these and other questions will be explored.

*Transfer Curriculum Goal(s): 5,9*

#### **SOCL 2422 Culture and Environment**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

Students will examine environmental issues from a sociological perspective. The focus will be on social, political, and economic factors which encourage or discourage protection of the natural life support systems of earth. What steps are going to be required to restore our damaged resources and create a sustainable society for future generations? Considering the implications of what we have studied, students will be encouraged to develop a personal philosophy.

*Transfer Curriculum Goal(s): 5,10*

#### **SOCL 2480 Sociology of Death and Dying**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course examines death, dying and bereavement from a variety of perspectives (e.g., historical, cross-cultural and social-psychological), but it emphasizes a sociological perspective on death and dying. Among the topics covered are: the social meaning of death, America as a "death-denying" culture, the dying process, life after death, euthanasia, suicide, hospice care, funerals and body disposition, the American Healthcare system, diversity in death rituals, and the grieving process.

*Transfer Curriculum Goal(s): 5*

#### **SOCL 2481 Race, Ethnicity & Oppression**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

Students will investigate the historical factors and events that explain oppressive acts and ideas in the present. Positive contributions of oppressed groups to modern culture and everyday life will be noted. Students will debate solutions to issues which have proven to be very controversial.

*Transfer Curriculum Goal(s): 5,7*

#### **SOCL 2599 Topics in Sociology**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course will examine selected topics of interest in Sociology. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **SPANISH**

#### **SPAN 1401 Beginning Spanish I**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is an entry level language class. Beginning level vocabulary groupings (pastimes, family, time, clothing, foods) will be used in elementary conversations. Grammar will include present tense of regular verbs, stem-changers, present progressive, irregulars, reflexives and some idiomatic constructs. Preterite tense of regular verbs will be introduced, time permitting. Graded level readings are used for comprehension and paired activities and role-play are implemented for beginning conversational interaction. Cultural data and correct intercultural communication is introduced by country.

*Transfer Curriculum Goal(s): 8*

#### **SPAN 1402 Beginning Spanish II**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is a continuation of SPAN 1401. Basic vocabulary groupings will be added (town, travel, social issues, as per text) at a more diverse topic level. Short readings related to Spanish-speaking countries are introduced for pronunciation and comprehension exercises. Grammar and vocabulary is practiced through writing and oral class participation. Advanced grammar includes: preterit, conditional, imperative (commands), present tense subjunctive. Cultural activities are an integral piece of each lesson. (SPAN 1401, 1 year of *high school Spanish or equivalent recommended.*)

*Transfer Curriculum Goal(s): 8*

#### **SPAN 1597 Topics in Spanish**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course will examine a specialized selected topic related to Spanish language and / or Spanish language cultures. On demand.

*Transfer Curriculum Goal(s): none*

#### **SPAN 1598 Topics in Spanish**

**Credits: 1-3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course will examine a specialized selected topic related to Spanish language and / or Spanish language cultures. On demand.

*Transfer Curriculum Goal(s): none*

#### **SPAN 2401 Intermediate Spanish I**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is a review of the fundamentals in grammar and vocabulary covered in the first year (or years) of Spanish language study, with amplification to more advanced structures and complex language usage. The remaining verb tenses (future, conditional, subjunctives) will be introduced through reading, writing and speaking. Graded level readers are used for pronunciation, comprehension and cultural information, providing topics in art, music, politics and current events. Short essays and conversations complete the language skill practices. SPAN 1402 or equivalent (2-3 years of high school Spanish) recommended.

*Transfer Curriculum Goal(s): 6,8*

#### **SPAN 2404 Intermediate Spanish II**

**Credits: 4**  
*Prerequisite: none*  
*Co-Requisite: none*

This course follows SPAN 2401 in sequence of grammar acquisition. Review begins with the present subjunctive formation and uses. Continued emphasis will cover: Reflexives, Ser/Estar, passive voice, perfect tenses and finally, the introduction of imperfect subjunctive. Grammar practice and the perfecting of language structures is emphasized. Vocabulary will reflect upper level constructions, idioms, words frequently confused and cultural variances. This course is also designed to promote communication in the target language. Graded level readers provide reading practice, grammar review, vocabulary building and cultural reference. Role play, videos, newspapers, magazines and native speaker guests serve as a basis for class discussion, enhance reading, listening and comprehension skills.

*Transfer Curriculum Goal(s): 6,8*

#### **SPAN 2420 Many Faces of Mexico**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

This interdisciplinary course explores the cultural, historical and social realities which together form contemporary Mexico. By studying the roots (Aztec, Toltec, Olmec) through the Spanish colonization (Cortés – Santa Anna), U.S. / Mexican relations (The Alamo to THE WALL), we arrive at the present with a better understanding of today's economical, political and sociological interrelationship. What future will we forge between these two neighbors?

*Transfer Curriculum Goal(s): 6,8*

#### **SPAN 2425 Cultures of Latin America**

**Credits: 3**  
*Prerequisite: none*  
*Co-Requisite: none*

This course includes an overview of pre-Columbian cultures (Maya, Inca, Amazonian), the effects of the incoming Spanish and Portuguese cultures and how these roots have evolved into current Latin American situations. Issues covered include the politics, religions, economics, gender and rich cultural diversity of the area. Where does contemporary Latin America fit globally? What is the U.S. / Latin American past and present relationship? Specific countries will vary by semester.

*Transfer Curriculum Goal(s): 5,8*

## **SPECIALTY CROPS MANAGEMENT**

#### **SCMT 1110 System Goal Setting**

**Credits: 1**  
*Prerequisite: none*  
*Co-Requisite: none*

This course is geared towards people who are thinking about starting a business growing specialty crops. Students will consider several major factors before deciding whether or not to become a specialty crop producer. Advantages and disadvantages of different crops will be covered.

*Transfer Curriculum Goal(s): none*

#### **SCMT 1111 Introduction to Specialty Crops**

**Credits: 2**  
*Prerequisite: none*  
*Co-Requisite: none*

This course introduces the student to specific crop enterprise opportunities available to generate income on limited acreage. Emphasis will be placed on establishing family and busi-

ness goals that will help the student select crop enterprises that would be compatible with their economic requirements and management ability.

*Transfer Curriculum Goal(s): none*

**SCMT 1112 Introduction to Financial Planning and Analysis**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce the student to the process of financial planning and analysis for the specialty crop business. Students will establish an effective record keeping system and learn how to use the information to plan cash flow needs and monitor the performance of the business.

*Transfer Curriculum Goal(s): none*

**SCMT 1114 Marketing of Specialty Crops**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the steps involved in developing a strategy to sell locally grown produce. Students will estimate the population in their marketing area and determine if farmer's markets, wholesale or consumer supported agriculture (CSA) will provide the best approach for selling their products.

*Transfer Curriculum Goal(s): none*

**SCMT 1116 Introduction to Soils and Plant Growth**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide students with an understanding of soil types, their characteristics and which crops will grow best on their soils. Students will learn how to manage soils to achieve desired plant growth by using nutrient management techniques appropriate to specific soil types and crop growth needs.

*Transfer Curriculum Goal(s): none*

**SCMT 1117 Pest Identification and Control**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course introduces the student to Integrated Pest Management techniques. Students will learn how to identify the most common insects, diseases and weeds that threaten their crops, and learn to choose appropriate cultural practices and pesticides for each pest.

*Transfer Curriculum Goal(s): none*

**SCMT 1119 Pesticide Safety and Handling**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers how to properly and safely apply pesticides to crops. Students will learn the difference between restricted use and non-restricted use pesticides and determine if they will need to acquire a pesticide applicators license. Different sprayers appropriate for their farming operation will also be covered.

*Transfer Curriculum Goal(s): none*

**SCMT 1121 Fertilizer Selection and Handling**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the selection and application of fertilizer materials used in the production of specialty crops. Students

will learn how to calculate nitrogen and other nutrient needs for their crops based on crop demand and soil tests.

*Transfer Curriculum Goal(s): none*

**SCMT 1124 Irrigation Planning and Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the selection, design and management of irrigation systems appropriate to specialty crops. Students will learn the advantages of using a drip system versus using impact sprinklers or microsprinklers. The unique water needs of various specialty crops and soil types will be covered.

*Transfer Curriculum Goal(s): none*

**SCMT 1135 Labor, Risk and Tax Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers unique labor, insurance and tax circumstances that pertain to the business of producing and selling fruits and vegetables in direct market and wholesale outlets. Students will learn about options for buying crop insurance for specialty crops, and will also learn steps they can take to reduce their liability insurance.

*Transfer Curriculum Goal(s): none*

**SCMT 1232 Post Harvest Processing of Specialty Crops**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will learn the steps involved in proper handling of harvested fruits and vegetables for processing or long term storage. Students will learn the proper time to harvest products and identify equipment needed to store or process produce.

*Transfer Curriculum Goal(s): none*

**SCMT 1241 Alternative Crop Systems**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers alternative crop and management systems that can be used in fruit and vegetable production. Students will learn how to integrate different cropping practices to increase labor and marketing efficiencies. Costs and benefits of new technologies will be explored.

*Transfer Curriculum Goal(s): none*

**SCMT 1243 Cultural Practices for Specialty Crops**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers the production practices necessary to successfully grow specialty crops. Students will learn appropriate plant physiology, identify production problems and determine the best course of action to treat different production problems.

*Transfer Curriculum Goal(s): none*

**SCMT 2000 Special Topics in Soil Management**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

Students will study the relationship between soil and profitability for specialty crops. Students will learn which soil types are best for specific crops, and how to change the soil

for desired crops.

*Transfer Curriculum Goal(s): none*

**SCMT 2125 Advertising and Customer Relations**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

*This course covers the use of advertising to increase sales and expand the customer base. Students will identify the most effective advertising strategies for their business location and learn methods to handle dissatisfied customers.*

*Transfer Curriculum Goal(s): none*

**SCMT 2127 Advanced Financial Planning and Analysis**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course provides students with a systematic method to assess specialty crop business enterprise strengths and weaknesses based on information obtained through computerized analysis of specialty crop business accounts. Students will learn how to use information from the analysis to make changes in their specialty crops business.

*Transfer Curriculum Goal(s): none*

**SCMT 2131 Advanced Soils and Plant Nutrition**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course identifies the nutrient needs for various specialty crops and alternative methods of achieving and maintaining desired nutrient levels. Students will learn how CEC and pH influence soil fertility and which nutrients are best added with foliar feeding.

*Transfer Curriculum Goal(s): none*

**SCMT 2132 Advanced Marketing Strategies**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will look at different ways to market their products to determine which selling venue will help them meet their business goals. Students will learn how to interpret specialty crop business analyses and customer surveys to help make marketing decisions.

*Transfer Curriculum Goal(s): none*

**SCMT 2136 Advanced Pest Identification and Control**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers alternative methods of weed, insect and disease control. Students will learn both cultural practices and chemical methods to control specific pests. Special emphasis will be placed on understanding the life cycles of insects, fungi and weeds that reduce crop yields.

*Transfer Curriculum Goal(s): none*

**SCMT 2200 Current Issues in Specialty Crop Marketing**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to help students understand how recent developments can influence their specialty crop business. Topics may include changes to the market due to recent events or changes in advertising due to advances in technology.

*Transfer Curriculum Goal(s): none*

**SCMT 2305 Legal Issues for Specialty Crop Growers**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will learn the different laws that regulate specialty crop businesses and the legal ramifications of transferring the business.

*Transfer Curriculum Goal(s): none*

**SCMT 2320 Family and Business Relationships**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course explores the challenges family members encounter during the operation of a family-owned business. Family members will learn how to achieve better communication and learn to deal with other issues that arise in a multi-generational business.

*Transfer Curriculum Goal(s): none*

**SCMT 2325 Tree Fruit Production Basics**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will learn the basics of tree fruit production including selecting rootstocks, selecting varieties, finding the right site to plant trees, projected costs and returns of a fruit orchard, and labor requirements for orchard production.

*Transfer Curriculum Goal(s): none*

**SCMT 2327 Orchard Planning**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will map out orchards that will be planted on the properties, taking into account estimated tree size. Students will choose desirable varieties and rootstocks and decide whether or not a windbreak or a trellis will be needed. Students will decide whether or not to install an irrigation system and will be able to state the reasons for the choice.

*Transfer Curriculum Goal(s): none*

**SCMT 2329 Orchard Training and Pruning**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will learn how to properly prune and train trees in order to achieve desired orchard efficiencies and production. Students will learn advantages of summer versus dormant season pruning, and how pruning can reduce disease and insect pressure.

*Transfer Curriculum Goal(s): none*

**SCMT 2330 Business Math for Specialty Crop Producers**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will learn how to perform the basic mathematic calculations necessary for running a specialty crops business. Topics include spray calculations, dilution calculations, and calculations to determine profitability and cost of production.

*Transfer Curriculum Goal(s): none*

**SCMT 2334 Value Added Opportunities for Specialty Crops**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course explores several different opportunities in which specialty crop raw material can be processed into products that can be sold later at an increased market value.

*Transfer Curriculum Goal(s): none*

### **SCMT 2335 Labor Economics and Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will learn how to utilize labor as a business resource. Students will learn how to hire and fire employees, proper regulations for hiring employees, and morale building and motivation techniques.

*Transfer Curriculum Goal(s): none*

### **SCMT 2350 Small Fruit Production Basics**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will be introduced to cultural practices specific for strawberry and raspberry production. Students will choose a good site for berries and learn the importance of choosing the correct variety for their soil and marketing situation.

*Transfer Curriculum Goal(s): none*

### **SCMT 2360 Planning for Vegetable Production**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will develop a yearly plan to plant and sell vegetables from their property. The yearly plan will take into account weather conditions, labor availability and pest control for each crop.

*Transfer Curriculum Goal(s): none*

### **SCMT 2363 Vegetable Diseases**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will acquire the skills needed to identify and control diseases that occur in a diverse cropping system. Students will learn to differentiate fungal diseases from viral and bacterial diseases and learn common cultural practices that will control most diseases.

*Transfer Curriculum Goal(s): none*

### **SCMT 2400 Special Topics - Business Plans**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

In this course, the student will write and submit a business plan that includes a vision statement, a mission statement, a cash flow plan and a contingency plan.

*Transfer Curriculum Goal(s): none*

### **SCMT 2500 Special Topics - Cultural Practices**

**Credits: 1-4**

*Prerequisite: none*

*Co-Requisite: none*

In this course, students will develop financial projections in order to determine which cultural practice will give them their best cash flow. Cultural practices that will be studied include weed control, crop rotations, soil compaction and irrigation.

*Transfer Curriculum Goal(s): none*

## **SUSTAINABILITY STUDIES**

### **SUST 1400 Introduction to Sustainability**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

In the past few years, sustainability concerns have come to the forefront. In order for humans to continue, and pass on to future generations a planet that provides for the needs of all, we must change the way we do things. This course will look at what sustainability is, what it is not, and what it needs to be.

*Transfer Curriculum Goal(s): 8*

### **SUST 2160 Sustainability Case Studies**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This is a capstone course for a certificate in Sustainability. It can also be used by any student who, after completing the Introduction to Sustainability course, wants to determine if they can provide possible solutions for real world issues regarding sustainability and the future of all life on our planet.

*Transfer Curriculum Goal(s): none*

## **THEATRE**

### **THTR 1442 Improvisation**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce students to the performance art of improvisation. Through an application of basic improvisation principles and the use of theatre games, students will acquire a basic skill level in spontaneously generating character, situation, dialogue, and story. Students will showcase their work in live performance situations with invited audiences.

*Transfer Curriculum Goal(s): 6*

### **THTR 1443 Stage to Screen: Plays that Become Movies**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will study selected plays and the film versions of those plays. It will focus on a comparative analysis of how the ideas of a script are communicated via the stage versus how those ideas are communicated via the film medium. Students will read plays, view the film versions of those plays, and participate in in-class discussion and submit analytical papers.

*Transfer Curriculum Goal(s): 6*

### **THTR 1445 Acting for the Camera**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is for students who want to learn about acting in video, film, television, and other recorded media. Students will have the opportunity to perform in front of the camera and see themselves as the camera records them, revealing their strengths and challenges. Acting techniques specific to working in film and television will be covered along with methods for auditioning, script analysis, character development, acting as communication, and acting styles in film and video. The course is also recommended for those wishing to enhance their on-screen presentational skills, be it in film, video, or online presentations.

*Transfer Curriculum Goal(s): 6*

### **THTR 1451 Introduction to Theatre**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the various elements that make up the theatre experience, including a brief overview of the history of theatre development, and an examination of theatre traditions in non-Western cultures: including lecture, readings, and attendance of live performances.

*Transfer Curriculum Goal(s): 6,8*

### **THTR 1452 Stage Make-up**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a study of materials and techniques used in the application of theatrical make-up. The class also covers script analysis, research, make-up design and practical applications. Students allergic to latex or wool should not take this class.

*Transfer Curriculum Goal(s): 6*

### **THTR 1453 Theatre Costuming**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This one credit class is for participating in any of the following technical area of the theatre: i.e. set construction, painting, lighting, sound, make-up, costuming, properties, front of house and stage crew. This course requires 30 hours of work over the course of the semester. Students may take up to four Theatre Production Labs.

*Transfer Curriculum Goal(s): 6*

### **THTR 1461 Acting I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to acquaint the student with the fundamentals of acting through a study of theory and lab experience. Recommended for students pursuing majors or minors in speech, theatre, English, or elementary education.

*Transfer Curriculum Goal(s): 1*

### **THTR 1462 Acting II**

**Credits: 3**

*Prerequisite: THTR 1461 or instructor's consent*

*Co-Requisite: none*

This is an advanced course in acting, taking the Stanislavski acting method and concentrating on in-depth scenework and critiquing.

*Transfer Curriculum Goal(s): 6*

### **THTR 1466 Acting Lab**

**Credits: 1**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

Acting labs are for the rehearsal and performance of plays being presented by the Theatre Department. Rehearsal and performance schedules to be arranged.

*Transfer Curriculum Goal(s): 6*

### **THTR 1471 Theatre Production Lab**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

In this one credit class, students participate in any of the following technical areas of the theatre: set construction, painting, lighting, sound, make-up, costuming, properties,

front of house, and stage crew.

*Transfer Curriculum Goal(s): 6*

### **THTR 1478 Technical Theatre**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Technical Theatre is designed to give students a working practical knowledge of the technical element of a theatrical production. The course covers the proper use of tools, set construction and rigging, how to hang a light plot, property construction, painting techniques, theatre etiquette and safety.

*Transfer Curriculum Goal(s): 6*

### **THTR 1480 The Theatre Experience**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine the theatre-going experience, including audience etiquette, stage conventions, reading a play script, and analyzing a performance. The course will use a trip to New York City as an applied field trip. Plays will be selected on the basis of the New York theatre season offerings during the time of the trip. Travel expenses are extra.

*Transfer Curriculum Goal(s): 6*

### **THTR 1481 The Theatre Experience-New York**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine the theatre-going experience, including audience etiquette, stage conventions, reading a play script, and analyzing a performance. The course will use a trip to New York City as an applied field trip. Plays will be selected on the basis of the New York theatre season offerings during the time of the trip. Travel expenses are extra.

*Transfer Curriculum Goal(s): 6*

### **THTR 1482 The Theatre Experience-London**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine the theatre-going experience, including audience etiquette, stage conventions, reading a play script, and analyzing a performance. The course will use a trip to London, England as an applied field trip. Plays will be selected on the basis of the London theatre season offerings during the time of the trip. Travel expenses are extra.

*Transfer Curriculum Goal(s): 6,8*

### **THTR 1483 Honors Theatre Experience**

**Credits: 3**

*Prerequisite: Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator*

*Co-Requisite: none*

This course is an immersion into the total theatre experience. Students will read and analyze play scripts, develop an aesthetic framework for the plays' production. The class will then travel to a select number of theaters in Minnesota to see productions of the plays read, meet with the creative teams that produced the play, and tour the facilities where the productions take place. Emphasis will be placed on cultural, socioeconomic, political, and human diversity issues as they apply to the specific plays/productions. Comparative analysis will take the form of directed classroom discussion and/ or analysis papers. Ticket fees for productions seen are extra.

Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

*Transfer Curriculum Goal(s): 6,7*

#### **THTR 1496 Summer Theatre Workshop**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a workshop in acting and/or technical areas of theatre performance and production. Activities and assignments will be determined by the needs of the shows in the summer theatre season.

*Transfer Curriculum Goal(s): 6*

#### **THTR 1597 Topics in Humanistic Theatre**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will cover selected topics of interest in Theatre.

*Transfer Curriculum Goal(s): none*

#### **THTR 1598 Topics in Humanistic Theatre**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Humanistic Theatre. On demand.

*Transfer Curriculum Goal(s): none*

#### **THTR 2410 Children's Theatre**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Children's Theatre is theatre written, directed, and produced for a young audience performed by adult actors. In this course students will participate in all phases of producing a children's theatre production as part of the Central Lakes College theatre season. This is a performance class.

*Transfer Curriculum Goal(s): 6*

#### **THTR 2441 Directing for the Theatre**

**Credits: 3**

*Prerequisite: THTR 1451 or instructor's consent*

*Co-Requisite: none*

This course is an introductory course in the fundamentals and methods of directing that includes choosing a script and analyzing and blocking it, in preparation for rehearsals and the final production.

*Transfer Curriculum Goal(s): 6*

#### **THTR 2450 Theatre History**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of Western and Classical Asian theatre. Major periods and/or movements of theatre are discussed as they occurred chronologically. Analysis of the period's practices, practitioners, playing space and audience in the context of the cultural and societal forces of that period.

*Transfer Curriculum Goal(s): 5,8*

#### **THTR 2491 Theatre Independent Study**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

In this course the student will meet with the instructor several times and complete a mutually agreed upon theatre project.

*Transfer Curriculum Goal(s): 6*

## **UNDERWATER DIVING**

#### **UWDV 1300 Introduction to Diving**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed as an introduction to the world of diving. Students will study four main areas of diving: Snorkeling, SCUBA, Technical Diving and Commercial Diving. Topics covered will include; the history of diving, locations for diving in Minnesota and worldwide, a brief description of the physics and physiology of diving, artifacts, equipment and the underwater environment. This is a non-diving lecture-only course.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1301 PADI Basic Open Water Diving**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course teaches students the foundational knowledge and skills they need to dive with a buddy, independent of supervision. The course will include classroom work at the Minnesota School of Diving. Topics covered include equipment, safety, dive planning and the physics and physiology of diving. Students will be participating in pool dives to demonstrate skills and knowledge consistent with the material presented in the classroom. Students will also be required to complete four Open Water dives between May 1 and October 31 under the observation of the instructor. Upon completion students will receive their PADI certification. Classroom and pool requirements segments are conducted in one weekend. Open water dives are two separate days afterwards.

*Transfer Curriculum Goal(s): 11*

#### **UWDV 1302 PADI Advanced Open Water Diver**

**Credits: 2**

*Prerequisite: UWDV 1301*

*Co-Requisite: none*

The PADI Advanced Open Water course provides divers with a structured means to explore special diving interests and gain dive experience. Participating in a specialty dive is often the first step a new diver will take after their initial certification. The course allows the student diver to broaden their capabilities as divers. The course consists of 5 open water dives; Peak Performance Buoyancy, Night Dive, Deep Diving, Underwater Navigation and Search and Recovery. Minnesota School of Diving strongly recommends students serious about this course should partake in local Fun Dives with us to practice skills beforehand. This course is conducted over one weekend.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1303 PADI Rescue Diver Class**

**Credits: 3**

*Prerequisite: UWDV 1302*

*Co-Requisite: none*

The PADI Rescue Diver course is an important step in expanding the student diver's knowledge and experience beyond a purely recreational level. Rescue divers learn to look

beyond themselves to consider the safety and well-being of other divers. Rescue diver training readies the student diver to help prevent problems and, if necessary, manage dive emergencies using a variety of techniques. The course is designed to be demanding, though realistic in its conduct, content and approach. This course is a prerequisite for all PADI leadership training, including Divemaster.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1304 PADI Divemaster**

**Credits: 5**

*Prerequisite: UWDV 1303*

*Co-Requisite: none*

In the PADI Divemaster course, students work closely with a PADI Instructor to expand dive knowledge and skills to the professional level. Divemaster training develops leadership abilities, qualifying the student to supervise dive activities and assist instructors with student divers. In this course, the student will build diver leadership skills through both classroom and independent study. The student will complete water skills and stamina exercises, as well as training exercises requiring an ability to organize, problem solve and help others improve dive skills through a series of structured training dives.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1305 Search & Recovery**

**Credits: 3**

*Prerequisite: UWDV 1302*

*Co-Requisite: none*

The purpose of the PADI Search and Recovery Specialty Course is to familiarize the student diver with the skills, knowledge, planning, organization, procedure, techniques, problems and hazards of search and recovery diving. This course is conducted over one weekend. This class is normally only run once a year so you need to contact Minnesota School of Diving early in the semester in order to get into the class. Students are responsible for cost of rental needed for the course.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1306 Inland Commercial Diver Tender**

**Credits: 18**

*Prerequisite: UWDV 1301*

*Co-Requisite: none*

This course is designed to train candidates to become commercial divers, domestic and international. The training is divided into three distinct areas: classroom, confined water and open water. Classroom topics include: diving physics, physiology, dive medicine, US Navy Dive Tables, Canadian dive tables, record keeping, commercial air diving equipment, equipment maintenance, commercial diving procedures, rigging, diving tasks, diving environments, underwater burning and welding and OSHA, ADC, DCBC, and ANSI standards. In both the confined and open water, students will have practical experience diving, tending, rack box operations, record keeping, dive station operations, radio protocol, back-up diver and systems supervisor.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1308 Underwater Photography**

**Credits: 2**

*Prerequisite: UWDV 1301*

*Co-Requisite: none*

The PADI Underwater Photographer course teaches certified divers the fundamental knowledge and skills needed to create photos underwater with a digital camera. The course will include classroom work at the Minnesota School of Diving

and three open water dives. Topics covered will include photographic equipment and its care, creation of images, composition, lighting and clarity. Students will learn to capture, download and store their photographic work.

*Transfer Curriculum Goal(s): none*

#### **UWDV 1309 Ice Diver Certificate**

**Credits: 2**

*Prerequisite: UWDV 1302*

*Co-Requisite: none*

The purpose of the PADI Ice Diver Specialty course is to familiarize divers with the skills, knowledge, planning, organization, procedures, techniques, problems, hazards and excitement of diving under ice. The course is intended and designed to be a safe, supervised introduction to diving under ice.

*Transfer Curriculum Goal(s): none*

## **VIDEOGRAPHY**

#### **VPRO 1100 Media Script Writing**

**Credits: 3**

*Prerequisite: ENGL 1410 or ENGL 1422*

*Co-Requisite: none*

This course is designed to develop scriptwriting skills for broadcast, web and corporate film making. All video production incorporates some form of scripting. Students will explore the many different ways a scriptwriter ties the project together. Students will learn to write scripts meant to be 'made' and not just read. Camera angles and cues will be studied. Creative writing skills will be emphasized in conjunction with the ability to communicate in words 'visually' and write 'spatially'. Emphasis is placed on the traditional writing process (brainstorming, outline, treatment, draft and revision). Stylistically, our focus will be on the AV-2-column style. Topical areas include corporate communications, commercials/PSAs, documentary and feature-narrative.

*Transfer Curriculum Goal(s): none*

#### **VPRO 1110 Video Editing Workflow**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course consists of entry-level videography skills used to produce motion pictures from conception to completed video. Students will produce commercials, documentaries and fictional narratives from start to finish. The emphasis is on postproduction techniques - namely, editing. However, basic terminology and strategies of all production aspects will be examined. The three main phases of production will be deconstructed to reveal a film's internal development. Students will divide into production teams and immediately begin creating content. Students will complete the course with one or more portfolio videos.

*Transfer Curriculum Goal(s): none*

#### **VPRO 1112 Basic Camera**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce incoming students to professional video camera operation. Safe handling of equipment will be emphasized throughout the course. Instruction will include those standard functions critical for professional-level operation; including focus, color balance, audio, exposure and adaptation. Basic shot composition and motion picture sequencing will be analyzed and applied.

*Transfer Curriculum Goal(s): none*

### **VPRO 1114 Camera Operations**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce incoming students to professional camera operations. Safe handling of equipment will be emphasized. Instruction will include standard functions critical for professional-level video & DSLR camera operation; focus, color balance, audio, exposure and power. Introductory shot composition and motion picture sequencing will be examined. A variety of broadcast-level cameras will be explored. This course will introduce students to operations, functions and menus used in current video & DSLR cameras.

*Transfer Curriculum Goal(s): none*

### **VPRO 1126 Media Lighting and Sound**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is intended to familiarize videography students with the two most significant support services in video production - lighting and audio. Participants will explore the proper use of broadcast lighting equipment. On alternate weeks, students will explore the proper use of sound acquisition equipment and sound manipulation software applicable to enhanced motion picture quality.

*Transfer Curriculum Goal(s): none*

### **VPRO 1128 Business of Media**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Students will explore effective business practices relating to the media industry. The course is designed to assist students in gaining employment. Topics of study include career options, small business development, accounting procedures, marketing techniques, portfolio creation, resumes, cover letters, business plans, and interview techniques.

*Transfer Curriculum Goal(s): none*

### **VPRO 1130 Creative Development**

**Credits: 2**

*Prerequisite: CART 2128*

*Co-Requisite: none*

This course focuses on developing techniques in the development and use of creative content in the preparation of video projects. Students will compose unconventional scripts, employ arresting camera techniques and improvise new editing styles to create innovative videos.

*Transfer Curriculum Goal(s): none*

### **VPRO 1150 Media Graphics**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course covers basic development and manipulations of raster and vector images for media presentations.

*Transfer Curriculum Goal(s): none*

### **VPRO 1290 Video Production Internship**

**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

This course provides practical experience in the development, production and distribution of videos through an individualized occupational experience. The internship allows students to demonstrate their knowledge and skills, as well as learning new techniques and enhancing their skills in a job

setting.

*Transfer Curriculum Goal(s): none*

### **VPRO 2104 CLC Productions I**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

CLC Productions I is part one of a two-course sequence. In CLC Productions I, students will be divided into two groups and follow one of two tracks. Students in Track A will focus on producing 'real-world' corporate/industrial productions for the college community and local non-profit organizations. The objective of this unit is to provide students with hands-on experience in authentic working environments. Concurrently, students in Track B will produce an episodic college news broadcast distributed on-campus and on public access television. The strategy of this unit is to mimic an authentic news and studio environment. Subsequently, all students exchange roles in CLC Productions II during spring semester.

*Transfer Curriculum Goal(s): none*

### **VPRO 2106 CLC Productions II**

**Credits: 4**

*Prerequisite: VPRO 2104*

*Co-Requisite: none*

CLC Productions II is a continuation of a two-course sequence. In CLC Productions II, students will be divided into two groups and follow one of two tracks. Students in Track A will produce an episodic college news broadcast distributed on-campus and on public access television. The strategy of this unit is to mimic an authentic news and studio environment. Students in Track B will focus on producing 'real-world' corporate/industrial productions for the college community and local non-profit organizations. The objective of this unit is to provide students with hands-on experience in authentic working environments.

*Transfer Curriculum Goal(s): none*

### **VPRO 2110 Advanced Camera**

**Credits: 3**

*Prerequisite: VPRO 1110, VPRO 1112*

*Co-Requisite: none*

This is a second year course for students who have successfully completed all videography first year classes. Students will apply techniques for capturing complex and artistically advanced motion pictures using a variety video cameras and support equipment. Specialty devices including jibs, floating camera systems and point-of-view cameras. Advanced sequencing will be emphasized. Macro videography, artistic videography and action videography are all explored in this practical application course.

*Transfer Curriculum Goal(s): none*

### **VPRO 2112 Advanced Video Editing**

**Credits: 3**

*Prerequisite: VPRO 1110, VPRO 1112, CART 2128*

*Co-Requisite: none*

Video production is a business and must be operated with professional standards at all times. This course will prepare students to succeed occupationally in the video production industry. You, or the company you work for will provide a variety of custom video production services. Your services must reflect the specifications of each client or assignment. Each video is a custom product and therefore has its own unique set of criteria. Therefore, you also provide consultant services as you guide your client or supervisor through the process of determining the best-fit video for their needs.

All of these considerations are addressed in this course.

Students will explore effective business practices designed to gain and retain clients or employment. Business accounting procedures designed to keep a business legal and solvent will be identified. Marketing techniques designed for maintaining and expanding a business or career are investigated. Participants will create samples of work used for portfolios and distribution on social media platforms. Resumes, cover letters and business plans will be included in this curriculum.

*Transfer Curriculum Goal(s): none*

### **VPRO 2120 Interactive Design & Production**

**Credits: 3**

*Prerequisite: CART 2128, VPRO 1110*

*Co-Requisite: none*

This course provides practical experience in authoring and managing all visual media to various formats ad platforms. Students will learn techniques in DVD authoring and menu controls, uploading to social media sites and web or presentation placement. They will study the design principles used in successful interactive media development.

*Transfer Curriculum Goal(s): none*

### **VPRO 2130 Creative Development**

**Credits: 4**

*Prerequisite: for 2nd year students only*

*Co-Requisite: none*

This course focuses on completing the production cycle for students by offering the opportunity to produce and direct a film of their choice from start to finish. Each student will be required to produce a completed motion picture, using classmates as crew members and sharing all aspects of the production process. Each participant will be responsible for conceiving, budgeting, scripting, directing and editing a film that can be presented as a portfolio finale.

*Transfer Curriculum Goal(s): none*

### **VPRO 2350 Video Production Internship**

**Credits: 1-6**

*Prerequisite: instructor's consent*

*Co-Requisite: none*

Internship is an elective opportunity to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

*Transfer Curriculum Goal(s): none*

### **VPRO 2370 Videography Independent Study**

**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

*Transfer Curriculum Goal(s): none*

## **VITICULTURE AND ENOLOGY**

### **VITI 1105 Molecular Principles in Grade and Wine**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course puts emphasis on basic chemical fundamentals, organic chemistry, biochemistry, and their focused applications in the grape and wine industry.

*Transfer Curriculum Goal(s): none*

### **VITI 1111 Intro to Viticulture and Vineyard Establishment**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to viticulture in general and to current practices for establishing a commer-

cial vineyard. Topics covered include varietal selection, site preparation, equipment, site selection, first season establishment, vine growth development and training, trellis systems, weed control, vine disease control, and pruning for training purposes. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course.

*Transfer Curriculum Goal(s): none*

### **VITI 1112 Botanical Viticulture**

**Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course is a survey of the plant kingdom, including plant cells and tissues, the ecology, morphology, physiology and life cycles of representative plants of each division. In addition, this course will focus communication on grapevine biology, vine structures and their functions.

*Transfer Curriculum Goal(s): none*

### **VITI 1113 Winter Viticulture Technology**

**Credits: 2**

*Prerequisite: VITI 1111*

*Co-Requisite: none*

This course is designed to provide students interested in the field of viticulture practical experience in winter vineyard operations. Students are required to collaborate with an approved vineyard to participate in the required field experience portion of the course, which will serve as work experience for those seeking employment in commercial viticulture.

*Transfer Curriculum Goal(s): none*

### **VITI 1114 Spring Viticulture Technology**

**Credits: 2**

*Prerequisite: VITI 1111*

*Co-Requisite: none*

This course is designed to provide students initiated in the field of Viticulture practical experience in spring vineyard operations. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course which will serve as work experience for those seeking employment in commercial viticulture.

*Transfer Curriculum Goal(s): none*

### **VITI 1115 Summer/Fall Viticulture Technology**

**Credits: 2**

*Prerequisite: VITI 1111*

*Co-Requisite: none*

This course is designed to provide students initiated in the field of viticulture practical experience in summer/fall vineyard operations. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course which will serve as work experience for those seeking employment in commercial viticulture.

*Transfer Curriculum Goal(s): none*

### **VITI 1130 New Wine Business Feasibility**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course provides a systematic look at the different components of a successful wine or vineyard brand and assists students in creating a plan for a profitable business. Students will be exposed to key aspects of the business, including the regulatory climate for making and selling wine or grapes, financial frameworks to develop a vineyard and/or winery or to create a virtual brand, and different models for profitability. Every student will be given the tools and

frameworks to critically evaluate this competitive landscape and make decisions on a course of action.

*Transfer Curriculum Goal(s): none*

### **VITI 1132 Finance and Accounting for Wine Business** **Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers industry specific accounting and reporting for wine business profit and loss statements and balance sheets, assets and depreciation, intangibles, cost segregation and inventory costing. It also examines best practices in winery business management, including key performance indicators and other winery expenses. Using financial ratios and benchmarking are explored for internal management reporting.

*Transfer Curriculum Goal(s): none*

### **VITI 1146 Intro to Enology**

**Credits: 3**

*Prerequisite: Students must be of legal age to drink alcohol*

*Co-Requisite: none*

This is a compacted 16-week course based on the fundamentals of science and technology of making wine. Introduction to Enology targets people who are interested in home winemaking and cellar employees interesting in a winemaking career and possibility to grow into the small business opportunity as well as cellar employees interested in winemaking career. During this course, students will build proper basic understanding of winemaking, which will alleviate common home winemaker's errors. This course is part of the VESTA's Viticulture and Enology program with emphasis on the practical aspects of growing grapes and winemaking.

*Transfer Curriculum Goal(s): none*

### **VITI 1147 Introduction to Fruit Wine Production**

**Credits: 2**

*Prerequisite: VITI 1146*

*Co-Requisite: none*

This course includes the history of fruit wine making, starting a fruit winery, production processes, quality control, faults and flaws, stability tests, marketing and sales, and legal regulations. Students will get an understanding of the special idiosyncrasies of the various fruits available to make commercial grade fruit wine.

*Transfer Curriculum Goal(s): none*

### **VITI 1148 Winery Sanitation**

**Credits: 3**

*Prerequisite: VITI 1146*

*Co-Requisite: none*

This is a course in the basic science and technology of winery sanitation. The course serves as an introduction to wine microbiology and covers all methods used for winery sanitation including premises, tanks, pumps, filters, oak barrels and sampling equipment, including but not limited to chemical agents, reagents, and thermal treatments leading to sterile bottling. Environmental issues and compliance are also addressed.

*Transfer Curriculum Goal(s): none*

### **VITI 1157 Principles of Agricultural Mechanization**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will offer an introduction to mechanized components of vineyard and winery operations. Topics will include safety, fencing, trellises, tractor operations, mechanical har-

vesting, spraying, pruning, fertilizing, and forklift operation.

*Transfer Curriculum Goal(s): none*

### **VITI 1160 Winery Equipment Operation**

**Credits: 2**

*Prerequisite: VITI 1146*

*Co-Requisite: none*

This course covers process technologies and process systems used in modern commercial wineries. The course will include lectures, demonstrations, and two-day workshop. Overview of winemaking systems including work place safety, cleaning and sanitation procedures, winemaking equipment and materials, tanks, barrels and barrel alternatives, filtration systems, and bottling equipment. We will also touch on chillers, and electrical needs.

*Transfer Curriculum Goal(s): none*

### **VITI 1190 Vineyard Safety**

**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will offer an introduction to safety and procedures specific to viticulture (grape growing.) Topics will include general history of agricultural safety and health issues, ergonomics, OSHA safety rules and other safety issues specific to viticulture.

*Transfer Curriculum Goal(s): none*

### **VITI 1210 Intro to Wine Microorganisms**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to the basic principles of wine microbiology and to serve as an introduction to the variety of microorganisms frequently encountered in the wine making process. Yeasts, bacteria, and molds play vital roles in the production of wine, both beneficial and harmful. Students will become familiar with the morphology, reproduction, and sensory attributes of wine microorganisms in order to understand their influence on winemaking, and to be able to manage them effectively.

*Transfer Curriculum Goal(s): none*

### **VITI 1211 Integrated Pest Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Effective grape production depends on the grower developing a system of grape management that is appropriate for each vineyard. Decisions need to be made for how to manage all of the normal cultural practices such as planting, fertility, harvesting, and pruning as well as managing the insect, disease, and weed problems that occur either regularly or sporadically. The information in this course will address management issues related to common, expected pest problems as well as the occasional appearance of minor pest problems.

*Transfer Curriculum Goal(s): none*

### **VITI 1213 Midwest Vineyard Management**

**Credits: 2**

*Prerequisite: VITI 1111, VITI 1113*

*Co-Requisite: none*

This course is a general study of vineyard management applicable to the Mid-America region, primarily Missouri, Kansas, Nebraska, Iowa and Illinois. The course primarily covers management of the mature vineyard. It does not go into detail concerning vineyard establishment which is

addressed in the Vineyard Establishment and Maintenance VESTA Course, nor does it go into detail concerning pests and diseases which is addressed in the Integrated Pest Management VESTA Course.

*Transfer Curriculum Goal(s): none*

### **VITI 1246 Intermediate Enology**

**Credits: 3**

*Prerequisite: VITI 1146 or VITI 1268*

*Co-Requisite: none*

The Intermediate Enology course is built on the fundamentals of science and technology of winemaking practices taught in Introduction to Enology course VIN 146. During this course, students will understand how the whole winemaking process works and learn the scientific background for any decision made during process of winemaking. At the completion of course the students will understand winemaking calculations necessary for accurate, precise and safe additions to the wine. This course is part of the VESTA program with emphasis on the practical aspects of growing grapes and winemaking.

*Transfer Curriculum Goal(s): none*

### **VITI 1257 Fall Wine Production Internship**

**Credits: 3**

*Prerequisite: VITI 1146, VITI 1148, VITI 1160, VITI 1246*

*Co-Requisite: none*

Principles of grape juice and wine analysis and the reasons for use of each analysis. Analyses of a practical and useful nature are chosen for the laboratory exercises demonstrating various chemical, physical and biochemical methods. Students will participate in workshops and hands-on experiences at participating wineries.

*Transfer Curriculum Goal(s): none*

### **VITI 1259 Cellar Operations Technology**

**Credits: 2**

*Prerequisite: VITI 1146, VITI 1148, VITI 1160, VITI 1246, VITI 1268, VITI 1257*

*Co-Requisite: none*

This course is designed for the individual anticipating a career in the wine industry. This course is designed to provide a student who has completed major course sequences, including a harvest internship, with a selection of practical and realistic winery cellaring experiences through bottling, sufficient to equip him/her with sufficient skills and work experience for an entry-level position in the wine industry. Students involved in this program will participate on a part time basis at a supporting winery, and are expected to use the time and opportunities to further their understanding of the winemaking process and common winery operations.

*Transfer Curriculum Goal(s): none*

### **VITI 1266 Sensory Evaluation of Wine**

**Credits: 3**

*Prerequisite: VITI 1146, must be legal drinking age*

*Co-Requisite: none*

This is a course intended for those individuals who need to develop an understanding of the principles of sensory evaluation used in commercial wine making. It will also be of benefit to the wine enthusiast who is interested in reaching advanced levels of appreciation as well as to the producer, the wine merchant, and ultimately the enologist, who by the nature of their profession need to discern flavors and establish tasting benchmarks. Students will practice sensory analysis at home and in workshops to further their sensory evaluation skills and techniques.

*Transfer Curriculum Goal(s): none*

### **VITI 1268 Wine and Must Analysis**

**Credits: 3**

*Prerequisite: VITI 1146, CHEM 1414*

*Co-Requisite: none*

Principles of grape juice and wine analysis and the reasons for use of each analysis. Analyses of a practical and useful nature are chosen for the laboratory exercises demonstrating various chemical, physical and biochemical methods. Students will participate in workshops and hands-on experiences at participating wineries.

*Transfer Curriculum Goal(s): none*

### **VITI 1270 Marketing for the Small Winery**

**Credits: 2**

*Prerequisite: VITI 1146*

*Co-Requisite: none*

This course will explore the marketing aspects of the wine industry. Focus is on the need for differentiation from competitors in angri-tourism. The outcome will include a public relations program for an existing or future winery.

*Transfer Curriculum Goal(s): none*

### **VITI 1272 Winery Tasting Room Management**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will explore the management of winery tasting rooms. Focus is on the customer service and customer loyalty.

*Transfer Curriculum Goal(s): none*

### **VITI 1274 Wines of the World**

**Credits: 3**

*Prerequisite: VITI 1266, must be of legal drinking age*

*Co-Requisite: none*

This is a course intended for those individuals who wish to further their understanding of wine styles and builds on the knowledge developed in VIN 266, Sensory Evaluation. It is appropriate for commercial winemakers who wish to understand how the wines that they produce compare and contrast with the most popular and important wine styles around the globe. It will also be of benefit to the wine enthusiast who is interested in reaching advanced levels of appreciation and an understanding of global benchmarks. Students will practice sensory analysis at home to further their sensory evaluation skills and techniques.

*Transfer Curriculum Goal(s): none*

### **VITI 1290 Winery Safety**

**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is an introduction to safety and procedures specific to enology (wine making). Topics covered will include general history of food and beverage safety and health issues, ergonomics, OSHA safety rules, and hazards specific to operating a winery.

*Transfer Curriculum Goal(s): none*

### **VITI 1293 Soils for Viticulture**

**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

The course will explore soil properties and behavior and their influence on wines. The course focuses not only on growth and production, but on the long-term effects of viticulture on soil quality and the wider environment.

*Transfer Curriculum Goal(s): none*

### **VITI 1399 Special Topics**

#### **Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Viticulture and Enology. Offered on demand.

*Transfer Curriculum Goal(s): none*

## **WELDING**

### **WELD 1100 Introduction to Welding**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide students with the basic fundamental skills required to understand and utilize the equipment and processes of basic welding. Students will identify and place in to practice a common set of safety standards utilized with Oxy-Acetylene Welding (OAW), Gas Metal Arc Welding (GMAW), and Shielded Metal Arc Welding (SMAW). Students will develop and place into practice the necessary skills to properly operate and trouble shoot welding equipment.

*Transfer Curriculum Goal(s): none*

### **WELD 1101 Shielded Metal ARC Welding I**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the shielded metal arc welding process, under a variety of conditions that meet given industry-standard specifications. Students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

*Transfer Curriculum Goal(s): none*

### **WELD 1102 Shielded Metal ARC Welding II**

#### **Credits: 3**

*Prerequisite: WELD 1101*

*Co-Requisite: none*

This course will expand on skills obtained in WELD 1101 including safety, equipment setup, electrode selection, and operating parameters. Students will refine and further advance skill sets to produce quality welds. Visual and non-destructive testing practices are used to determine weld acceptability.

*Transfer Curriculum Goal(s): none*

### **WELD 1111 Blueprint Reading I**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide students with the basic fundamental skills required to communicate as fabricators through the use of blueprints. Students will understand and identify orthographic drawings, isometric drawings, basic lines, and dimensioning techniques. Students will develop and place into practice the necessary skills to create and interpreted practical blueprints. These are building-block skills for future courses.

*Transfer Curriculum Goal(s): none*

### **WELD 1112 Blueprint Reading II (Welding Symbols)**

#### **Credits: 2**

*Prerequisite: WELD 1111*

*Co-Requisite: none*

This course will expand on skills obtained in WELD 1111 Blueprint Reading I and further develop skills required to communicate as fabricators through the use of blueprints. Students will identify welding symbols and their components, and understand their relationships with orthographic drawings. Students will develop and place into practice the necessary skills to create, and interpreted practical weldment blueprints.

*Transfer Curriculum Goal(s): none*

### **WELD 1113 Blueprint Reading III (CAD Systems)**

#### **Credits: 2**

*Prerequisite: WELD 1111, WELD 1112*

*Co-Requisite: none*

This course will expand on skills obtained in WELD 1111 and WELD 1112. Students will use CAD to create 3D models, 2D prints, assembly prints, and welding symbols. Students will develop and place into practice the necessary skills to create and interpret weldment blueprints and create a final project.

*Transfer Curriculum Goal(s): none*

### **WELD 1114 Metallurgy & Fabrication**

#### **Credits: 2**

*Prerequisite: None*

*Co-Requisite: none*

Students will study all aspects of metallurgical engineering including the three areas of extractive, mechanical, and physical metallurgy. Theory and applications of metallurgical principles as applied to the conditioning, design, identification, selection, testing, and processing of metals and alloys. Topics include heat treatment, crystal structures, phase diagrams, materials standards, specific alloys, nondestructive and destructive testing, and fabrication methods. The safe and proper operation of iron workers, sheet metal shears, oxy-fuel and plasma cutting equipment will be taught. Both manual and automatic systems will be covered. Material handling techniques are also studied.

*Transfer Curriculum Goal(s): none*

### **WELD 1115 Gas Tungsten ARC Welding I**

#### **Credits: 2**

*Prerequisite: None*

*Co-Requisite: none*

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the gas tungsten arc welding process, under a variety of conditions that meet given industry-standard specifications. During the course, students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

*Transfer Curriculum Goal(s): none*

### **WELD 1116 Gas Tungsten ARC Welding II**

#### **Credits: 3**

*Prerequisite: WELD 1115*

*Co-Requisite: none*

This course will expand on skills obtained in WELD 1115 including safety, electrode selection and operating parameters, weld characteristic of stainless steels and nonferrous metals. Students will refine and further advance skill sets used to produce quality welds. Visual and non-destructive testing practices are used to determine weld acceptability.

*Transfer Curriculum Goal(s): none*

### **WELD 1117 Gas Metal ARC Welding I**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the gas metal arc welding process, under a variety of conditions that meet given industry-standard specifications. During the course, students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

*Transfer Curriculum Goal(s): none*

### **WELD 1118 Gas Metal ARC Welding II**

#### **Credits: 3**

*Prerequisite: WELD 1117*

*Co-Requisite: none*

This course will expand on skill obtained in Weld 1117 including safety, equipment setup, electrode selection, and operating parameters. Students will refine and further advance skill sets used to produce quality welds. Visual and non-destructive testing practices are used to determine weld acceptability.

*Transfer Curriculum Goal(s): none*

### **WELD 1120 Fabrication Design and Construction**

#### **Credits: 4**

*Prerequisite: WELD 1150*

*Co-Requisite: none*

This course is intended to utilize all content and skills learned in previous courses. Students will design and fabricate projects that meet specific requirements from start to finish. Projects may include fire rings, signs, and personal projects as approved by the instructor. To complete these projects, students will demonstrate mastery of various fabrication equipment, such as a plasma cutter, press brake, grinder, and the tools they have made in previous classes.

*Transfer Curriculum Goal(s): none*

### **WELD 1128 Metal Fabrication**

#### **Credits: 3**

*Prerequisite: WELD 1111*

*Co-Requisite: none*

Fundamental sheet metal layout, bend and forming allowances, safe operation of metal fabrication equipment, and a student fabrication project are the objectives of this course.

*Transfer Curriculum Goal(s): none*

### **WELD 1130 Advanced Welding Processes**

#### **Credits: 4**

*Prerequisite: WELD 1101, WELD 1117*

*Co-Requisite: none*

Enhanced GMAW and GTAW will be performed on non-ferrous, ferrous, and stainless steel in this course. Casting repair, pressure vessel welding and testing are also performed.

*Transfer Curriculum Goal(s): none*

### **WELD 1132 Testing/Codes & Inspection**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

Students will study the major national codes that govern

the welding industry, specifically the ASME pressure vessel code, the American Welding Society Structural Code D1.1, along with AWS codes. Students will also study the fundamentals of welding inspection techniques and the different types of destructive and nondestructive weldment testing.

*Transfer Curriculum Goal(s): none*

### **WELD 1134 Welding Qualification**

#### **Credits: 3**

*Prerequisite: WELD 1102, WELD 1116, and WELD 1118*

*Co-Requisite: none*

Students will prepare and participate in the American Welding Society's "Sense" program. The opportunity to earn the Entry Level Welder Certificate is available for students who wish to apply. Students must successfully complete industry recognized modules and performance evaluations in compliance with The American Welding Society standard to obtain full certification. During the class, students will explore various welds, welding techniques, inspection standards, and destructive tests for specific welding tasks.

*Transfer Curriculum Goal(s): none*

### **WELD 1140 Trade Knowledge**

#### **Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will introduce student to fundamentals skills related to the welding & fabrication trade, which includes safety, fabrication equipment, fabrication techniques, measurement, layout, hand tools, fasteners, thread repair, and shop math. Students create and refine skill sets by producing class projects such as a nut and bolt gauge and electrode holder, which will be utilized in future classes.

*Transfer Curriculum Goal(s): none*

### **WELD 1150 Advanced Metal Fabrication**

#### **Credits: 4**

*Prerequisite: WELD 1100, WELD 1111, and WELD 1140*

*Co-Requisite: none*

*Students will practice and apply skills attained in math, electronics, welding, fabrication, metallurgy, and blueprint reading classes in order to construct a final project. Through this immersion, work-simulated environment, students will be assigned a project and independently build the project from planning to final assessment.*

*Transfer Curriculum Goal(s): none*

### **WELD 1160 Welding Theory**

#### **Credits: 4**

*Prerequisite: none*

*Co-Requisite: none*

This course will provide students with the fundamentals required to understand the equipment and processes of basic welding. Students will study a common set of safety standards and gain basic knowledge in Oxy-Acetylene Welding (OAW), Oxy-Acetylene Cutting (OAC), Plasma Arc Cutting (PAC), Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), and Gas Tungsten Arc Welding (GTAW).

*Transfer Curriculum Goal(s): none*

### **WELD 1161 Introduction to Nondestructive Testing**

#### **Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course is designed to introduce students to the five major Nondestructive Testing disciplines: Radiographic Testing (RT), Ultrasonic Testing (UT), Visual Testing (VT), Penetrant Testing (PT), and Magnetic Particle Testing (MT). Students

will understand the benefits and limitations of each method as well as an overview of the various discontinuities that may be encountered.

*Transfer Curriculum Goal(s): none*

**WELD 1162 Ultrasonic Testing (UT) Level I & II**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

Ultrasonic testing (UT) uses waveforms to inspect welds. UT Level I includes a basic introduction to the theory and principles of ultrasound. It contains study materials related to the propagation, reflection, and attenuation of sound as well as the responses from discontinuities. UT is also used for precise thickness measurements and the basic procedure for this is covered. UT Level II explains advanced theory, application, and variables such as beam profile, near and far zones, acoustic impedance, absorption, and sound characteristics. Other subjects pertaining to angle beam inspection include refraction, mode conversion, and tip diffraction. Vertical/horizontal linearity and mode converted calibrations are covered. Examination and evaluation of several test specimens are required.

*Transfer Curriculum Goal(s): none*

**WELD 1163 Penetrant Testing Level I & II**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course contains Level I and II material covering the theories and practices involved with liquid penetrant inspection. Equipment, light meters, code and procedure reference, types, forms, and methods are discussed. Level I focuses on penetrant dyes, developers, and basic theory. Level II continues to put the knowledge earned in Level I to practice.

*Transfer Curriculum Goal(s): none*

**WELD 1164 Magnetic Particle Testing Level I & II**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course contains Level I and II study material and covers the theory of magnetic particle examination. Magnetic fields, flux leakage, magnetization processes, particles/mediums, applications, basic principles, and safety considerations are addressed. Level I will focus on the medium and magnetic theory. Level II will put the knowledge learned in Level I to practice.

*Transfer Curriculum Goal(s): none*

**WELD 1165 Radiation Safety**  
**Credits: 2**

*Prerequisite: none*

*Co-Requisite: none*

This course on Industrial Radiography is designed to meet the training requirements for formal certification in Radiation Safety for both X-ray and gamma radiographers. Students will become familiar with the requirements of the Department of Transportation and the Nuclear Regulatory Commission and the Suggested State Regulations for Controlling Radiation (SSRCR).

*Transfer Curriculum Goal(s): none*

**WELD 1166 Radiographic Testing Level I & II**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

This course covers Level I and II radiation testing, focusing

on the theory and principles of radiation and their application to radiography. Subjects also included in this course include handling and processing radiographic film, radiography techniques, image quality, basic radiographic interpretation, and the safe use of RT equipment. Both X-Ray and Gamma Ray sources are analyzed along with technique development guidance and advanced radiation safety. Level II begins with a review of Level I subjects and continues with the technical production of proper radiographic imaging. Study materials focus on optimizing contrast, definition, sensitivity, film processing, interpretation, calculations, shot techniques, and utilizing acceptance criteria per relevant codes and standards. This course exceeds the criteria specified in ASNT's recommended practice.

*Transfer Curriculum Goal(s): none*

**WELD 1167 Visual Inspection Level I & II**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course's subjects include the mechanics of the human eye, illumination requirements, surface conditions, test specimen attributes, and various discontinuities and conditions that may be encountered. Both direct and indirect (remote) visual techniques are thoroughly presented and demonstrated. The different visual tools, measuring devices, and advanced VT instrumentation are discussed and demonstrated. A wide range of common applications are included. Level I will focus on weld discontinuities. Level II will focus on measuring discontinuities and determining whether or not weld is accepted or rejected.

*Transfer Curriculum Goal(s): none*

**WELD 1168 Codes and Specifications**  
**Credits: 1**

*Prerequisite: none*

*Co-Requisite: none*

This course will familiarize students with various codes, standards, and specifications used in the Nondestructive Testing and Inspection industry. Students will learn to interpret and classify examination results, which is paramount for Nondestructive Testing examiners and inspectors.

*Transfer Curriculum Goal(s): none*

**WELD 1350 Elective Open Lab I**  
**Credits: 1-6**

*Prerequisite: none*

*Co-Requisite: none*

With a plan in place, between instructor and student, supervised lab experience will be attainable. This course allows students to develop and implement a personal study plan to help improve their welding skills or fabricate a project.

*Transfer Curriculum Goal(s): none*

**WELD 2370 Topics in Welding**  
**Credits: 1-3**

*Prerequisite: none*

*Co-Requisite: none*

This course will examine selected topics of interest in Welding. Offered on demand.

*Transfer Curriculum Goal(s): none*

## WOMEN'S STUDIES

**WMST 1400 Introduction to Women's Studies**  
**Credits: 3**

*Prerequisite: none*

*Co-Requisite: none*

In this course, we will take an interdisciplinary approach to

the study of women in the United States. Issues of race, ethnicity, class, sexual orientation and age will be important as we investigate and analyze the significance of gender in shaping women's political, economic, legal and social experiences in the U.S.

*Transfer Curriculum Goal(s): 5,7*

**WMST 2402 Gender and Popular Culture**  
**Credits: 3**

*Prerequisite: Accuplacer Reading Score 56+*

*Co-Requisite: none*

In this course, we will examine how the media and popular culture shape our most fundamental understandings of gender identity. Issues of race, ethnicity, class, sexual orientation, and age will be important as we investigate and analyze the ways that the mass media -- television and movies, popular music, internet, print sources like magazines, popular fiction, and newspapers, and other cultural forms -- portrays women and gender roles.

*Transfer Curriculum Goal(s): 6,7*

**WMST 2420 Women & Religion**  
**Credits: 3**

*Prerequisite: Accuplacer Reading Score 56+*

*Co-Requisite: none*

This course will examine the historical roles and experiences of women in a variety of religious contexts. Students will be able to demonstrate knowledge of women's religious experiences, practices and beliefs, as well as their roles and status in Judaism, Buddhism, Christianity, Islam and Alternative Religions. The women's movement that began in the last half of the twentieth century has made a significant difference in the roles of women in religion; we will consider the effects of that in America and throughout the world.

*Transfer Curriculum Goal(s): 5,7*





## College in the Schools Program

The College in the Schools (CIS) Program is a concurrent enrollment program administered by Central Lakes College (CLC) through the Minnesota State Colleges and Universities (MnSCU) P-16 Program Policies. Central Lakes College partners with high schools to strengthen their academic course offerings and provide their students with the opportunity to earn college credit. When enrolled in a CLC course through CIS, students are eligible to receive both high school credit and college credit.

College in the Schools, part of CLC's Division of Academic Affairs, is administered by the Director of Secondary Relations. Program courses are introductory college courses that have been approved for college credit as part of a degree or diploma program's required or elective credit options. Courses may be part of the Liberal Arts and Sciences or Career and Technical college curriculum. CIS courses are selected by each partnering high school.

CIS courses are taught during the regular high school day by credentialed high school instructors, supported by CLC collaborating faculty. The course content, pedagogy, assignments, and assessments of CIS courses are the same as CLC's on-campus courses. All CIS courses are transcripted and become part of the student's permanent college record. Students successfully completing a course receive college academic credits which are transferable to other colleges and universities.

To be eligible for admission to the CIS Program, students must be a high school junior with a 3.0 cumulative grade point average or a senior with a 2.5 cumulative grade point average. The CIS admissions process requires students to complete an application, provide a high school transcript, take the college assessment (Accuplacer), and complete a data enrollment form. In rare cases, students having less than the required grade point average may appeal to enroll in the CIS Program. Students should contact their high school counselor to complete the process.

Students enrolled in CIS courses follow all CLC academic and student policies, receive a college email address, and are eligible for participation in college activities.

Central Lakes College's College in the Schools program is fully accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP). This accreditation demonstrates that CLC's CIS program meets or exceeds rigorous national standards of quality in the areas of curriculum, instructors, students, assessment, and program evaluation. To learn more about NACEP or to view the NACEP -standards, visit [www.nacep.org](http://www.nacep.org).

Below is a list of College in the Schools courses. Please see the course descriptions online.

## College in the Schools

## ANTHROPOLOGY

ANTH 1457 Cultural Anthropology . . . . . (3cr)

## ART

ARTS 1401 Black & White Photo I . . . . . (3cr)  
 ARTS 1403 Color Photo I . . . . . (3cr)  
 ARTS 1420 The Art of Digital Photography . . (3cr)  
 ARTS 1458 Drawing . . . . . (3cr)  
 ARTS 1459 2-D Design & Color. . . . . (3cr)  
 ARTS 1468 Painting. . . . . (3cr)  
 ARTS 1470 Art Appreciation . . . . . (3cr)  
 ARTS 1487 Ceramics: Beginning Hand Building . . (3cr)  
 ARTS 1488 Ceramics: Beginning Throwing. . (3cr)  
 ARTS 2485 American Indian Art . . . . . (3cr)

## BIOLOGY

BIOL 1404 Human Biology . . . . . (3cr)  
 BIOL 1411 Concepts of Biology . . . . . (3cr)  
 BIOL 1415 Environmental Biology . . . . . (3cr)  
 BIOL 1431 General Biology I . . . . . (5cr)  
 BIOL 1432 General Biology II . . . . . (5cr)

## BUSINESS

BUSN 1102 Accounting for Non-Accountants. (3cr)  
 BUSN 1501 Introduction to Business . . . . . (3cr)  
 BUSN 1110 Marketing Principles . . . . . (3cr)

## CHEMISTRY

CHEM 1414 Fundamentals of Chemistry . . . (4cr)

## COLLEGE AND CAREER STUDIES

CCST 1510 College Success Skills . . . . . (3cr)  
 CCST 1530 Employment Strategies. . . . . (3cr)  
 CCST 1559 Money Management Skills . . . (1cr)  
 CCST 1570 Thinking, Learning and Communicat-  
 ing (3cr)

## COMPUTER TECHNOLOGY

COMP 1101 Computer Fundamentals . . . . . (3cr)  
 COMP 1120 Introduction to Computer Applications  
 (3cr)

## ECONOMICS

ECON 1450 The American Economy . . . . . (3cr)

## ENGLISH

ENGL 1410 Composition I . . . . . (4cr)  
 ENGL 1411 Composition II . . . . . (4cr)  
 ENGL 1422 Practical Writing . . . . . (3cr)

ENGL 1454 Film Appreciation. . . . . (3cr)  
 ENGL 1463 Introduction to Literature. . . . . (3cr)  
 ENGL 1468 Poetry . . . . . (3cr)  
 ENGL 1470 Introduction to Science  
 Fiction and Fantasy Literature . . (3cr)  
 ENGL 2450 World Literature . . . . . (3cr)  
 ENGL 2467 American Literature Pre-1861 . . (3cr)  
 ENGL 2468 American Literature  
 1861 - Present . . . . . (3cr)

## GEOGRAPHY

GEOG 1400 Physical Geography . . . . . (3cr)  
 GEOG 1459 Cultural Geography. . . . . (3cr)

## HEALTH

HLTH 1501 Personal Health and Wellness . . (3cr)

## HEALTH ADMINISTRATIVE SPECIALIST

HINS 1360 Medical Terminology . . . . . (3cr)

## HISTORY

HIST 1406 Western Civilization,  
 Pre-History to 1500 . . . . . (3cr)  
 HIST 1407 Western Civilization,  
 1500 to Present . . . . . (3cr)  
 HIST 1412 World History I,  
 From the Beginning to 1500 . . . (3cr)  
 HIST 1413 World History II,  
 1500 to Present . . . . . (3cr)  
 HIST 1472 U.S. History to 1865 . . . . . (3cr)  
 HIST 1473 U.S. History Since 1865 . . . . . (3cr)

## MATH

MATH 1460 Intro to Statistics . . . . . (4cr)  
 MATH 1470 College Algebra. . . . . (3cr)  
 MATH 1472 Precalculus . . . . . (5cr)  
 MATH 1477 Calculus I. . . . . (5cr)  
 MATH 1478 Calculus II . . . . . (5cr)  
 MATH 1520 Introduction to College Algebra . (3cr)

## MARKETING

BUSN 1011 Marketing Principles . . . . . (3cr)

## MUSIC

MUSC 1403 American Popular Music . . . . . (3cr)  
 MUSC 1408 Community Band . . . . . (1cr)  
 MUSC 1421 Cantare' Concert Chorale. . . . . (1cr)  
 MUSC 1450 Music in World Cultures . . . . . (3cr)  
 MUSC 1457 Music Appreciation. . . . . (3cr)  
 MUSC 1459 Fundamentals of Music. . . . . (3cr)

## NURSING

NSGA 1110 Nursing Assistant . . . . . (3cr)  
 NSGA 1115 Home Health Aide . . . . . (1cr)

## PHYSICAL EDUCATION

PHED 1502 Circuit Training . . . . . (2cr)  
 PHED 1505 Fitness Walking. . . . . (2cr)  
 PHED 1521 Body Conditioning . . . . . (2cr)  
 PHED 1522 Weight Training. . . . . (2cr)  
 PHED 1524 Recreational Sampler. . . . . (2cr)  
 PHED 1583 Athletic Training . . . . . (2cr)

## PHILOSOPHY

PHIL 1411 World Religions . . . . . (3cr)

## PHYSICS

PHYS 1401 College Physics I . . . . . (4cr)  
 PHYS 1402 College Physics II . . . . . (4cr)  
 PHYS 1407 Principles of Physics . . . . . (3cr)

## POLITICAL SCIENCE

POLS 1430 Introduction to Political Science . (3cr)  
 POLS 1435 American Government & Politics. (3cr)

## PSYCHOLOGY

PSYC 2421 General Psychology . . . . . (4cr)  
 PSYC 2431 Human Development. . . . . (3cr)

## SOCIOLOGY

SOCL 1401 Introduction to Sociology . . . . (3cr)  
 SOCL 2411 Social Problems . . . . . (3cr)

## SPANISH

SPAN 1401 Beginning Spanish I . . . . . (4cr)  
 SPAN 1402 Beginning Spanish II . . . . . (4cr)  
 SPAN 2401 Intermediate Spanish I . . . . . (4cr)  
 SPAN 2404 Intermediate Spanish II. . . . . (4cr)

## SPEECH

COMM 1410 Introduction to Communication Stud-  
 ies (3cr)  
 COMM 1421 Interpersonal Communication . . (3cr)  
 COMM 1431 Fundamentals of Public Speaking (3cr)

## THEATRE

THTR 1451 Introduction to Theatre. . . . . (3cr)

## WELDING

WELD 1100 Intro to Welding . . . . . (2cr)

# COLLEGE IN THE SCHOOLS

## CURRENT CIS PARTNERS

**Aitkin High School ISD #1**  
Aitkin, MN

**BBE High School ISD #2364**  
Belgrade, MN

**Big Lake High School ISD #727**  
Big Lake, MN

**Brainerd High School ISD #181**  
Brainerd, MN

**Browerville High School ISD #787**  
Browerville, MN

**Crosby High School ISD #182**  
Crosby, MN

**Eagle Valley High School**  
Eagle Bend, MN

**Freshwater Ed District**  
Staples, MN

**Greenway High School #316**  
Coleraine, MN

**Holdingford High School ISD #738**  
Holdingford, MN

**Infinity Online**  
Coleraine, MN

**Isle High School ISD #473**  
Isle, MN

**Kimball High School ISD #739**  
Kimball, MN

**Little Falls Area School ISD #482**  
Little Falls, MN

**Long Prairie-Grey Eagle High School ISD #2753**  
Long Prairie, MN

**Menahga High School ISD #821**  
Menahga, MN

**Monticello High School ISD # 882**  
Monticello, MN 55362

**Nevis High School ISD #308**  
Nevis, MN

**Northland High School ISD #118**  
Remer, MN

**Onamia High School ISD #480**  
Onamia, MN

**Parkers Prairie High School ISD #547**  
Parkers Prairie, MN

**Pequot Lakes High School ISD #186**  
Pequot Lakes, MN

**Pierz-Healy High School ISD #484**  
Pierz, MN

**Pillager High School ISD #116**  
Pillager, MN

**Pine River-Backus H. S. ISD #2174**  
Pine River, MN

**Royalton High School ISD #485**  
Royalton, MN

**Sauk Centre High School ISD #743**  
Sauk Centre, MN

**Sebeka School District**  
Sebeka, MN

**Staples-Motley High School ISD #2170**  
Staples, MN

**Swanville High School ISD #486**  
Swanville, MN 56382

**Upsala High School ISD #487**  
Upsala, MN

**Verndale High School ISD # 818**  
Verndale, MN

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## COLLEGE INFORMATION

### Learning Opportunities

Central Lakes College is a full-service, comprehensive community and technical college. We offer technical college and community college programs and courses from campuses in Brainerd and Staples.

As a comprehensive two-year college, we promote success for our students, businesses, and communities. Our dedicated and competent employees provide opportunities for students to prepare for the future by learning the knowledge, skills, and attitudes necessary for living and earning. We encourage and support cultural enrichment, life-long learning, civic responsibility, and community development. Our programs and services facilitate growth and development of individuals from diverse cultural, ethnic, economic, and educational backgrounds.

We award associate degrees, diplomas, and certificates in more than 60 majors. Some graduates of CLC transfer to Minnesota state universities or other colleges to complete four-year degrees. Other students take a career path from more than 40 professional programs leading immediately to rewarding employment.

Anyone with a high school diploma or a GED may enroll. Even if you don't have a high school diploma or GED, you may still be admitted if you demonstrate the potential for being successful in college.

We are part of the Minnesota State Colleges and Universities system, which is a network of 31 two-year and four-year state colleges and universities serving about 250,000 students annually on 54 campuses in 47 communities in Minnesota.

### Values

The strategic plan is driven by commonly held values that guide individual and organizational behavior. At CLC we value:

- Excellence – seeking to be the best in all that we do
- Access – providing opportunities for everyone
- Integrity – striving to be transparent, honest and open in all our actions
- Service – giving of our time and talents for the betterment of society
- Learning – inspiring our students to reach their full potential
- Diversity – leveraging our unique elements for collective success
- Innovation – embracing change to transform and to work more effectively
- Community— drawing strength from our relationships

### Vision Statement

Central Lakes College will be Minnesota's leading Community and Technical College for life-long learning.

### Mission Statement

We Build Futures.

At Central Lakes College, we-

- are committed to a supportive environment for the growth and development of students from diverse cultural, ethnic, economic, and educational backgrounds.
- offer liberal arts, technical education, and customized training programs of proven high quality that are accessible and affordable and that lead to employment, skill enhancement, or transfer to other institutions of higher learning.
- anticipate and respond to the needs of business and industry in a globally competitive economy,
- encourage and support cultural enrichment, life-long learning, civic responsibility, and community development.

### History

Central Lakes College was formed in 1995 to merge the strengths of the former Brainerd Community College and Brainerd Staples Technical College. Brainerd Community College had been established in 1938 as Brainerd Junior College. At that time, the college included both technical career programs and a college transfer program, all operated by the local school district. In 1963, Brainerd Junior College was chosen as the first member of the Minnesota State Junior College System to receive its own separate building. Brainerd Technical Institute remained as part of the school district.

The community college responded to 35 years of steady enrollment growth with building projects in 1969, 1971, 1974, 1989, and 1991. By 1992 the campus had grown to an enrollment of 1,800.

Brainerd Technical College was at that time called a technical "institute" and remained part of the school district until the merger in 1995. Brainerd Technical Institute and its sister institution, Staples Technical Institute (30 miles away in the historic railroad town of Staples), developed programs designed to meet the changing needs of business and industry. In 1991, the State Board of Technical Colleges combined the administration of both schools, creating Brainerd Staples Technical College.

The Minnesota Legislature, meanwhile, began encouraging community and technical colleges to cooperate, and academic visionaries cited many advantages for consolidation. Brainerd Community College and Brainerd Staples Technical College volunteered to

become one of the first merged colleges in the state and named Central Lakes College: A Community and Technical College.

In 1996, a \$24 million addition opened on the original Brainerd Community College campus. At that time, the former Brainerd Technical College programs physically joined with the former community college and moved to the expanded site nestled in a curve of the Mississippi River. Under one roof in Brainerd are state-of-the-art facilities occupying 350,000 square feet with cutting-edge educational tools, laboratories, and space to grow. A 4,500 sq. ft. music rehearsal hall addition opened in 2008.

At Staples, a new 15,500 square foot West Campus Heavy Equipment Center, funded at \$1.72 million by the state, opened in 1999. A 30,000 sq. ft. maintenance facility opened in 2008, also on the Heavy Equipment campus. A well-equipped main campus addition in 1985 is also a training base for careers in demand. Started in 1950, the campus outgrew the original building. A completely new campus was built on the north edge of Staples near the Crow Wing River in 1971. The college has responded to educational trends by adding Web classes offered on the Internet, as well as evening and weekend courses.

## Scholarships

The Central Lakes College Foundation is a nonprofit 501C-3 organization formed to solicit, receive and administer gifts, grants, bequests and donations. It provides a tax-exempt vehicle for people to donate to the college and thereby provide educational opportunities for Central Lakes College students. Private and corporate contributions are critical to fulfilling the college's missions. Persons or groups desiring to contribute to the Foundation may contact the Foundation Director.

The mission of the CLC Foundation is to provide financial assistance in the form of scholarships to students at CLC. Scholarship applications are available through the Foundation office or can be submitted on-line at [www.clcmn.edu/foundation](http://www.clcmn.edu/foundation).

## Skone Family Conservatory Housing the Humphrey Center for American Indian Studies

The center bears the name of the late Pete Humphrey, whose collection of American Indian cultural materials and literature forms the heart of the center. The facility is part of the library in the east wing of the Brainerd campus. The main area is a museum housing interpretative displays on Ojibwe culture. It also includes more than 3,000 books research material, cultural resources, and programming on American Indian cultures and related issues.

## The Gordon Rosenmeier Center for State and Local Government

The Gordon Rosenmeier Center provides resources for students of CLC and citizens of Minnesota, with headquarters in the library at Central Lakes College, Brainerd campus. It focuses on history and public policy issues involving state and local government.

## Resource Center for Global Connections

This center is a hub for networking teachers, students and community members interested in issues related to the Americas. Its resources include bilingual materials (music, books, newspapers and videos), volunteer and educational listings, Spanish translation services, travel abroad and local speakers.

The Resource Center sponsors Cultural Thursday presentations on the First Thursday of the month. Presentations are given by students, faculty or community members on experiences they have had around the globe. Topics also include current events related to our role as global citizens.

Other events include:

- La Mesa Española—weekly gathering of Spanish speakers for an hour of practice
- Annual Latino Cinco de Mayo Folk Dance/Celebration
- Specialized Spanish classes for the professionals

Check the CLC Web page for updates and events or contact Tracey Kloeckl-Jiménez at 855.8183. The Resource Center for World Languages/Cultures and Global Connections is located in the Brainerd campus library E413.

The Resource Center for World Languages/ Cultures will also serve as a meeting point for CLC Global Connections, a service-oriented student club which provides peer support for our international students, as well as identifies and provides access to learning opportunities revolving around global issues for our entire college community.

## Accreditation

Central Lakes College is accredited by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools located at: 30 North LaSalle Street, Suite 2400 Chicago, IL 60602-2504 Phone: 800.621.7440/312.263.0456 Fax: 312.263.7462 <http://www.ncahigherlearningcommission.org/>

The college was originally accredited in 1977 and has been consistently accredited since that time. Our most recent visit of the NCA evaluation team was in 2002-

2003, and the next comprehensive evaluation by NCA is scheduled for the year 2012. The college's goal is to maintain a 10-year accreditation status, which is the maximum designation awarded.

## Business & Industry Center

Customized Training provides leadership, resources, and training specifically tailored to meet the educational or training needs of organizations served. Our training will help update, retrain, cross-train, and prepare your employees for advancement. CLC provides experienced professionals by using campus instructors and outside consultants to meet your training needs—our campuses, your place of business, off-site, on-the-job training—we will train at a location based on your needs. For a list of services see [www.clcmn.edu](http://www.clcmn.edu) or call 218-855-8139.

## Small Business Development Center

The mission of the Central Lakes College Small Business Development Center (SBDC) is to provide quality business development assistance to existing and prospective businesses to promote growth, profitability, innovation, increased productivity, management improvement and economic development. For a list of services see [www.clcmn.edu](http://www.clcmn.edu) or call 218-855-8239. Policies and procedures are explained in section entitled "Admission to CLC".

## ADMISSIONS POLICY

Central Lakes College has an open admissions policy. The college serves students from a variety of educational backgrounds in keeping with its goals of providing a quality, affordable education.

Once admitted to CLC, students may enroll in any course or program as long as individual course prerequisites are met and space for effective instruction is available. The college will guide a student's enrollment based on academic skills assessments, interviews, previous achievement and other criteria as explained in this section.

Students applying for the programs with selective admissions criteria may be required to take additional tests for admissions purposes. Students who do not meet the standards for admissions into a certain program may enroll in developmental courses designed to help them meet program qualifications.

Application for admission can occur anytime during the year. Admissions policies and procedures are explained in section entitled "Admission to CLC".

## Admission to CLC

It is the policy of Central Lakes College to admit stu-

dents who are able to benefit from the educational offerings of our institution. Admission to CLC does not guarantee admission to a specific program. Fiscal and facilities considerations may limit admission to a particular program.

## Admission Requirements:

Early application is recommended for best selection of classes at registration.

1. Early application is recommended for best selection of classes at registration. A signed transcript release form is required for all applicants attending CLC.
2. A person who does not have a high school diploma or GED certificate (such as home schooled students) must meet the federal and CLC "Ability to Benefit" criteria. See "Ability to Benefit" section for details.
3. On-line applications are available at [www.clcmn.edu](http://www.clcmn.edu). Paper versions are available upon request.
4. A high school student may be admitted as a PSEO student on the basis of:
  - a. College readiness as decided by the college, and/or
  - b. Recommendation by the student's high school principal or designee.
5. Admission to the Heavy Equipment, Nursing, and Criminal Justice programs require additional criteria. Contact the Admissions Department for details.
6. Heavy Equipment Maintenance and Operation and Diesel and Heavy Equipment Mechanics students are required to take a drug test prior to registration for classes. Acceptance into a program major is on a space available basis. See "PSEO" section for details.

## Application for Deferment

Central Lakes College's admissions policy requires students to pay a non-refundable \$20 application fee prior to being admitted to the college. However, under special circumstances, deferments may be approved due to financial hardship. Applications for deferment are available in the Admissions Office. Two official letters from a professional source indicating an inability to pay the fee must accompany application.

## Immunization

Minnesota Law (M.S. 135A.14) requires that all students born after December 31, 1956 and/or graduated from high school prior to 1997 and enrolled in a public or private post-secondary school in Minnesota be immunized against diphtheria, tetanus, measles, mumps, and rubella. The student must provide the college with immunization information required by law prior to the commencement of student's second semester. A registration hold will be placed on records for students not providing immunization information. The information is made available for review by the Minnesota Department of Health and the local community health board. Students wishing to file an ex-

emption to any or all of the required immunizations should request a separate form for required physician and notary signatures.

## Immunization Against Communicable Diseases

It is strongly recommended that all entering freshmen and transfer students be immunized for measles and rubella before they register for classes at CLC.

## College Readiness Policy

Central Lakes College, in order to comply with the MnSCU Board Policy, 3.3.1, "Assessment for College Readiness," requires students to complete an incoming student assessment or assess to appropriate levels on ACT. The assessment includes reading, writing, and mathematics. It will be used to ensure that students have or develop the skills necessary to be successful with their college level curriculum.

Central Lakes College provides a college readiness curriculum to help unprepared students achieve college-level standards:

- Study Skills
- Basic Reading
- Basic Math

Students are encouraged to take College Readiness courses as early in their college career as possible. These College Readiness skills are prerequisites for some courses.

## Assessment Department Assessment Testing for College Readiness

Central Lakes College is dedicated to supporting student success. As part of that commitment to student success, Central Lakes College adheres to the MnSCU policy to assess the reading and mathematical skills of new students in an attempt to match current skills with the CLC curriculum.

### Part 1. Incoming Student Assessment

*Subpart A.* CLC shall require all students to complete incoming student assessment that includes measures of reading comprehension and mathematics on system-endorsed tests, except as provided in Subpart D. The incoming student assessment shall not be used to make college admissions decisions. Placements received as a result of assessment testing are mandatory.

*Subpart B.* Students with documented disabilities shall be tested with system-endorsed, adaptive tests through the Office for Students with Disabilities with necessary accommodations provided. Students with documented disabilities may be eligible for testing accommodations. Please contact Disability Services

at 218-855-8175 or [disabilityservices@clcmn.edu](mailto:disabilityservices@clcmn.edu) to inquire.

*Subpart C.* CLC shall provide an appeals process for students.

*Subpart D.* Exemptions:

Exemptions: Students who have indicated on their admissions application that they are not seeking a degree, diploma, or certificate do not need to take the assessment tests unless they register for: (1) classes in English and mathematics; or (2) classes requiring a prerequisite based on scores/placements received during assessment testing. Information regarding prerequisites can be found in the course listing section of the semester schedule. (NOTE: Students indicating that they are not seeking a degree, diploma or certificate are not eligible for financial aid.)

- Students enrolled in partnership agreements and/or management programs (FBM), non-credit continuing education or customized training classes are exempt from testing.

- Students with college-level coursework in English composition or mathematics shall have documented credits evaluated to determine exemption status. Students taking six or fewer credits within one term are exempt from testing unless they register for English or mathematics classes.

- Students may transfer assessment scores to CLC from other MnSCU institutions provided that they have been taken within the past three years for reading and past two years for math on MnSCU system endorsed tests. Scores will then be evaluated for placement into CLC coursework.

### Part 2. Minimum Standards for Access to General Education Courses

*Subpart A.* CLC shall adhere to MnSCU guidelines for placement into college level courses in reading and math.

*Subpart B.* Students placing below college-level coursework shall be placed into developmental coursework as indicated.

*Subpart C.* CLC instructors shall evaluate student's progress through curriculum and determine next sequenced placement.

### Part 3. Developmental Education

Students placing into developmental education curriculum shall be provided coursework that will prepare them for entry into college level courses or technical/occupational programs.

### Part 4. Annual Report on College Readiness

CLC shall annually report its assessment data, accord-

ing to system reporting procedures.

### Part 5. Definitions

System-Endorsed Tests: For native speakers of English, the system-endorsed tests are the Descriptive Tests of Language Skills and the Descriptive Tests of Mathematical Skills as developed by the College Board OR the computerized version of such tests, known as the Accuplacer CPTs (Computerized Placement Tests). For non-native English speakers, the Test of English as a Foreign Language shall be used for assessment purposes.

- General Education: courses in the college-level curriculum in college mathematics and composition to which minimum reading standards apply will be determined by the Department of Academic Affairs.

- College Level: courses number 1000 or above which count toward the credit requirements of a certificate, diploma, associate degree, or baccalaureate degree.

- Developmental Education: courses numbered below 1000 intended for students who do not meet minimum assessment standards and which do not count toward a certificate, diploma, associate degree, or baccalaureate degree.

## Assessment Testing Procedures

### Part 1. Incoming Student Assessment

*Subpart A.* English as a Native Language

CLC shall administer the following tests to students who self-declare English as their native language (NL):

- Accuplacer/College Placement Tests
- Reading Comprehension 20 items
- Arithmetic 20 items
- Elementary Algebra 20 items
- College Level Mathematics 20

Tests take approximately 1 ½ hours to complete including instructions, general information, and printing test results. The testing schedule is available on the CLC Assessment web site.

### Part 2. Accommodations

Students with disabilities may arrange for testing accommodations by contacting the Disability Services Office at 218-855-8175 or [disabilityservices@clcmn.edu](mailto:disabilityservices@clcmn.edu).

### Part 3. Appeals Process

Students will be informed at the time of testing and in CLC publications that they may retest if they believe their test results are not a valid reflection of their skills.

### Retest

A student may test twice within 90 days and then one more time within a 12-month period. The cost to re-

test is \$15.00. The student must retest to college level or take the appropriate developmental course. Retests can be scheduled on the CLC Assessment web site.

### Part 4: Ability to Benefit Procedure

Students who do not possess a high school diploma or GED are required to meet minimum scores in reading, sentence skills and math-ematics. Those who do not meet minimum scores may retest within a 90-day period of the initial test and then one more time within a 12 month period. The cost to retest is \$15.00. Minimum scores are those set by the Federal Government. Students who take the Ability to Benefit test are not eligible for financial aid.

### Part 5. Testing Exemptions

Exemptions to Assessment Testing for College Readiness based on completed degree, college transcript, or ACT/SAT subscores:

*Subpart A.* Students seeking exemption from testing based upon previous college coursework must work with a CLC Advisor to complete the Assessment Exempt process.

Students holding a two-year or four-year degree from an accredited U.S. institution may be exempt from assessment testing and may be determined to meet the program entrance requirements for a technical program. Students seeking exemption from testing based on previous degrees must work with a CLC Advisor to complete Assessment Exempt Process.

Students seeking exemption from testing based on ACT/SAT subscores that are within two years old must submit documentation for review to Assessment Center staff.

*Subpart B.* Students enrolled in partnership agreements and/or management programs (FBM, SBM, CSB), non-credit continuing education or customized training classes are exempt from testing.

### Part 6. Establishing Minimum Standards for Access to General Education Courses

The Dean of Students will serve on the Developmental Education Committee of CLC and serves as the college liaison to CAPP Associates. The developmental coordinators will forward to the Dean of students the cut score placements for coursework by mid-February of each year. These scores will go into effect at the beginning of the fall testing term (July 1) and will remain in effect through the following spring term testing period. Math and English department faculty have evaluated acceptable student progress in developmental courses as A, A-, B+, B, B-, C+, and CNC for progression to the next sequenced placement.

### Part 7. Developmental Education

*Subpart A.* Students shall enroll in the developmental

coursework in which they were placed. Subsequent progression will be determined by the instructor and prerequisites. Students are not to retest with the placement tests once coursework has begun in that discipline. Retesting of current students will occur only if instructor recommended. For technical programs, students must meet the requirements to begin program coursework. If developmental coursework is required, developmental coursework must begin during the first semester of enrollment.

#### Part 8. Annual Report on College Readiness

CLC shall annually submit to MnSCU unit record data files on assessment test results, course placement or advisory standards, and criteria and number of exemptions to testing policy for research and evaluation purposes. Ability to Benefit reporting will also be completed annually.

## Developmental Education

### Part 1. Definitions

Developmental education is the program which enables students to improve basic learning skills in reading, writing, and mathematics, thereby furthering the achievement of personal educational objectives. Developmental education expands higher education opportunities to previously underserved and underprepared populations. Developmental education prepares students for rigorous academic experiences, has positive effects on underprepared student persistence, grade point average, and retention.

### Part 2. Assessment Testing

Assessment testing for basic skills in the areas of reading and mathematics will be administered to all new entering students. Students with disabilities may arrange for testing accommodations by contacting the Disability Services Office at 218-855-8175 or [disabilityservices@clcmn.edu](mailto:disabilityservices@clcmn.edu). Exceptions to this policy will be noted under Student Assessment policies. Assessment testing must be completed before registration.

### Part 3. Developmental Coursework

Developmental courses have course numbers under 1000 and do not count toward credits in degree and diploma programs. These courses are provided at normal tuition and count toward financial aid eligibility. The College has identified minimum assessment standards required for enrollment in college-level courses in mathematics and English composition. Students are expected to complete their developmental coursework during the first year. This normally will necessitate enrollment in any required reading, writing, or mathematics courses in the first semester the student is enrolled.

## Post Secondary Enrollment

## Options (PSEO) Procedures

The Post Secondary Enrollment Options program (PSEO) was established as an enrichment program for high school juniors and seniors. PSEO students are expected to perform to the standards to which the college's non-PSEO students are held accountable. These include policies regarding academic standing and student conduct.

### PSEO Admissions Criteria

A high school junior/senior applying as a PSEO student must meet the following criteria:

1. High School Grade Point Average: (SEE NOTE 1)
  - a. 12th grade/Senior must have a high school GPA of 2.5 or greater.
  - b. 11th grade/Junior must have a high school GPA of 3.0 or greater.
2. 10th Grade Career & Technical Education:(SEE NOTE 1)
  - a. 10th grade/Sophomore: a student who is in 10th grade and has attained a passing score on the 8th grade Minnesota Comprehensive Assessment in reading. Students who do not meet the standards listed above must request an appeal through the Admissions Department.

*NOTE 1: MNSCU PSEO Procedures please visit <http://www.mnscu.edu/board/procedure/3-05p1.pdf> for the entire MnSCU Policy.*

### PSEO Admissions Process

1. Student applying as a PSEO student must provide the following information to the Admissions Department:
  - a. CLC Application for Admission
  - b. Completed PSEO form signed by student, high school official and parent (if under 18).
  - c. Current high school transcript
2. Verification of College Readiness, completion of assessment or submission of ACT documentation.
3. PSEO students must attend a college registration session.

### PSEO Enrollment Information

• PSEO students needing to enroll in developmental courses (college courses numbered below 1000 or Technical Education courses numbered below 1000) are required to pay tuition and fees for these classes.

• PSEO students will register on assigned registration days according to total credits earned. Students must complete a post secondary option form each semester, which must be signed by a high school official and parent (if under 18). This form must be submitted to the Admissions Department.

• PSEO students may be responsible for the costs of textbooks, materials and/or fees for certain courses.

If you have questions regarding these costs, please contact the Business Office at [cashiers@clcmn.edu](mailto:cashiers@clcmn.edu) or 218-855-8030.

• Post Secondary Enrollment Option (PSEO) students are allowed to charge required books and a reasonable amount of required supplies that will be used up in their courses. Books charged by PSEO students are the property of Central Lakes College. Books must be returned to the bookstore at the end of the semester.

- PSEO students are not eligible for financial aid, CLC scholarships, or work-study.
- PSEO students will be accepted into program majors only after all regular post-secondary students have been admitted.

### PSEO Academic Standard for GPA and Course Completion

Once admitted to the college, PSEO students are required to maintain a minimum Grade Point Average and Course Completion Rate in order to continue their participation in the PSEO program. PSEO students must maintain a cumulative GPA of 2.0 (C average) in their CLC courses and complete 67% of the courses that they attempt. If a student falls below either of these levels, they will receive a letter indicating that they are dismissed from the PSEO program and must return to their High School. Under extraordinary circumstances appeal of dismissal from the PSEO program will be considered.

### PSEO Admissions Appeal Process

PSEO applicants who do not meet the admissions requirements and are denied acceptance have the right to appeal the decision to the college.

#### What constitutes an Appeal?

An appeal must include:

a. A statement by the student in writing defining how he/she can be academically successful as a PSEO student at CLC.

b. A letter of recommendation from the high school counselor or principal stating the student can be academically successful at CLC and that the high school supports the student's admission to the college. The appeal must be submitted to the Admissions Office by noon on the fifth day of the semester in which the applicant is seeking admissions. Appeals received after this deadline will not be considered for the current semester. Notification of the decision will be sent to the student and the high school counselor/principal no later than the end of the fifth day of the semester.

### PSEO Students with Disabilities

PSEO applicants with disabilities must follow the procedure outline for all PSEO applicants. Students wishing to receive disability services must provide the

Office of Disabilities with current documentation. Students with disabilities, who are appealing a denial for admissions, may provide letters of support from their Special Education teacher for consideration.

## Admission of Transfer Students

Students transferring to Central Lakes College from other colleges must request official transcripts of all previous college work be forwarded to the Central Lakes College Office of Students Records. Students who have attended other MnSCU institutions will have their transcripts automatically sent to CLC upon Admission. Students who have a suspension status at a previous college must supply a college transcript and complete the appeal process available on the website at [www.clcmn.edu](http://www.clcmn.edu).

## Admission of International Students

International applicants (new and transfer) who are not permanent residents or citizens of the United States may be considered for admissions after submitting the following:

1. A completed International Student Application for Admission.
2. Official transcripts from each high school/secondary school, college, university, and ESOL program attended. Transcripts must be translated into English, officially stamped, and mailed by the institution.
3. Documentation of English proficiency by providing one of the following:
  - a. Official TOEFL (Test of English as a Foreign Language) examination scores. Minimum composite score requirements are: 61 (internet based) 173 (computerized) or 500 (pencil/paper)
  - b. Official ESOL results from an ESOL center. Must have completed 109 for admissions or
  - c. A grade C or better in a college level English.
  - d. Completion of the ESOL Accuplacer assessment. ESOL students will be assessed in all areas of reading, writing, sentence meaning and listening
4. Financial Documentation: Declaration of financial resources in U.S. currency to ensure that there are sufficient funds available to cover applicant's school and living expenses for one year. Please note that students can not rely on financial aid from the college or employment in the U.S. as a source of income.
5. U.S. Form I-134 Affidavit of Support is required if a third party will be providing some or all support while attending CLC.

#### Application Deadline:

Fall Semester: May 1 (F-1 Transfer students – July 1)  
Spring Semester: October 1 (F-1 Transfer students – December 1)

**International students on an F-1 visa must:**



- purchase the MnSCU International Student Accident and Illness Insurance Plan upon enrollment.
- provide written proof of immunization against diphtheria, tetanus, measles, rubella, and mumps as required by Minnesota Law (M.S. 135A.14)
- be enrolled full time completing at least 12 credits each term.
- pay tuition in full by required due dates.

## Admission of English As a Second Language and Other Language Learners

English as a Second Language and other language learners (ESOL) services at Central Lakes College are designed to assist limited English speakers from different ethnic and cultural backgrounds to be successful in the college environment. Naturalized citizens or resident aliens, requiring ESOL services and seeking admission to the college may be considered for admission after submitting the following:

1. A completed Application for Admission.
2. A high school diploma, G.E.D., or have passed the 'Ability to Benefit' testing. Official school transcripts from high school or postsecondary institution; transcripts must be translated into English and officially stamped and mailed.
3. Written proof of immunization.
4. Documentation of English proficiency by providing one of the following:
  - a. Official TOEFL (Test of English as a Foreign Language) examination scores. Minimum composite score requirements are: 61 (internet based) 173 (computerized) or 500 (pencil/paper)
  - b. Official ESOL results from an ESOL center. Must have completed 109 for admissions or
  - c. A grade C or better in a college level English.
  - d. Completion of the ESOL Accuplacer assessment. ESOL students will be assessed in all areas of reading, writing, sentence meaning and listening. Eligibility for enrollment would be testing into ENGL 1510.

### Students who are unable to meet the acceptance criteria may appeal.

Students who are unable to meet the acceptance criteria for Admission may appeal for admission into Central Lakes College. For more information, please contact the Central Lakes College Admissions Department.

## Determination of Residence

1. Students who seek to qualify for in-state residence status must meet the following threshold requirements:
  - a. Students must have resided in Minnesota for at least one calendar year immediately prior to

- applying for in-state tuition; and
  - b. Residence in Minnesota must not be merely for the purpose of attending a college or university.
2. Each of the following additional facts and circumstances will be considered when responding to a petition for in-state tuition. No one of these factors is either necessary or sufficient to support a claim for in-state tuition:
    - a. Continuous presence in Minnesota during the period when not enrolled as a student;
    - b. Sources for financial support are generated within Minnesota;
    - c. Domicile in Minnesota of family, guardian, or other relatives or persons legally responsible for student;
    - d. Ownership of a home in Minnesota; and
    - e. Permanent residence in Minnesota.
  3. The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to affect eligibility for in-state tuition under these regulations but may be considered as part of the demonstration of the facts and circumstances listed above:
    - a. Voting or registration for voting;
    - b. The lease of living quarters;
    - c. A statement of intention to acquire a domicile in Minnesota;
    - d. Domicile of student's spouse in Minnesota.
    - e. Automobile registration; and
    - f. Other public records, e.g., birth and marriage records.

Students determined to be a non-residents at the time of application, may appeal their residency status by completing a Petition for Resident Status form. This form is available in the office of admissions and must be completed prior to the end of the fifth day of the semester.

**Appeal:** An appeal must be submitted in writing along with supporting documentation no later than 10 working days from denial of resident tuition status. The appeal will be reviewed by Director of Admissions and Dean of Student Affairs. Written notification of results of appeal will be mailed within 20 days of receipt of the appeal.

## Reciprocity

Residents of South Dakota, North Dakota, Wisconsin, and Manitoba, Canada are eligible to attend Minnesota public institutions under the reciprocity agreements with the State of Minnesota. Application forms are available on-line at [www.mnseo.state.mn.us](http://www.mnseo.state.mn.us). CLC charges in-state tuition to all students unless another state's reciprocity agreement dictates otherwise.

## Midwest Student Exchange

Residents of Kansas, Michigan, Missouri, and Nebraska are eligible to attend Minnesota public institu-

tions under the Midwest Student Exchange Program. Residents of these states may attend Central Lakes College at a tuition rate 50% above resident tuition. Further information may be obtained from the Admissions office.

## Returning/Re-Admit Students

A CLC student who has not attended the college for one year or more will be classified as a returning student. In order to be re-admitted, a returning student must complete the EZ Enrollment form and submit to Admissions department. Students who are on suspension status, have outstanding financial obligations, or possess other encumbrances must clear their status before re-enrollment. A returning student must comply with the program major requirements and policies which are in effect when returning to college.

## Senior Citizen Admission

Senior citizens who are 62 years of age or older are eligible to enroll for classes on a space-available basis. An administrative fee of \$20 per credit plus associated fees are required if a course is taken for college credit. Senior citizens may audit a course for no grade. The administrative fee will be waived, but associated fees will be assessed.

## Ability to Benefit

Central Lakes College policy states that any student without a high school diploma or GED certificate, regardless of the number of credits he/she is enrolling in or regardless of whether he/she is receiving financial aid, is an Ability to Benefit student. Students are required to complete the Accuplacer Assessment and score at specified levels prior to acceptance at CLC.

Ability to Benefit testing is administered by Lynn Anderson 218-855-8254 at Brainerd campus and Gayle Wonders 218-894-5114 at Staples campus. Students who complete the test with the appropriate scores will continue through the Admissions/ Orientation / Registration process.

## Home-Schooled

Students who are schooled at home and who do not have a high school diploma or its equivalent (GED) may be admitted to the college with special student status in the same manner in which Ability to Benefit students are admitted. Students who are schooled at home and are entering under Post Secondary Option will follow the PSEO Student Admission Policy. Home-schooled students are required to submit Immunization form to Admissions department.

## College in the Schools (CIS)

## Procedures

The College in the Schools Program (CIS) was established as an enrichment program for juniors and seniors giving them an opportunity to take college classes in their high schools. Students are expected to perform to the standards to which the college's non-CIS students are held accountable. These include policies regarding academic standing and student conduct.

## College in the Schools Criteria

A high school junior/senior applying as a CIS student must meet the following criteria:

1. High School Grade Point Average:
  - a. 12th grade/senior must have a GPA of 2.5 or greater
  - b. 11th grade/junior must have a GPA of 3.0 or higher
  - c. 9th or 10th grade must rank in the upper one-tenth of their class or attain a score at or above the 90th percentile on a nationally standardized, norm-referenced test, or letter of recommendation from high school official
  - d. A score of 78 or higher in Reading on Accuplacer

## CIS Enrollment Information

1. Students must submit an application and high school transcript to the representative at their high school.
2. CIS students receive books at no cost for their classes and are required to return the books to the college at the end of the semester.
3. CIS students are not eligible for financial aid, CLC scholarships or student employment. CIS Admissions Appeal Process CIS applicants who do not meet the admissions requirements and are denied acceptance have the right to appeal the decision. Students will contact their high school representative for details on appeal process.

## What constitutes an Appeal?

### An appeal must include:

A letter of recommendation from the high school counselor or principal stating the student can be academically successful at CLC and that the high school supports the student's admission to the college. CIS Academic Standard for GPA and Course Completion CIS students are required to maintain a minimum grade point average and course completion rate in order to continue their participation in the program. CIS students must maintain a cumulative GPA of 2.0 (C average) in their CLC courses and complete 67% of the courses that they attempt. If a student falls below either of these levels, they will receive a letter indicating that they are dismissed from the PSEO program. Under extraordinary circumstances appeal or dismissal from the CIS program will be re-considered.

# REGISTRATION

## Registration Procedures

Students may register for courses by using the CLC Web site: [www.clcmn.edu/registration](http://www.clcmn.edu/registration). Registration procedures vary depending upon whether the student is a new, returning, or in a program at the time of enrollment. When enrollment has been broken for one year, the student is subject to the degree, diploma, or certificate requirements stated in the program that is current at the time of re-enrollment. Students who wish to enroll in more than 19 credits fall or spring semester, must have a 'Request for Additional Credits' form signed by an advisor. Students who wish to enroll for more than 9 credits during the summer semester, must have a 'Request for Additional Credits' form signed by an advisor. The college reserves the right to withhold registration privileges from students with unpaid college financial obligations.

## Add/Drop Courses

Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation.

- Students are permitted to add and drop courses up to the first five days of the semester, or one business day after the first class meeting, whichever is later.

- Students are financially obligated for any classes not dropped after the fifth business day of the term, or one business day after the first class session, whichever is later and students are not able to have those courses removed from their academic record. For purposes of this policy, business days are defined as Monday through Friday (excluding posted holidays).

## Repeating a Course

A course may be repeated for an improved grade. Only the highest grade earned will be counted toward a degree and in the computation of the overall numerical grade point average. This policy applies to all grades including "F" grades. However, both the original and the repeated grade will appear on the student's transcript. Tuition and fees will be charged each time. Repeated coursework is not automatically updated on a student's record. A student who is repeating a course should fill out a "Course Repeat" form, available in the Records and Registration office and at [www.clcmn.edu/registration/forms.html](http://www.clcmn.edu/registration/forms.html) in electronic and PDF format.

## Transcript Requests

The Records and Registration office maintains student academic records. Transcript records show all course work for which a student was registered during each term of enrollment and the grades awarded for those courses. Requests for transcripts can be made in person, by fax, by mail or electronically. Transcript requests will not be accepted via e-mail. If an official

Central Lakes College (CLC) transcript is needed for a Minnesota State College or University, that institution may be able to obtain the CLC transcript electronically. Please contact that institution directly for further information. A complete listing of the MnSCU colleges/universities can be found at [www.mnscu.edu/campuses](http://www.mnscu.edu/campuses). Unofficial Transcripts may be obtained on the CLC registration Web site [www.clcmn.edu/registration](http://www.clcmn.edu/registration). Students will need their StarID and Password to access their transcripts.

All official transcript requests must be signed, dated, and include the following:

- Complete name and current address
  - Student's social security number or ID
  - Program and date of last attendance
  - Address where transcript is to be mailed
- Transcript Request forms may also be submitted electronically from the Central Lakes College registration web site <http://www.clcmn.edu/registration/registration-forms/>

## Transcript Hold

Academic student transcripts are not released for students with financial obligations. This includes unreturned library materials, media equipment, and physical education equipment and unpaid tuition, fees, or bookstore charges.

The following grades are used at CLC:

Grade	GPA	Description
A	4.0	Excellent
A-	3.67	
B+	3.33	Above Average
B	3.0	
B-	2.67	
C+	2.33	
C	2.0	Average
C-	1.67	
D+	1.33	Minimum Passing
D	1.0	
D-	.67	
F	0.0	Failing (For courses #1000 level or above)
FN	0.0	Non-attendance
FW	0.0	Unofficial Withdrawal
S	0.0	Satisfactory
U	0.0	Unsatisfactory
W	0.0	Withdraw (Student generated)
I	0.0	Incomplete
IP	0.0	In Progress
AU	0.0	Audit (Must be student generated at time of registration)
NC	0.0	No Credit (For courses numbered below 1000)

## Definitions:

- The "I" grade is an agreement between the faculty member and the student. The student may be given up to one semester to complete the course requirements. An instructor will submit a grade change once

the course requirements have been met. Students not completing the course requirements after the one semester will automatically receive an "F".

- Students who have not attended the first 5 days of class will receive an "FN" grade and will not receive financial aid for this class.
- The "FW" grade means the student stopped attending class prior to 60% of the term being completed.
- The "S" grade represents average achievement of "C" or above. Arrangements for "S" grades must be made with the instructor. Credits of "S" will be limited to 30% of the total credits for the degree, diploma, or certificate.
- The "AU" grade means the student will audit the class. At the time of registration the student must indicate that he/she chooses to audit a class. The audit permits attendance and participation in course activities. No credit is earned for the audited course, and financial aid does not cover the course. However, tuition and fees remain the same. Regular attendance without registration is not authorized.
- Credit: The unit by which academic work is measured.
- Registered Credits: The total number of credits for which a student is officially enrolled at the end of the registration drop/add period of each semester.
- Earned Credits: Successfully completed credits.

## Grade Point Average (GPA)

The grade point average (GPA) is determined by adding all grade points earned and dividing by the sum of all credits attempted in courses where letter grades of A, B, C, D, or F were received. Courses with grades of I, W, IP, S, U, AU, NC, and all transfer grades do not apply toward GPA calculations. A semester example is shown below.

Grades	Points	Credits	Points
A=	4.00	3=	12.00
B=	3.00	3=	9.00
C=	2.00	3=	6.00
D=	1.00	3=	3.00
F=	0.00	3=	0.00
Total	15=		30.00
GPA= 30/15= 2.00			

Both the term GPA and the cumulative GPA show on a grade report and a transcript. Students who do not maintain a 2.0 or higher cumulative GPA will be put on academic probation/suspension. A cumulative 2.0 GPA is required for graduation.

## Address Changes

Students may now change their address and phone number online [www.clcmn.edu/registration](http://www.clcmn.edu/registration). Students are responsible for keeping their address current with Central Lakes College.

## Classification of Students

Students are not required to take a minimum number of credits each semester. However, to make progress toward the completion of a 60-credit associate degree or diploma within a two-year time frame, students must complete an average of 15 credits each semester. Students planning to take more than 19 credits fall and spring semesters and more than 9 credits summer semester must obtain approval from an advisor. For reporting purposes, students are classified according to the following:

- Full-time: A student who is enrolled in at least 12 credits during a semester.
- Part-time: A student who is enrolled in 11 or fewer credits during a semester.
- Freshman: A student who has completed 29 or fewer semester credits.
- Sophomore: A student who has completed 30 or more semester credits.

## Visiting Students

Central Lakes College allows students registered at other MnSCU Colleges and Universities to register for courses at Central Lakes College as long as those courses traditionally have not had demand from Central Lakes College admitted students which historically had exceeded available seating capacity in the course.

Visiting Students are not required to apply to Central Lakes College to register for their selection of courses and are permitted to register for a maximum of 22 credits among all MnSCU colleges and universities. Visiting Students are not eligible for Financial Aid at Central Lakes College, but may be eligible for federal financial aid at their home college or university.

## Graduation Requirements

Candidates for degrees, diplomas, and certificates must comply with the following criteria:

1. Complete all degree, diploma and certificate program requirements. Credits must be earned in courses numbered 1000 or above.
2. Achieve a cumulative grade point average (GPA) of 2.0 or better on a 4.0 grading scale.
3. Fulfill all financial obligations to the college.
4. Complete one-fourth of their credits at Central Lakes College.
5. Submit an "Application for Graduation" form to the Records and Registration office the semester before graduation.
6. Nursing students need a "C" in all courses.
7. Students who receive a 3.25-3.74 Cumulative GPA will graduate with honors. Students who receive a 3.75-4.0 Cumulative GPA will graduate with high honors.

For the graduation ceremony, honors and high honors are determined at the end of fall semester. At this time,

spring grades are not included.

## Program Major Changes

Students who are planning to change programs need to follow the following process:

1. Complete a Program Change form (available in the Admissions office).
2. It is recommended that students meet with a counselor in the Counseling Center to discuss a program change.
3. Submit the completed Program Change form to the Admissions office.

Students are accepted into programs on a first-come, first-serve basis by the date of application or by the date of the Program Change form. Students who do not follow the proper procedure to change programs may be placed on a waiting list for their desired program if space is not available.

## Transfer of Credit

Students seeking a degree, diploma or certificate who have attended a previous college must have all official transcripts sent directly from that college to Central Lakes College Records and Registration. If the transcript is hand-delivered by the student, it must be delivered in an unopened college envelope. Student copies and faxed transcripts are not considered official. A course syllabus or course outline may be requested to determine course transferability.

Courses completed from colleges or universities which do not possess regional accreditation will be considered on an individual basis for evaluation but do require a syllabi or course outline for the course. Other documentation may be required.

Transfer of credits shall be accomplished in accordance with Minnesota State Colleges and Universities policy and the policy of Central Lakes College. Once a course has met the criteria necessary for inclusion in the Minnesota Transfer Curriculum in any area of emphasis, the course must be accepted for full credit in that area of emphasis at all Minnesota State Colleges and Universities.

Lower division courses (100, 200, or 1000, 2000 numbered) completed with a grade of "D-" or better at regionally accredited colleges will be accepted in transfer. "S" grades will be accepted if the transcript legend designates the "S" grade equals a "C" grade or higher. Not more than six upper-division (300, 400 or 3000, 4000 numbered) semester credits may be used in transfer.

Law enforcement students seeking the Minnesota Post licensing: Only credit for law enforcement courses

completed within three years of the request of transfer will be accepted in transfer.

Nursing students: Only microbiology courses that include a lab will be accepted in transfer. Transfer credit requests should be done prior to registering for classes.

## Transfer decisions may be appealed.

Your Rights as a Transfer Student

The following are rights of a transfer student:

1. To receive a clear, understandable statement of an institution's transfer policy.
2. To receive a fair credit review and an explanation of why credits were or were not accepted.
3. To appeal a transfer decision.

## Transfer Appeals Process

Transfer appeal process steps are:

1. Student completes the Transfer Appeal Form indicating they would like to appeal a transfer evaluation decision.
2. The CLC Registrar will review the Transfer Appeal and notify the student of the outcome of the appeal in writing.
3. If the student is not satisfied with the decision of the college, they have the right to appeal to the Vice President of Academic and Student Affairs. (Please contact the Transfer Specialist for the appropriate paperwork.)
4. If the student is not satisfied with the decision of the Vice President of Academic and Student Affairs, they have the right to appeal to the Senior Vice Chancellor of Academic and Student Affairs at MnSCU using the System Appeal Form. This decision is final. (Please contact the Transfer Specialist for assistance with completing the appeal.)

For more information, please refer to Procedure 3.21.1-Part 7, Subpart B-System level appeal at: <http://www.mnscu.edu/board/procedure/321p1.html>.

## Credit for Military Experience

An enrolled student may request an evaluation of military experience and education for college credit from an official military transcript. This is evaluated and awarded by the Registrar according to the standards of the American Council on Education (ACE), the American Association of College Registrars and Admissions Officers (AACRAO), and the policies of Central Lakes College. Contact the Records and Registration office for information.

## Credit for Advanced Placement

## Testing

Central Lakes College will award credit for Advanced Placement testing provided the student earned a score of 3 or above on the exam. The amount of credit granted will not exceed the credit granted for an equivalent course or course sequence offered by CLC. Approved credits will be transcribed as "Advanced Placement" credits. Students wishing to apply for Advanced Placement credit should request to have test results mailed to Records and Registration.

## Credit for Advanced Standing Certification

Central Lakes College has a number of course equivalency agreements with high schools. These articulation agreements allow students to experience advanced learning that can be used in their college career. Students are subject to the current articulation agreement that is in effect at the time of their enrollment at Central Lakes College. Advances Standing Certification credits are transcribed showing total credits and identified as "Advanced Standing Certification" credits. Students who are interested in further information should contact their high school counselor or the Records and Registration office of Central Lakes College.

## Credit for CLEP

Credit for both subject and area examinations of CLEP (College Level Examination Program) will be evaluated for credit according to the recommendation of the American Council on Education and according to the policies of Central Lakes College. Students wishing to apply for credit should have results mailed from CLEP directly to the Records and Registration office. Approved credits will be transcribed as "CLEP" credits. Information about CLEP is available in the Counseling Center.

## Credit by Evaluation

If a student is confident that he/she has the competencies needed to meet the objectives for a diploma program course, he/she may make a request for Credit by Evaluation by following these steps:

1. Check the list of courses that allows this method. The list is available from the vice president of Academic Affairs office.
2. If the student decides to proceed, he/she should complete the Credit by Evaluation form available from the vice president of Academic Affairs office.
3. After the student completes the form, the VP of Academic Affairs or designee will assign the appropriate instructor to administer the evaluation. The evaluation may be oral, written, demonstration, or a combination of these.

4. The student will go to the cashier to pay the appropriate non-refundable fee. Students are reminded that financial aid does not cover any of the Credit by Evaluation fees.

5. The student will then meet with the assigned instructor to set up the test time and finalize criteria for the evaluation.

6. The examination will be administered to the student.

7. The instructor will return the Credit by Evaluation form to the VP of Academic Affairs who will ensure the credits are appropriately transcribed.

8. Only the grade of "S" will be allowed for Credit by Evaluation courses.

The process allowing Credit by Evaluation must be completed by the end of the drop-add period to allow the student to withdraw from a course without penalty. If the student has not registered for the course and wishes to attempt Credit by Evaluation, the student may complete the process at any time.

A student cannot receive Credit by Evaluation for a course she/he previously registered for and failed.

## Withdrawing from a Course

Students may withdraw online using e-services by selecting the "drop/withdraw" function after selecting the course you wish to withdraw from. When a student withdraws from a course, his/her transcript will show a "W" grade for the course. While withdrawing from a course does not affect a student's GPA, the student needs to complete 67% of his/her attempted credits to remain in good academic standing at Central Lakes College. The college strongly recommends that before a student withdraws from a course, he/she should first meet with an advisor. No refunds are given for withdrawing from individual courses.

For Fall and Spring Semester courses which start at the beginning of each semester and meet for the full 16 week term, a student may withdraw online utilizing e-services up to ten (10) business days prior to the start of finals exams. For any courses not meeting for the full 16 week term, a student may withdraw utilizing e-services up to twenty (20) business days following the first class meeting.

For Summer Session courses, students may withdraw from a course up to five days before the end of the session for courses which meet for the full 8 week term. If a student wishes to withdraw after the deadline, he/she must obtain permission from the instructor and signature of approval on the Withdraw Form.

## Withdrawing Totally from College

Students may totally withdraw from Central Lakes College by withdrawing utilizing e-services, or by completing a Total Withdraw form, which is available

at the Financial Aid office. The form must be initiated by the student. Students are not allowed to withdraw after the final withdrawal date of each semester. Tuition will or will not be refunded according to state or federal policy. All students totally withdrawing from the college will receive "W" grades for registered courses. If a student who receives Federal financial aid officially withdraws from all his/her classes or merely stops attending classes at CLC before 60% of the term is completed, the student will be required to repay a portion of his/her financial aid. The student's last date of attendance will be determined as follows:

1. If a student completes a Total Withdrawal form before leaving CLC, the college will use the date on the form as the last date of attendance.
2. If a student stops attending classes and does not notify CLC of his/her decision, the student will receive "F" grades for all registered courses and the student's last date of attendance will be reported by the student's instructors.

## TUITION, FEES & FINANCIAL AID

Please visit the Business Office web page for up-to-date tuition rates, fees and policies.

Central Lakes College does not mail tuition statements. The act of registration is considered an acknowledgment on the part of the student that he/she will attend and pay for the registered courses. It is the responsibility of the student to review their account in Student e-Services and pay their bill in a timely manner.

- Tuition is due 15 days prior to the start of the semester.
- Tuition payments must be received, in the Business Office, by 4:30 p.m. on the tuition due date.
- Financial Aid is disbursed on the 12th day of the semester. For current student account information please check online @ <http://www.clcmn.edu>. Select e-Services at the top of the screen and log in using your StarID. Tuition

For planning purposes, students may estimate base tuition and fees at \$180 per credit.

- Central Lakes College charges in-state tuition to all students unless another state's reciprocity agreement dictates otherwise.
- Tuition for online courses is an additional \$30.00 per credit.
- Certain technical and lab courses may be charged a higher rate of tuition.
- Additional charges may apply depending on the courses for which a student registers. Mandatory Fees
- Parking Fee: Students are charged \$2.50 per credit and a maximum of \$40 per semester for on campus parking. This fee supports parking lot and sidewalk

construction, improvements and maintenance. This fee is not assessed for online or off campus credits.

- Statewide Student Association Fee: This fee is \$0.31 per credit and supports the Minnesota State Colleges Student Association (MSCSA). Other Fees
- Student Life/Activity Fee: This fee supports student athletics, campus cultural activities, student senate and student clubs. The fee maximum is \$112.50 per semester.
- Technology Fee: This fee supports student and classroom technology. The fee maximum is \$10.00 per credit.

Service Charges: charges for items that become the personal property of a student and have an educational or personal value beyond the classroom or for services for or on the behalf of the students. The actual cost shall be the allowable maximum charge. These charges may include but are not limited to testing fees, assessment fees, processing fees, or other course related fees.

## Senior Citizen Charges and Fees

As defined in Minnesota Statutes §135A.51 a senior citizen is a legal resident of Minnesota who has reached 62 years of age before the beginning of any term, in which a course of study is pursued. Senior citizens pay an administrative fee of \$20 per semester credit in lieu of tuition. Senior citizens are exempt from student activity fee, but are required to pay all other applicable student fees. Senior citizens who audit a course do not pay the \$20 administrative fee, student activity fee, technology fee, or student association fee, but are still responsible parking fees and all other applicable fees.

## Due Dates

The tuition due date is fifteen business days prior to the start of the term. Start of the term is the first day classes are held. Registration Cancellation will process for unpaid credit registrations on the fifth business day of the term. Full payment is due twenty five business days after the start of the term unless the student has obtained an approved tuition and fee payment plan. Financial Aid Disburse on the twelfth day of the term.

## Registration Cancellation

The college shall cancel student registration for all credit courses unless one of the following conditions has been met:

- The student has paid at least 15% of the Tuition and Fees due or made a \$350 down payment towards tuition and fees;
- An Institutional Student Information Record (ISIR) has been received by the college;
- The student has enrolled in a Nelnet payment plan;
- The student has received an approved third party funding deferral and the college is in possession of

an authorization, in an amount adequate to cover charges; or

- The student has received an approved waiver or scholarship at least equal to the amount of tuition and fees due. The registration cancellation process will occur:
- Three weeks prior to the start of the term, after the tuition due date
- On the 5th business day of the term, after the free add/drop period has ended

By meeting the minimum criteria of the payment policy, registration is secured and students should attend their courses.

If plans change and the student will not be attending, it is the student's responsibility to login to e-Services and drop/cancel their course registration prior to the 5th day of the term. Students should not rely on the Registration Cancellation process to drop their courses for them.

## Payment Plans

Nelnet Payment Plan: Central Lakes College offers Nelnet as a convenient budget plan. The cost to budget an interest-free monthly payment plan is a \$24 per semester, non-refundable enrollment fee. Tuition, fees and books may be included in the plan. Payments are made through an automatic withdrawal from either a checking, savings, or credit card account. Payments are processed on the 5th or 20th of each month. Additional information is available at <http://www.clcmn.edu/businessoffice/>.

CLC Payment Plan: Student accounts not paid in full or enrolled in a Nelnet payment plan, by the 25th day of the term are past due, are considered to be on the CLC internal payment plan and are charged a \$30 payment plan fee. After the fee is applied, students have until the last day of the term to pay their account in full.

## Unpaid Balances and Late Fees

An Unpaid Balance Hold is applied to accounts on the 25th day of the term. This hold prevents registration for additional courses at any MNSCU college or university. Payment in full is required before you may register for subsequent courses and before the hold is removed. Accounts not paid in full by the end of the semester are charged a \$50 late fee and referred to Minnesota Department of Revenue for collections. After referral, additional collection fees are applied to the past due account.

## Deferment for Textbooks and Course Materials

Bookstore charging is open four weeks each term; beginning three weeks prior to the start of each term and ending the fifth day of the term. Students that have met the minimum tuition payment criteria, and are not in

danger of having their course registrations cancelled, may charge up to \$1000 in the campus bookstore for textbooks and related supplies. A picture ID (student id, driver's license) and a course schedule are required to charge books. Books can also be purchased online at <http://clcbkstore.com>, and charged to financial aid, PSEO or credit card.

## Dishonored Checks/NSF Fee

Checks will be considered NSF/dishonored after they have been presented to the bank twice and are returned to Central Lakes College unpaid due to non-sufficient funds, closed account, stop payment, etc. Dishonored checks will be backed out of the account to which they were deposited and the NSF fee will be charged. If the reversal of the receipt causes the account to become unpaid after the due date, applicable late charges will also be added to the account. The NSF fee is \$35 and is subject to change without notice.

## Students' Receiving Financial Aid

The fee statement does not list the amount of financial aid a student is eligible to receive. It shows the amount of tuition and fees owed. The financial aid award letter lists the types and amounts of funding a student is eligible to receive based on the number of enrolled credits. The two documents should be compared to determine if the student will personally owe the college for any of the tuition costs. A separate loan promissory note must be completed in order to borrow a student loan. If you decide to borrow a student loan, there are new regulations from the Federal Government regarding loan disbursements:

- For all borrowers, a single term loan (i.e. fall semester) must have two disbursements. The first disbursement will be in the first half of the term, and the second disbursement will occur after the midway point.
- For first-time borrowers, the first disbursement will be delayed until after the 30th day of the first term. Attendance is required to earn 100% of your financial aid award. Your record is reviewed to ensure compliance with financial aid rules. If you do not complete your courses, you may be required to pay back a portion or your entire financial aid award. Financial aid recipients may not use their current aid to pay unpaid balances from previous academic years.

## Refunds for Dropped Classes

Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation. Subject to the refund for full withdrawal provision, students are financially obligated for any classes dropped after the fifth business day of the term, or one business day after the first class session, whichever is later. Business days are

defined as Monday through Friday (excluding posted holidays). If a student is financially obligated for a dropped class, the student may petition Central Lakes College to apply the amount of the tuition and/or fees for the dropped class to the cost of an added class for the current term.

For courses less than three weeks in length, the no-obligation drop-and-refund period is one business day after the first class session for each for-credit course.

## Refunds for Withdrawals

Courses are non-refundable after the fifth day of the semester. You are responsible to drop any courses you do not plan to attend by the published deadline.

You may be eligible for a partial refund if you withdraw from all courses by the published dates.

Fall and Spring Term Refund %  
1st through 5th day of semester 100%  
6th through 10th day of semester 75%  
11th through 15th day of semester 50%  
16th through 20th day of semester 25% After 20th day of semester 0%

Summer Term Refund %  
1st through 5th day of term 100%  
6th through 10th day of term 50% After the 10th day of term 0%

## Waivers

The president may waive amounts due to Central Lakes College for the following reasons:

- Employee Benefit Provided by a collective bargaining agreement
- Death of a student
- Medical reasons
- College error
- Employment related condition
- Significant personal circumstances
- Student leader stipends
- Course conditions (A course condition exists when the location or timing of the course results in the student not being able to use the services intended by a fee)
- Natural disasters or other situations beyond the control of the campus

The president may waive amounts due to Central Lakes College for individual institutional waivers as approved by the Board.

Central Lakes College shall define the terms under which any authorized waiver will be granted. Central Lakes College maintains documentation for all waivers.

Central Lakes College, in accordance with Board policy, cannot waive the MSCSA student association fee. Appeals for Tuition and Fee Refund

After the drop/add period has expired, a refund of all or part of the tuition paid may be given under certain circumstances. Students may apply for an Administrative Refund for the following reasons only:

- Medical Reasons: injury or illness that requires a prolonged absence. A doctor's statement, on physician's letterhead, is required and must declare that the medical condition impairs the student's ability to attend or complete classes.
- Significant Personal Circumstances defined as a life event beyond the student's control that can be corroborated by an independent professional, such as a social worker, lawyer or law enforcement agent.
- Military duty (letter of assignment or notice of re-call is required).
- Death in the immediate family (that can be documented).

Financial aid is based on the number of registered and paid credits. If an Administrative Refund is approved, a student's financial aid may be reduced, which would require the student to repay a portion of his/her financial aid. Students need to contact the Financial Aid office before applying for a tuition refund to determine if their aid package will be impacted.

If an Administrative Refund is granted, classes are dropped, no grades are awarded and the student's transcript is not impacted. Appeal forms are available from the Financial Aid Office and the Business Office. Forms must be completed and signed by the student. Appeals must be made within ninety calendar days of the end of the semester for which the debt was incurred. Appeals will not be considered for debt greater than ninety days old.

A committee reviews all Administrative Refund Appeals.

## FINANCIAL ASSISTANCE

Central Lakes College is dedicated to bringing the highest quality of education within reach of every person who has a desire to pursue a college education. The Financial Aid office at CLC has developed a comprehensive financial aid program based on federal, state, and institutional resources to help cover the cost of education. CLC annually awards assistance to about 70 percent of its student body. Therefore, no prospective student should hesitate to apply for admission because of financial circumstances. The CLC Financial Aid staff encourages all students to apply for financial aid. For the most current information regarding Financial Aid please visit the CLC Web site at [www.clcmn.edu/financialaid](http://www.clcmn.edu/financialaid).

Eligibility Requirements: Unless otherwise stated, students receiving financial aid must:

1. Demonstrate financial need, as determined by the results of the Free Application for Federal Student Aid

(FAFSA);

2. Have a high school diploma or GED.
3. Be enrolled and attend class as a regular student in a degree program of at least one academic semester in duration that leads to a certificate, degree or other recognized credential and prepares students for gainful employment in a recognized occupation;
4. Maintain federal and state regulations requiring that all persons receiving financial aid meet the college's Standards of Academic Probation and Suspension.
5. Be a U.S. citizen or an eligible non-citizen;
6. Not be in default on any student loan or owe a refund to any student grant program;
7. Be registered for Selective Service (if required).

## How is Eligibility Determined?

Most financial assistance is awarded on the basis of financial need and may include a combination of the various types of aid. Need is defined as the difference between the cost of attending Central Lakes College and the available resources of the student and student's family to meet these costs (determined by the results of the Free Application for Federal Student Aid).

## How to Apply for Financial Aid:

The Free Application for Federal Student Aid (FAFSA) is available after January 1 of each year. (The FAFSA needs to be completed on-line each year the student is in school.) If you have Internet access, you can file a FAFSA at [www.fafsa.gov](http://www.fafsa.gov). A paper FAFSA may be requested by directly contacting the US Department of Education. Please contact the Financial Aid office if you have questions.

Students who have a completed financial aid application on file with the college by June 1 receive priority consideration for campus based aid (Federal Supplemental Educational Opportunity Grant (FSEOG) and student employment). After June 1, applications are reviewed on a first-come, first-serve basis. Separate applications are processed are needed for Post-Secondary Child Care Grant program, Alliss Grant, Foundation Scholarships, and any student loan.

## Types of Financial Assistance

Financial aid comes in three basic categories: Grants and Scholarships, Student Employment and Loans.

1. Grants
  - a. Federal Pell Grant - This is a federal grant awarded to eligible students. Students must demonstrate financial need.
  - b. Federal Supplemental Educational Opportunity Grant (SEOG) - This is a federally funded grant administered by the college. Students must demonstrate high financial need. Awards are limited to funds avail-

able.

- c. Minnesota State Grant - This is for Minnesota residents attending a Minnesota college only based on eligibility.
- d. Post-Secondary Child Care Grant Program - Income-based grant for students who have children in day care. Awards are limited to funds available.
- e. Alliss Grant - This grant pays for up to one 1-5 credit class for eligible students. A student may receive it once. Course fees and books are not covered by this grant.
- f. CLC Foundation Scholarships - CLC has an extensive scholarship program for a variety of scholarship applicants. A CLC Foundation Scholarship application is required. Certain deadlines apply. Check with the Foundation office, Admissions, Financial Aid or the Counseling/Career Center for more information and application form.
- g. Outside scholarships - Announced in community newspapers and local high schools. Students may contact the Foundation office.

2. Student Employment: Provides students with opportunities to earn money to help meet educational costs. Students must complete the FAFSA to demonstrate financial need in order to qualify. Student employment is viewed as a regular job with responsibilities and employer expectations. Students receive an hour's pay for an hour's work. Jobs are available both on campus or at designated off-campus sites. A listing of available jobs can be found on the college's Web site under Financial Aid.

3. Student Loans: Money that is borrowed and must be repaid. All borrowers must complete loan entrance and exit counseling, a Master Promissory Note and complete a separate online loan acceptance process. Central Lakes College requires a 30 day delay for students who are new borrowers to receive their loan proceeds. In addition, all Federal Direct loans are subject to multiple disbursement regulations.

- a. Federal Direct Student Loan programs (subsidized and unsubsidized) - Low-interest loans obtained via CLC, through the U.S. Department of Education. Interest will not exceed 8 1/4% with long-term payments beginning six months after enrollment drops below six credits.
- b. Federal Direct Parent Loan for Undergraduate Students (PLUS) - This loan has a variable interest rate, not to exceed 9%, with payments due within 60 days after the loan is fully disbursed.
- c. Federal Perkins Loan - A student must show high financial need for this low interest loan at 5%. Recipients are determined by CLC according to the amount of funds available. Priority is given to students who have their financial aid file completed prior to June 1.
- d. Alternative Loans - These loans should be used as a last resort, and are secured through a bank, savings

and loan or credit union. Interest rates vary greatly and a creditworthy co-signer is usually required.

## Steps for Receiving Student Financial Aid

1. The student must be accepted for admission and enrolled at Central Lakes College.
2. The student must file a Free Application for Federal Student Aid (FAFSA).
3. The U.S. Department of Education processor sends a Student Aid Report (SAR) to the student via email or U.S. mail.
4. The U.S. Department of Education processor automatically sends the college your information when you have entered the appropriate college code on the FAFSA. Central Lakes College code is 002339.
5. Paperwork such as Tax Transcripts (parent and/or student), Institutional Verification Forms (IVF), or Social Security card may be required.
6. Students transferring from one college to another in the middle of the academic year must inform both schools of their intent to transfer.
7. Estimated award information will be available to students via the E-Services portal after the financial aid file is completed. Students will be notified via email that their award is ready. This award information will explain your grant, loan and work eligibility. Your financial aid award will be finalized at the time of disbursement.
8. Financial aid awards are based on the number of credits at time of disbursement. Students who add a class after their aid has been disbursed may not be eligible for additional financial aid. Students who withdraw from a class prior to their aid being disbursed do not receive aid for the withdrawn class.
9. If you or your family have unusual circumstances, (such as unusual medical or dental expenses not paid by insurance, loss of income or assets) please contact the Financial Aid office, or refer to the "Special Circumstances" paragraph at the end of your award letter.

## Return of Federal Financial Aid

Any student considering totally withdrawing from the college should contact the Financial Aid office before making a decision to totally withdraw. CLC is not required to, and does not, record student attendance. Federal regulations mandate that the college have a procedure in place to ensure that students have attended, at a minimum, one class session in each course in which that student has registered, if that course was used to determine enrollment status for Federal funding.

In addition, Federal regulations require that students who totally withdraw, whether officially or unofficially or have stopped attending all their classes on or before the 60% point in time of the completed term

must be evaluated under the Federal Return to Title IV refund regulations. These regulations include a Federal formula which will determine if a repayment is owed to the financial aid programs for which the student was funded. Withdrawal on or before 60% of the completed term means that a student has not earned all of the financial aid he/she was paid. Federal regulations consider the student to have earned all of their aid if the student's attendance extends beyond the 60 percent point of the term.

The Return of Federal Financial Aid policy applies to the following federal aid programs and funds must be returned in this order: Federal Direct Loans, Perkins Loans, PLUS loans, Pell Grants, SEOG Grants. Refunds to Minnesota financial aid programs are calculated appropriately using CLC's Refund policy.

Impact of Total Withdrawals before the 60% percentage point of time.

Students may receive financial aid either as a credit to an account or as a cash payment. If funds have been credited to the student account and the college has an obligation to return federal funds, the student will owe a balance to the college.

When a student owes a balance to the college for unpaid tuition/fees, repayment arrangements must be made within 30 days. If the student fails to make repayment arrangements, the college will turn the balance owed the college to the Minnesota Revenue Recapture Program. Examples of these calculations are available upon request in the CLC Financial Aid office. Refunds to Financial Aid Programs are conducted before the student would receive a withdrawal refund. For students receiving State financial aid funding, Minnesota Higher Education Services Offices policies will apply.

## Unofficial Withdrawals

Any student who stops attending but does not officially withdraw will be considered an unofficial withdrawal. For unofficial withdrawals the last date of attendance is defined as the student's last date of recorded attendance or the midpoint of the semester. Every effort is made to identify students as soon as possible after their withdrawal. Unofficial withdrawals will not receive a refund of tuition or fees. CLC uses the U.S. Dept. of Education software to determine how much funding will be considered unearned and will need to be returned. Students must attend each class at least once to receive a portion of their financial aid.

## Satisfactory Academic Progress

Federal law requires that a recipient of state or federal financial aid make satisfactory academic progress toward a degree, diploma or certificate. All students are required to maintain a 2.0 cumulative grade point av-

erage and/ or complete a minimum of 67% of cumulative registered credits, and complete their program within 150% of the program length in credits. In addition, the Financial Aid office is required by the U.S. Department of Education to monitor whether or not a student will be able to graduate in a timely fashion.

Based upon U.S. Department of Education regulations, Minnesota State Colleges and Universities (MnSCU) policy states "once the institution determines that it is not possible for a student to raise his/her GPA (2.0) or course completion percentage (67%) to meet the institution standards before the student would reach the end of the program, the student shall be suspended from financial aid".

CLC has a Financial Aid office on each campus. The complete Satisfactory Academic Progress Policy can be found in the Academic Policies section. Questions regarding financial aid may be addressed to the campus where the student is taking courses.

## STUDENT SERVICES

### Your Success is Our Goal

Attending college is a time for developing your own life direction, learning about yourself and your interests and strengths. To this end, Central Lakes College offers counseling, advising, assessment, career planning, and placement services.

And because your personal development is as important as your career decisions, Central Lakes College offers activities through organizations and clubs to meet individual needs. At CLC, the staff wishes to help you become a successful student who knows how to analyze, make decisions, solve problems, and relate well with others. The staff is here to help you find and further develop these qualities in yourself.

## Career Services

Career Services has a wide range of printed and computerized career materials, surveys, and assessments which can help focus a career search and begin making decisions about college choices and career opportunities. In addition, the Career Services features the Minnesota Career Information System, which is a computerized career information system that supplies up-to-date information on employment trends, working conditions, training required for specific jobs, and current salaries.

The Counseling department offers structured career exploration classes as well as a variety of workshops to assist students in making informed career and educational decisions. Counselors Exploration/Planning courses provide participants with a more comprehensive look at their interests, abilities, personal charac-

teristics, and career options. Counselors are available for individual career counseling appointments.

## Academic Advising

CLC's advisors are available to assist students from the time they register through graduation and beyond. Our advisors are equipped to assist students with questions about admissions, financial aid, transfer, career exploration, registration and more. Advisors are a vital resource for students.

## Personal Counseling

Counselors meet with students to discuss areas of concern that may interfere with college success. Counselors refer students to outside resources when needed and provide on-campus support for students receiving off-campus services. If you are in a crisis and need immediate help, please come to the Campus Information & Services window and ask to see a counselor right away. If a counselor is unavailable, call for help, 1-800-462-5525 crisis hotline.

## Veterans Resource Center

The Veterans Resource Center (VRC) provides information and support to current or former military members, their families and community members. The VRC has, or can locate information about veterans' services, financial resources, scholarships, veteran and family support activities and other items of interest to veterans, family members or community members.

The VRC's director also serves as a certifying official for CLC students receiving veterans' benefits. Students or prospective students who are or were in the military, are encouraged to contact the Center to arrange for priority registration before the beginning of the term. To be eligible for priority registration, the student must visit with the VRC Director, develop a written educational plan, research available financial resources and agree to follow-up services if needed.

The Center staff serve as an advocate for veterans as well as a college training and educational resource. Staff from the Center provide information and public speaking about veterans issues for the general public. Everyone is welcome to drop in and visit. For additional information call or e-mail the VRC.

## Placement Services

Central Lakes College has a solid reputation for career education, which enables its graduates to be highly successful in gaining employment. Although securing employment is the responsibility of each graduate, Employers contact the college with job postings for qualified graduates, and all part-time and full-time employment opportunities are listed on the website at

## Learning Commons

The Learning Commons at the Brainerd and Staples campuses help prepare students for achievement in college courses. The services coordinated through this area:

1. Computer Assisted Instruction: Interactive computer stations and programs are available to support classroom activities for students from various disciplines.
2. Study Group Facilitation: Study groups for students will be coordinated through the staff in this department.
3. Supplemental Instruction: Academic assistance program which supports classes by providing regularly scheduled, out-of-class, peer-facilitated study sessions.
4. Tutoring Services: Tutoring is done to enhance a student's understanding of academic course content and lab course content. It can be accomplished in a small group, classroom, lab, or individual settings. Professional tutors or peer tutors provide these services. All services are free of charge to CLC students.

## Students With Disabilities

Students with documented disabilities may be eligible to receive reasonable accommodations through the Disability Services Office. Disabilities accommodated include but are not limited to learning disabilities, vision and hearing losses, physical and psychological disabilities, traumatic brain injuries, Aspergers/autism and attention deficit disorders.

Accommodations are determined on a case-by-case basis and may include alternative testing, note taking/lecture notes, interpreters, assistive listening devices, assistive technology, audio books and other reasonable accommodations. In order to register for the program, students must meet with the Coordinator of Disability Services, provide recent documentation of the diagnosis and make an appointment for an intake/interview by calling 218-855-8175 or by emailing [disabilityservices@clcmn.edu](mailto:disabilityservices@clcmn.edu). Early application is essential for timely implementation of accommodations.

## Meta 5 Displaced Homemakers Program

Meta 5 Displaced Homemaker Pre-Employment Program offers participants who have lost their primary source of income due to separation, divorce, disability or death of a spouse, a free, customized, holistic, client-centered program to help you transition into college, the job market and address a variety of other needs. We offer a compassionate, non-judgmental support system. Individuals are empowered to make

their own decisions and good choices. We provide referrals to a broad array of resources including social service agencies, educational institutions and training programs, as well as financial aid resources. Meta 5 Displaced Homemaker Program provides this free service through funding from the Department of Employment and Economic Development. Meta 5 is has offices both in Staples and Brainerd. Please contact program director Kimberly Pilgrim at 218-855-8010.

## Office of Diversity, Equity and Tribal Relations

Our commitment to diversity at Central Lakes College is embedded in our mission statement and values. At Central Lakes College we are committed to a supportive environment for the growth and development of students from diverse cultural, ethnic, sexual orientation, economic and educational backgrounds. Contact Mary Sam, (218-855-8159, Office E132) for more information on services, training, clubs and organizations and services provided by the Office of Diversity.

## Check & Connect

The Check & Connect (C&C) Program at Central Lakes College is an inclusive and comprehensive model for engaging and retaining students in higher education. The C&C Coach promotes positive outcomes by routinely meeting with the students and offering support. Check & Connect Program is located in the 'Bridge' at the Brainerd Campus. (Office E135)

## Student Support Services

The Student Support Services program is located on the Brainerd campus in the Bridge. The mission of Student Support Services is to increase the retention, graduation, and transfer rates of Central Lakes College students by offering academic and personal support in a variety of ways. The Student Support Services program serves 160 students each year. Federal regulations require that the participants must qualify as at least one of the following:

- First generation college student (neither parent has completed a bachelor's degree)
- Low to moderate income student (according to the U.S. Government)
- Student with a documented disability. A student must be enrolled in Central Lakes College (Brainerd or Staples campus), taking six or more credits and be a U.S. citizen. During the academic year, students receive individual and group advising to foster positive study habits and academic success. Students can take advantage of a comfortable learning environment, leadership opportunities, cultural excursions, and academic work-shops. This Student Support Services is a federally funded program by the U.S. Department

of Education.

## Upward Bound

Upward Bound is a college access program federally funded by the U.S. Department of Education. Upward Bound provides fundamental mental support to participants in their preparation for college entrance. The program provides opportunities for participants to succeed in pre-college performance and ultimately in higher education pursuits. Upward Bound serves high school students from low income families and high school students from families in which neither parent holds a bachelor's degree. The goal of Upward Bound is to increase the rates at which participants enroll in and graduate from institutions of post-secondary education. Upward Bound is located on both the Brainerd and Staples campuses.

All Upward Bound projects provide instruction in math, laboratory science, composition, literature, and foreign language. Other services include:

- Instruction in reading writing, study skills, and other subjects necessary for success in education beyond high school.
- Academic, financial, or personal advisement.
- Exposure to academic programs and cultural events.
- Tutorial Services.

## Student Conduct Policies and Procedures

### 3.6 Student Conduct Policy Part 1. Student Conduct Policy

The Central Lakes College Student Code of Conduct serves two purposes: the first purpose is to serve as a guide for student behavior; the second purpose is to outline the procedures to be followed, both by students and college officials, should violations of the Code occur. It is expected that all students will read this code and will be responsible for knowing and abiding by its content.

In the eyes of the College, two authorities guide a student's conduct while on campus or while participating in off-campus, college-sponsored activities. First, as a citizen of the larger community, each student is expected to abide by the rules, regulations, and policies of the College as well as local, state, and federal laws.

### Part 2. Off Campus Conduct

Central Lakes College may hold students accountable for a violation of the behavioral proscriptions contained in their Student Codes of Conduct committed off campus when:

1. Hazing is involved; or

2. The violation is committed while participating in a college sanctioned or sponsored activity; or
3. The victim of the violation is a member of the college community; or
4. The violation constitutes a felony under state or federal law; or
5. The violation adversely affects the educational, research, or service functions of the college.

As an institution dedicated to teaching and learning, Central Lakes College has a vested interest in maintaining an environment in which students are free to pursue their academic interests and responsibilities. Conduct that unreasonably restricts such freedom and interferes with the College mission of promoting student learning is subject to regulation and/or sanction by the College. The creation of such an environment is premised on the assumption that students have both rights and responsibilities. Therefore, a major function of the College is to guarantee student rights, yet to demand student responsibility.

### Part 3. Appeals

Students found to be responsible for a conduct violation shall be provided an avenue of appeal within the institution. In addition, in cases involving sanctions of suspension for 10 days or longer, students shall be informed of their right to a contested case hearing under Minnesota State Statute 14.

3.6.1 Student Code of Conduct Procedures are located on the CLC website:  
<http://www.clcmn.edu/general-information/college-policies/>

## Drugs and Alcohol

Employee and Student Drug and Alcohol Prevention & Information

Primary prevention efforts will be to provide students and employees with appropriate information to make responsible decisions regarding alcohol and drug use. Some of these efforts are as follows:

- Early identification and intervention efforts to provide assistance to those primary areas of concern.
- Crisis intervention procedures for those experiencing medical emergencies.
- Counseling and referral for those persons with a need for such services.
- Re-entry assistance for those students and employees who complete therapy for drug and alcohol abuse.
- Providing information regarding the college's policies as they pertain to standards of conduct and sanction.

### Health Risks

Alcohol: Alcohol consumption causes a number of changes in behavior and physiology. Even low doses

significantly impair judgment, coordination, and abstract mental functioning. Statistics show that alcohol use is involved in a majority of violent behaviors on college campuses, including acquaintance rape, vandalism, fights, and incidents of drinking and driving. Continued abuse may lead to dependency, which often causes permanent damage to vital organs and deterioration of a healthy lifestyle.

**Amphetamines:** Amphetamines can cause a rapid or irregular heartbeat, headaches, depression, damage to the brain and lungs, tremors, loss of coordination, collapse, and death. Heavy users are prone to irrational acts.

**Cocaine/Crack:** Cocaine users often have a stuffy, runny nose and may have a perforated nasal septum. The immediate effects of cocaine use include dilated pupils and elevated blood pressure, heart rate, respiratory rate, and body temperature, paranoia and depression. Cocaine is extremely addictive and can cause delirium, hallucinations, blurred vision, severe chest pain, muscle spasms, psychosis, convulsions, stroke and even death.

**Hallucinogens:** Lysergic Acid Diethylamide (LSD) causes illusions and hallucinations. The user may experience panic, confusion, suspicion, anxiety, and loss of control. Delayed effects, or flashbacks, can occur even when use has ceased. Phencyclidine (PCP) affects the section of the brain that controls the intellect and keeps instincts in check. Hallucinogens can cause liver damage, convulsion, coma and even death.

**Marijuana:** Marijuana may impair or reduce short-term memory and comprehension, alter sense of time, and reduce coordination and energy level. Users often have a lowered immune system and an increased risk of lung cancer. Users also experience interference with psychological maturation and temporary loss of fertility. The active ingredient in marijuana, THC, is stored in the fatty tissues of the brain and reproductive system for a minimum of 28 to 30 days.

**Methamphetamine:** Methamphetamines, known as speed, meth, ice, glass, etc., have a high potential for abuse and dependence. Taking even small amounts may produce irritability, insomnia, confusion, tremors, convulsions, anxiety, paranoia, and aggressiveness. Over time, methamphetamine users may experience symptoms similar to Parkinson's disease, a severe movement disorder.

**Narcotics:** Narcotics such as codeine, heroin or other opiate drugs cause the body to have diminished pain reactions. The use of heroin can result in coma or death due to a reduction in heart rate.

**Steroids:** Steroid users experience a sudden increase

in muscle and weight and an increase in aggression and combativeness. Steroids can cause high blood pressure, liver and kidney damage, heart disease, sterility and prostate cancer. Additional information can be found at: [www.nida.nih.gov](http://www.nida.nih.gov).

## Drug and Alcohol Treatment Programs

Agencies and Community Resources

• Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services Website: [www.samhsa.gov](http://www.samhsa.gov)

• United Way 2-1-1 Phone: 211 or 1-800-543-7709 Website: [www.unitedwaytwincities.org](http://www.unitedwaytwincities.org) Call 2-1-1. It's free, confidential, and is available 24 hours-a-day, 7 days-a-week. United Way 2-1-1 provides callers with information about and referrals to human services for every day needs and in times of crisis. United Way 2-1-1 can connect you to resources dealing with family counseling, housing assistance, food, health services, legal help, transportation, child and senior services, volunteer and donation opportunities and many more!

• St. Joseph's Medical Center Phone: 218-828-7374 Website: <http://www.sjmcmd.org/> Chemical Health services are available for those who have or may have problems with drug or alcohol abuse, or who have been referred by the Court. Services are available directly from the Center and from a variety of health care and social services providers located throughout the county. Programs are culturally diverse and different treatment models are available.

Services include:

- Chemical dependency assessments
- Detoxification

Referrals to:

- Inpatient and outpatient treatment
- Extended and transitional care
- Supportive housing
- Case management
- Other support services

Assessments are available regardless of financial status. Private insurance may not cover some chemical health services. Services may be paid for with public funding if the recipient is financially eligible.

• Hope Treatment Centers Phone: 877-335-4673 <http://www.treatment-centers.net/treatment-directory/minnesota/brainerd.html>

• Alcoholics Anonymous Phone: 218-829-3740 Website: <http://www.usrecovery.info/AA/Minnesota.htm>

• Narcotics Anonymous

Phone: (952) 939-3939 or 1-877-767-7676 Website: [www.naminnnesota.org](http://www.naminnnesota.org)

• Addiction Search

Phone: 1-800-559-9503 Website: [www.addiction-search.com/treatment/MN/minnesota.html](http://www.addiction-search.com/treatment/MN/minnesota.html)

## Employee and Student Drug and Alcohol Policy & Procedures

Purpose:

As a learning institution, Central Lakes College values and promotes an alcohol and drug free environment for its students, faculty, and staff. In addition, it is the MnSCU Policy # 5.18.1 to maintain a drug and alcohol-free environment.

The College prohibits the illegal use of alcohol and drugs and complies fully with federal, state and local regulations regarding the sale, possession and consumption of alcoholic beverages and controlled substances.

All members of the college community are held responsible for their behavior and for respecting the rights of others. The college is committed to providing the community with education regarding high-risk alcohol and drug use and to making health-enhancing experiences a priority.

## Non-Discrimination

The drug and alcohol policy in regard to learning or work substance abuse is non-discriminatory in intent and application. However, in accordance with Minnesota Statutes, disability does not include any condition resulting from alcohol or other drug abuse, which prevents a person from performing essential functions of the classroom or the job or creates a direct threat to property or the safety of individuals.

## Alcohol Policy

The unlawful possession, use, production, distribution or sale of alcohol by any student or employee is prohibited on the college property (including buildings, grounds and vehicles) or as any part of a college activity in accordance with Minnesota State Colleges and University guidelines (regardless of age), city, state and federal laws. To consistently ensure compliance with these regulations, alcohol beverage containers (both empty and full) are not allowed on campus.

Examples include, but are not limited to: cans, bottles, kegs, party balls, crates, cases and wine or liquor bottles. Exemptions would include alcohol beverage containers that may be used within a course curriculum or theatrical production or a college function that

has, on file, a MnSCU Board permit on file. Any student, faculty or staff member found to be in violation of federal, state and/or local law, or who violates the college's alcohol and other drug policies, are subject to Central Lakes College disciplinary procedures and or referral to the appropriate authorities for legal prosecution. Campus disciplinary sanctions include, but are not limited to, written warnings, probation, suspension and/or dismissal. Sanctions may also apply to registered student organizations and to off-campus conduct involving activities sponsored or authorized by the Central Lakes.

## Legal Requirements

The following general provisions apply to individual possession or use of alcoholic beverages on College property, on property owned or controlled by the College, and at College sponsored events:

No person who is less than 21 years of age may purchase, sell, furnish, possess, or consume any type of alcoholic beverage. No person may be in a public area in an intoxicated condition.

No person may possess an open container of alcohol in a public area, including, but not limited to, hallways, stairways, and other common areas of the facilities.

No person may provide alcohol to any person who is less than 21 years of age.

No person may misrepresent their age through false documents or to lend their identification to someone for the purpose of purchasing or using alcoholic beverages.

No person, under the age of 21, may drive with any amount of alcohol in their system.

No employee shall report to work under the influence of alcohol, which affects alertness, coordination, judgment or safety.

No employee shall operate use or drive any equipment, machinery or vehicle of the State of Minnesota under the influence of alcohol.

## Policy Violations

If violations occur, the student, faculty or staff member will receive written notice of the violation. The following systems may be used: Students are subject to appropriate discipline by the Vice President of Student Affairs as outlined in the Code of Student Conduct. Faculty and Staff could be disciplined by the President of Central Lakes College. Violators will given a copy of the policy and information regarding sanctions that may result from this violation. Sanctions, although specific to students and employees,



may include, but are not limited to, community service hours, loss of privileges or services within the college community, suspension, dismissal or expulsion or may be referred to law enforcement.

## Uniform Amnesty

As part of the recent Higher Education Bill, the Minnesota Legislature made substantial revisions to Minnesota Statute 135A.15 Sexual Harassment and Violence Policy. 2015 Minn. Laws, Ch. 69, Art. 4, Sec. 2. The Sexual harassment and violence policy must include a provision that a witness or victim of an incident of sexual assault who reports the incident in good faith shall not be sanctioned by the institution for admitting in the report to a violation of the institutions student conduct policy on the personal use of drugs or alcohol.

### Legal Sanctions:

The State of Minnesota may impose a wide range of sanctions for alcohol-related violations. For example, driving while intoxicated (blood alcohol content of .10 or more) may result in a \$700 fine, 90 days in jail, and/or revocation of driver's license for 30 days. Possession of alcohol under age 21 or use of false identification to purchase alcohol results in \$100 fine. Furnishing alcohol to persons under 21 is punishable by up to a \$3,000 fine and/or one year imprisonment.

## Drug Policy

Central Lakes College will not tolerate the use or sale of drugs and/or drug paraphernalia by students, faculty or staff. The possession, use, distribution or sale of marijuana, hallucinogens, narcotics, un-prescribed amphetamines or barbiturates is prohibited. Any sale or sharing of prescription drugs is prohibited.

## Legal Requirements

The following general provisions apply to individual possession or use of drugs on College property, on property owned or controlled by the College, and at College sponsored events: The Controlled Substances Act prohibits the manufacture, possession, use, distribution or sale of cocaine, crack, narcotics, hallucinogens, marijuana and the various individual drugs in these categories and states that are illegal under Minnesota and Federal Law. An employee taking medically authorized drugs or other substances which may alter job performance, is under an affirmative duty to notify the appropriate supervisor of a temporary inability to perform the job duties of the position. Prosecution of drug possession and sale may include the following:

- Students, faculty and staff may have drugs and/or paraphernalia confiscated by local law enforcement
- Students may be referred to Vice President Of Stu-

dent Affairs for disciplinary action.

- Faculty and staff may be referred to the President for disciplinary action.
- Students, faculty and staff may have possible legal action taken against them by the State or Federal Government.
- Students may have a possible loss of Federal Financial Aid.

## Policy Violations

If violations occur, the student, faculty or staff member will receive written notice of the violation. The following systems may be used: Students are subject to appropriate discipline by the Vice President of Student Affairs as outlined in the Code of Student Conduct. Faculty and Staff could be disciplined by the President of Central Lakes College. Violators will be given a copy of the policy and information regarding sanctions that may result for this violation. Sanctions, although specific to students and employees, may include, but are not limited to, community service hours, loss of privileges or services within the college community, suspension or dismissal or may be referred to law enforcement.

## Legal Sanctions

Federal and state sanctions for illegal possession of controlled substances range from up to one year imprisonment and up to \$100,000 in fines for a first offense, to three years imprisonment and \$250,000 in fines for repeat offenders. Additional penalties include forfeiture of personal property and the denial of federal student aid benefits.

Under federal laws, trafficking in drugs such as heroin or cocaine may result in sanctions up to and including life imprisonment for a first offense involving 100 gm or more. Fines for such an offense can reach \$8 million. First offenses involving lesser amounts, 10-99 gm, may result in sanctions up to and including 20 years imprisonment and fines of up to \$4 million. A first offense for trafficking in marijuana may result in up to five years imprisonment and fines up to \$500,000 for an offense involving less than 50 kg, and up to life imprisonment and fines up to \$8 million for an offense involving 1,000 kg or more.

## Special Addition to Policy

Students and faculty who are enrolled in or teaching in the programs of Heavy Equipment Operations and Maintenance and the Diesel and Heavy Equipment Technician Programs must comply to a specific program drug and alcohol policy as well as the general College policy.

## Special Addition to the Policy

Procedures related to CLC sponsored activities off

campus, such as sports events, field trips.

# Sexual Harassment and Sexual Violence

1B.3.2 Addendum to Reporting Discrimination, Harassment and/or Sexual Harassment Procedures  
What to do if discrimination or harassment happens to you:

Step 1. If you feel safe, communicate to your harasser: 1) what you are feeling, and 2) that you expect the behavior to stop. You may do this verbally or in writing. If you choose, you may get help and support from a friend, parent, professional or other trusted adult.

Step 2. If you feel unsafe confronting the individual or if the behavior is repeated, go on campus to the:  
• Designated Title IX Officer, Student Conduct Officer (Mary Sam, 218-855-8159, Office E132) or  
• Affirmative Action Officer (Nancy Paulson, 218-855-8054, Office C211) or  
• Campus Security ( 218-828-6050, Office C125)

Step 3. Always document your concerns including date, time and location of incident(s).

Step 4. Refer to the Student Concern Process where you may file a complaint. At any point in this process, you may choose to contact the Office of Civil Rights, U. S. Department of Civil Rights, U.S. Department of Education, Minnesota Department of Human Rights, an attorney or a police officer. For more information, please view MnScu System Policy 1B.1

## Sexual Violence

Sexual violence is an intolerable intrusion into the most personal and private rights of an individual, and is prohibited at Central Lakes College. CLC is committed to eliminating sexual violence in all forms and will take appropriate remedial action against any individual found responsible for acts in violation of this policy. Acts of sexual violence may also constitute violations of criminal or civil law, or other MnSCU Board Policies that may require separate proceedings.

To further its commitment against sexual violence, Central Lakes College provides reporting options, an investigative and disciplinary process, and prevention training or other related services as appropriate. For more information, please review MnSCU/Central Lakes College Sexual Violence Policy and Procedures and MnScu/Central Lakes College Sexual Violence Procedure

### Definitions:

Sexual violence. Sexual violence includes a continuum of conduct that includes sexual assault, non-forceful sex acts, dating and relationship violence, stalking, as well as aiding acts of sexual violence. Sexual assault. "Sexual assault" means an actual, attempted, or threatened sexual act with another person without that person's consent. Sexual assault is often a criminal act that can be prosecuted under Minnesota law, as well as form the basis for discipline under Minnesota State Colleges and Universities student conduct codes and employee disciplinary standards.

### Sexual assault includes but is not limited to:

1. Involvement without consent in any sexual act in which there is force, expressed or implied, or use of duress or deception upon the victim. Forced sexual intercourse is included in this definition, as are the acts commonly referred to as "date rape" or "acquaintance rape." This definition also includes the coercing, forcing, or attempting to coerce or force sexual intercourse or a sexual act on another.
2. Involvement in any sexual act when the victim is unable to give consent.
3. Intentional and unwelcome touching, or coercing, forcing, or attempting to coerce or force another to touch a person's intimate parts (defined as primary genital area, groin, inner thigh, buttocks, or breast).
4. Offensive sexual behavior that is directed at another such as indecent exposure or voyeurism.

### Dating & Relationship Violence

Dating and relationship violence includes physical harm or abuse, and threats of physical harm or abuse, arising out of a personal intimate relationship. This violence also may be called domestic abuse or spousal/partner abuse and may be subject to criminal prosecution under Minnesota state law.

### Stalking

Stalking is conduct directed at a specific person that is unwanted, unwelcome, or unreciprocated and that would cause a reasonable person to fear for her or his safety or the safety of others or to suffer substantial emotional distress.

### Consent

Consent is informed, freely given and mutually understood. If coercion, intimidation, threats, and/or physical force are used, there is no consent. If the complainant is mentally or physically incapacitated or impaired so that the complainant cannot understand the fact, nature, or extent of the sexual situation, there is no consent; this includes conditions due to alcohol or drug consumption, or being asleep or unconscious. Silence does not necessarily constitute consent, and past consent of sexual activities does not imply ongoing future consent. Whether the respondent has taken advantage of a position of influence over the complainant may be a factor in deter-

mining consent.

### Non-Forcible Sex Acts

Non-forcible acts include unlawful sexual acts where consent is not relevant, such as sexual contact with an individual under the statutory age of consent, as defined by Minnesota law, or between persons who are related to each other within degrees wherein marriage is prohibited by law.

### Reporting Incidents of Sexual Violence

Prompt reporting encouraged. Complainants of sexual violence may report incidents at any time, but are strongly encouraged to make reports promptly in order to best preserve evidence for a potential legal or disciplinary proceeding.

Complainants are strongly encouraged to report incidents of sexual violence to law enforcement for the location where the incident occurred. Complainants are also encouraged to contact the local victim/survivor services office, counseling and health care providers, campus Title IX coordinators or Minnesota State Colleges and Universities campus security authorities for appropriate action. Central Lakes Contacts include:

- Affirmative Action Officer and Director of Human Resources - Nancy Paulson (218-855-8054, Office C211)
- Designated Title IX Officer, Student Conduct Officer and Director of Diversity - Mary Sam (218-855-8159, Office E132).
- Campus Security (218-828-6050, Office C125)
- Central Lakes College 'Campus Eye Online Report Form' at [www.clcmn.edu](http://www.clcmn.edu).
- Sexual Assault Services: 218-828-0494 or toll free 1-888-458-0494 (confidential 24-hour service) 211 South 4th Street, Brainerd.

Assistance in reporting. When informed of an alleged incident of sexual violence, all Central Lakes College students and employees are urged to encourage and assist complainants, as needed, to report the incident to local law enforcement, local victim/survivor services, campus Title IX coordinators or campus security authorities.

When appropriate, Central Lakes College may pursue legal action against a respondent, including, but not limited to, trespass or restraining orders, in addition to disciplinary action under the applicable student or employee conduct standard. A college or university may take actions it deems necessary or appropriate in response to all protection, restraining or no contact orders.

### Confidentiality of Reporting

#### Confidential Reports

Because of laws concerning government data contained in Minnesota Statutes §13, the Minnesota Government Data Practices Act, colleges and uni-

versities cannot guarantee confidentiality to those who report incidents of sexual violence except where those reports are privileged communications with licensed health care professionals. Some off-campus reports also may be legally privileged by law, such as reports to clergy, private legal counsel, or health care professionals.

Reports to campus security authorities. Complainants of sexual violence may contact any campus security authority for appropriate assistance or to report incidents. Absolute confidentiality of reports made to campus security authorities cannot be promised. However, campus security authorities shall not disclose personally identifiable information about a complainant of sexual violence without the complainant's consent except as may be required or permitted by law. There may be instances in which Central Lakes College determines it needs to act regardless of whether the parties have reached a personal resolution or if the complainant requests that no action be taken. In such instances, Central Lakes College will investigate and take appropriate action, taking care to protect the identity of the complainant and any other reporter in accordance with this procedure. Campus security authorities may be obligated to report to law enforcement the fact that a sexual assault has occurred, but the name or other personally identifiable information about the complainant will be provided only with the consent of the complainant, except as may be required or permitted by law.

### Uniform Amnesty:

As part of the recent Higher Education Bill, the Minnesota Legislature made substantial revisions to Minnesota Statute 135A.15 Sexual Harassment and Violence Policy. 2015 Minn. Laws, Ch. 69, Art. 4, Sec. 2. The Sexual harassment and violence policy must include a provision that a witness or victim of an incident of sexual assault who reports the incident in good faith shall not be sanctioned by the institution for admitting in the report to a violation of the institutions student conduct policy on the personal use of drugs or alcohol.

### General Principles

Central Lakes College shall use system procedure 1B.1.1 Report/Complaint of Discrimination/Harassment Investigations and Resolution when investigating complaints of sexual violence. College and university investigation and disciplinary procedures concerning allegations of sexual violence against employees or students shall:

- Be respectful of the needs and rights of individuals involved;
- Proceed as promptly as possible;
- Permit a student complainant and a student respondent to have the same opportunity to have an appropriate support person or advisor present at any interview or hearing, in a manner consistent with the

governing procedures and applicable data practices law;

- Be conducted in accordance with applicable due process standards and privacy laws;
- Simultaneously inform both the complainant and respondent of the outcome in a timely manner, as permitted by applicable privacy law.
- Be based on a preponderance of evidence standard, meaning that it is more likely than not that the policy or code has been violated.

## 1B.1 Policy on Harassment and Discrimination

1B.1 Equal Opportunity and Nondiscrimination in Employment and Education

### Part 1. Policy Statement

Subpart A. Equal opportunity for students and employees. Minnesota State Colleges and Universities has an enduring commitment to enhancing Minnesota's quality of life by developing and fostering understanding and appreciation of a free and diverse society and providing equal opportunity for all its students and employees. To help effectuate these goals, Minnesota State Colleges and Universities is committed to a policy of equal opportunity and nondiscrimination in employment and education.

Subpart B. Nondiscrimination. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, or gender expression. In addition, discrimination in employment based on familial status or membership or activity in a local commission as defined by law is prohibited.

Harassment on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, or familial status is prohibited. Harassment may occur in a variety of relationships, including faculty and student, supervisor and employee, student and student, staff and student, employee and employee, and other relationships with persons having business at, or visiting the educational or working environment.

This policy is directed at verbal or physical conduct that constitutes discrimination/harassment under state and federal law and is not directed at the content of speech. In cases in which verbal statements and other forms of expression are involved, Minnesota State Colleges and Universities will give due consideration to an individual's constitutionally protected right to free speech and academic freedom. However, discrimination and harassment are not within the

protections of academic freedom or free speech. The system office, colleges, and universities shall maintain and encourage full freedom, within the law, of expression, inquiry, teaching and research. Academic freedom comes with a responsibility that all members of our education community benefit from it without intimidation, exploitation or coercion.

This policy shall apply to all individuals affiliated with Minnesota State Colleges and Universities, including but not limited to, its students, employees, applicants, volunteers, agents, and Board of Trustees, and is intended to protect the rights and privacy of both the complainant and respondent and other involved individuals, as well as to prevent retaliation or reprisal. Individuals who violate this policy shall be subject to disciplinary or other corrective action.

This policy supersedes all existing system, college, and university equal opportunity and nondiscrimination policies.

### Part 2. Definitions.

Subpart A. Consensual Relationship. Consensual relationship means a sexual or romantic relationship between two persons who voluntarily enter into such a relationship. Employees who are members of the same household should also refer to Board Policy 4.10, Nepotism.

Subpart B. Discrimination. Discrimination means conduct that is directed at an individual because of his or her protected class and that subjects the individual to different treatment by agents or employees so as to interfere with or limit the ability of the individual to participate in, or benefit from, the services, activities, or privileges provided by the system or colleges and universities or otherwise adversely affects the individual's employment or education.

Subpart C. Discriminatory harassment. Discriminatory harassment means verbal or physical conduct that is directed at an individual because of his or her protected class, and that is sufficiently severe, pervasive, or persistent so as to have the purpose or effect of creating a hostile work or educational environment.

As required by law, Minnesota State Colleges and Universities further defines sexual harassment as a form of sexual discrimination which is prohibited by state and federal law. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, sexually motivated physical conduct, and other verbal or physical conduct of a sexual nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education, evaluation of a student's academic performance, or term or condition of participation in student activities or in other events or

activities sanctioned by the college or university; or  
2. Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions or other decisions about participation in student activities or other events or activities sanctioned by the college or university; or  
3. Such conduct has the purpose or effect of threatening an individual's employment; interfering with an individual's work or academic performance; or creating an intimidating, hostile, or offensive work or educational environment.

Subpart D. Employee. Employee means any individual employed by Minnesota State Colleges and Universities, including all faculty, staff, administrators, teaching assistants, graduate assistants, residence directors and student employees.

Subpart E. Protected Class. For purposes of this policy:

1. Protected class includes race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, or gender expression. In addition, familial status and membership or activity in a local human rights commission are protected classes in employment.

2. This policy prohibits use of protected class status as a factor in decisions affecting education and employment where prohibited by federal or state law.

Subpart F. Retaliation. Retaliation includes, but is not limited to, intentionally engaging in any form of intimidation, reprisal or harassment against an individual because he or she:

- a) made a complaint under this policy;
- b) assisted or participated in any manner in an investigation, or process under this policy, regardless of whether a claim of discrimination or harassment is substantiated;
- c) associated with a person or group of persons who are disabled or are of a different race, color, creed, religion, sexual orientation, gender identity, gender expression, or national origin; or
- d) Made a complaint or assisted or participated in any manner in an investigation or process with the Equal Employment Opportunity Commission, the U.S. Department of Education Office for Civil Rights, the Minnesota Department of Human Rights or other enforcement agencies, under any federal or state nondiscrimination law, including the Civil Rights Act of 1964; Section 504 of the Rehabilitation Act of 1973; the Minnesota Human Rights Act, Minn. Stat. Ch. 363A, and their amendments.

Retaliation may occur whether or not there is a power or authority differential between the individuals involved.

Subpart G. Sexual harassment and violence as sexual abuse. Under certain circumstances, sexual harassment or violence may constitute sexual abuse ac-

ording to Minnesota law. In such situations, the system office and colleges and universities shall comply with the reporting requirements in Minnesota Statutes Section 626.556 (reporting of maltreatment of minors) and Minnesota Statutes Section 626.557 (Vulnerable Adult Protection Act). Nothing in this policy will prohibit any college or university or the system office from taking immediate action to protect victims of alleged sexual abuse. Board Policy 1B.3 Sexual Violence addresses sexual violence.

Subpart H. Student. For purposes of this policy, the term "student" includes all persons who:

1. Are enrolled in one or more courses, either credit or non-credit, through a college or university;
2. Withdraw, transfer or graduate, after an alleged violation of the student conduct code.;
3. Are not officially enrolled for a particular term but who have a continuing relationship with the college or university;
4. Have been notified of their acceptance for admission or have initiated the process of application for admission or financial aid; or
5. Are living in a college or university residence hall although not enrolled in, or employed by, the institution.

Part 3. Consensual Relationships. An employee of Minnesota State Colleges and Universities shall not enter into a consensual relationship with a student or an employee over whom he or she exercises direct or otherwise significant academic, administrative, supervisory, evaluative, counseling, or extracurricular authority or influence. In the event a relationship already exists, each college and university and system office shall develop a procedure to reassign evaluative authority as may be possible to avoid violations of this policy.

This prohibition does not limit the right of an employee to make a recommendation on personnel matters concerning a family or household member where the right to make recommendations on such personnel matters is explicitly provided for in the applicable collective bargaining agreement or compensation plan.

Part 4. Retaliation. Retaliation as defined in this policy is prohibited in the system office, colleges and universities. Any individual subject to this policy who intentionally engages in retaliation shall be subject to disciplinary or other corrective action as appropriate.

Part 5. Policies and procedures. The chancellor shall establish procedures to implement this policy. The equal opportunity and nondiscrimination in employment and education policy and procedures of colleges and universities shall comply with Board Policy 1B.1 and Procedure 1B.1.1.

Complainants are strongly encouraged to report incidents of harassment and discrimination to campus authorities. Central Lakes Contacts include:

- Affirmative Action Officer and Director of Human

Resources - Nancy Paulson (218-855-8054, Office C211)

• Designated Title IX Officer, Student Conduct Officer and Director of Diversity - Mary Sam (218-855-8159, Office E132).

• Campus Security (218-828-6050, Office C125)

MnSCU Board Procedure 1B.1.1 Report/Complain of Discrimination/Harassment Investigation and Resolution can be found at: <http://www.mnscu.edu/board/procedure/1b01pl.html> or CLC Policies and Procedures webpage: <http://www.clcmn.edu/general/policies.html>

### Student Concern Process

Central Lakes Colleges strives to offer a student-centered learning environment. We are committed to resolving student concerns.

In an effort to provide transparency in our student concern resolution process, we have developed a resource document on our website. This document is designed to provide information and access to these resources.

## College Information Libraries

A physical library is located on both the Staples and Brainerd campuses. They provide for academic needs beyond the classroom and include printed material, research support, access to interlibrary loans, quiet places to study, areas for group work, computer labs, and a learning commons.

Both learning commons provide students peer tutoring services and support from the Learning Commons Coordinators. The combined number of printed volumes in the library's catalogs is in excess of 40,000. Also, students have access to circulating material located in the libraries of over 60 consortium member colleges. In addition to printed material, the libraries of Central Lakes College provide access to thousands of online journals and over 140,000 eBooks.

The Brainerd campus library, formally known as the Jon Hassler Library, also contains a special government section in the Heritage Center. It is dedicated to Minnesota Senator Gordon Rosenmeier. An additional collection of over 3,000 Native American-related titles is housed in the Humphrey Center for American Indians Studies, which is located in the library's Skone Family Conservatory. Central Lakes College students access the databases and borrow material using the 14 digit barcode located on the back of the "my-CLCPlusCard" they receive when they initially register for classes.

## Bookstore

There is a bookstore on both campuses. Each store

offers a variety of products and services, in addition to textbooks and course materials. Textbook information is available on our website, <http://clbookstore.com>, one month before the start of each term.

## Deferment for Textbooks and Course Materials

Bookstore charging is open four weeks each semester; beginning three weeks prior to the start of each semester and ending the fifth day of the semester. Students that have met the minimum tuition payment criteria, and are not in danger of having their course registrations cancelled for non-payment, may charge up to \$1000 in the campus bookstore for textbooks and related supplies.

- A picture ID (student id, driver's license) is required to charge books.
- Bring a copy of your class schedule. You will need the course and section numbers that appear on the class schedule to select the right books for each class. If you do not have a copy of your schedule you can print one through e-Services.
- Keep your receipts for all of your books. This will be needed to exchange or return a book and for tax purposes.

Post-Secondary Enrollment Option (PSEO) students are allowed to charge required books and a reasonable amount of required supplies that will be used up in their courses. Books charged by PSEO students are the property of Central Lakes College and must be returned to the bookstore at the end of the semester. You can also purchase your books online at <http://clbookstore.com>, charge them to financial aid, PSEO or credit card, and have them shipped directly to you.

## Return Policy

A CLC Bookstore receipt is required for all returns.

- Unopened general merchandise & software must be returned within 24 hours of purchase.
- Software is not returnable if opened.
- Nursing kits are not returnable. Please check nursing kit for supplies before leaving the store.
- Books charged to financial aid may be returned through 5th day of the semester.
- Books purchased after the first week of school have a 3-day return policy.
- New books must be returned in original condition.
- Books with open shrink-wrap will be returned at used book price.

Rental and PSEO books must be returned during finals week each semester.

## Textbook Buyback

Students have the opportunity to sell their books back at the end of each semester. No receipt is required for buyback.

Books are being purchased for the campus bookstores and for a wholesale book company. The bookstores' greatest need for books is at the end of the semester during the week of finals. Dates and times of buyback are posted on the CLC website. Study guides, lab manuals and workbooks are bought under limited conditions. Books bundled with multiple components such as CD's, diskettes, supplemental pamphlets, etc. must have all components to be bought back.

## Foodservice

Breakfast and Lunch are available daily at the Brainerd Campus.

## Telephones

Office telephones are for official use only. There are public telephones located on campus for student use. Students may not receive phone calls at the college. In the event of an emergency, a student will be contacted in class to return a phone call. The caller will be asked the nature of the emergency in order for Central Lakes College to determine if the call warrants a student being removed from class.

## Parking

Convenient student parking is available for all students on all campuses of Central Lakes College. You are subject to a CLC parking citation for the following reasons:

- Parking in a loading zone
- Blocking driveways
- Parking on grass
- Parking on perimeter
- Improper permits
- No permit displayed
- Improper position
- Parking between 11 p.m. and 6 a.m. without a permit
- Parking in restricted zones (i.e. yellow curb, visitor parking, no parking zones, fire lanes)

If you receive a CLC parking citation and wish to appeal, obtain an Appeal Form from <http://www.clcmn.edu/general-information/security-safety/> and submit it within 5 days of receipt of the citation. Appeals received after the 5th business day will NOT be considered.

Business and Industry Center parking is restricted to Business and Industry Center clients only. CLC parking lots are patrolled by local police and Campus Security.

Security Escort Service to the parking lots, is available during business hours on the Brainerd Campus by contacting the security department at 218.828.6050, or by pressing the red button on the emergency call boxes by the main exits or by contacting the Information Center (Brainerd: 218.855.8000, Staples:

218.894.5100). Contact maintenance personnel at Staples Campus.

## Handicapped Parking

Parking for students with disabilities is provided in designated areas. Students and others parking in these areas must display a current State Handicapped Parking Permit on their vehicle.

## CLC Permit Parking

Parking is provided for students with temporary disabilities in designated "permit parking" areas. Students must display a current CLC handicapped parking permit. Permits expire at the end of each semester and are only available through Disability Services (Brainerd: 218.855.8218, Staples: 218.894.5182).

## Overnight/Extended Parking

Students needing to park overnight or over an extended time period must obtain a permit through the Information Center at the CLC campus where the parking is being requested; and display the permit on the vehicle's dashboard, and park in the posted designated parking area.

## Housing

For information on housing contact the Student Life Office or check the student life website: <http://www.clcmn.edu/student-services/>

## Child Care

The Early Care and Education Center provides full and part-time childcare for children ages six weeks until their first day of kindergarten, for the children of CLC students and staff, as well as Brainerd School District employees' children. A partnership between the Brainerd School District (ISD #181) and Central Lakes College provides not only child care but also learning opportunities for those going into the childcare field. The Center employs full-time, high quality staff to provide a consistent, non-disruptive and safe educational opportunity for children.

The Center is open from 7:00 a.m. – 5:30 p.m. every Monday through Friday during the academic year, with the possibility of summer childcare.

CLC is committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion,

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# FACULTY DIRECTORY

## Faculty & Staff Directory

Mark Ambroz, Videography  
B.A. University of Minnesota

Andrew Anderson, Heavy Equipment  
A.A.S. Central Lakes College

Steve Anderson, Music  
B.S. North Dakota State University  
M.A. St. Cloud State University

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A.A. Vermilion Community College  
B.S. Bemidji State University  
M.A. Bemidji State University

Beck, Robyn, Farm Business Management  
B.S. South Dakota State University  
M.S. South Dakota State University

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Diploma, St Cloud Technical College  
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B.S. Bemidji State University  
M.S. St. Cloud State University

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M.S. St. Cloud State University

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B.A. Northwestern College  
M.A. Bethel University

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B.A. Concordia College  
M.A. University of Minnesota, Twin Cities

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Occupations  
B.S. Bemidji State University  
M.S. The College of Saint Scholastica

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Management  
B.S. University of Minnesota, St. Paul  
M.A. University of Phoenix

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Diploma, Central Lakes College

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A.S. Northland Community & Technical  
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B.A. College of St. Scholastica  
M.S. St Cloud State University

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M.S. St. Cloud State University

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B.A. University of Minnesota, Duluth

M.A. University of Minnesota, Duluth

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B.S. Mankato State University  
M.S. St. Cloud State University

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Diploma, American Floral Arts School,  
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B.S. University of MN  
M.S. University of MN

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B.S. Moorhead State University  
B.S. Mayville State University  
M.S.S. U.S. Sports Academy

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B.A. Concordia College

Samuel Espana Lopez, Computer  
Technology  
B.S. Winona State University  
M.S. University of St Thomas

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A.A. St Cloud State University  
B.S. University of Minnesota  
M.S. The Swedish University of Agricul-  
tural Sciences  
Ph.D. The Swedish University of Agricul-  
tural Sciences

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M.S. The University of Iowa

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M.A., Northeastern University, Boston

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M.S. Moorhead State University

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M.S. University of Phoenix

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Ph.D. University of Wisconsin-Madison

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Mankato  
M.F.A. Illinois State University

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Michael Hopps, Geography  
B.A. Hamline University  
M.A. Syracuse University

Tanya Hoting Mrazek, Sign Language  
AA.. Brainerd Community College  
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B.A. College of St. Benedict  
M.Ed. University of Minnesota

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B.A. College of St. Scholastica  
M.A. College of St. Scholastica

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M.S. Northern Arizona University

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M.A. University of Minnesota Duluth

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M.A. Minnesota State University  
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Thurman Knight, Speech

# FACULTY DIRECTORY

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M.A. University of Minnesota

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B.S. Bemidji State University  
M.S. Texas A & M University

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Diploma, Central Lakes College

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B.A. University of Hawaii at Manoa  
M.A. St Cloud State University

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B.A. University of Minnesota Morris  
M.A. University of Minnesota Duluth

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B.S. University of Minnesota  
M.S. Bemidji State University

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A.A. Central Lakes College  
B.A. St. Olaf College

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Diploma, Staples Technical College

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B.A. Ithaca College  
M.A. State University of New York at Cortland

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B.S. Villanova University  
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B.S. Bemidji State University  
M.A. College of St. Scholastica

Dawn Michel, Medical Assistant  
Diploma, Willmar Technical School  
A.A. Degree, Central Lakes College  
B.S., Bemidji State University  
M.S. Southwest Minnesota State University

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M.S. University of Minnesota-Duluth

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M.S. University of Minnesota-Duluth

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Diploma, Moorhead Technical College  
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A.S. Central Lakes College  
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M.S. University of Phoenix

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M.A. St. Mary's College  
Ph.D. South Dakota State University

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B.S. Bemidji State University

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B.S. Minnesota State University,  
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M.S. University of Michigan

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A.A. North Hennepin Community College  
B.A. College of St. Thomas

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M.S. University of Minnesota Duluth

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B.S. University of Minnesota

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M.S.N. Saint Xavier University

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B.S. Minnesota State University  
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Ed & Health  
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Certificate, Staples AVTI

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Diploma, St. Paul Technical College

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B.S. St. Cloud State University  
M.S. University of Minnesota

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Program  
B.S. Winona State University

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M.A. Northern Illinois University  
M.F.A. Northern Illinois University

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M.S. MSU, Moorhead

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B.S., The College of St. Scholastica

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Corey Uhrich, Heavy Equipment

Gordon Vierkant, Heavy Equipment  
Staples Vocational Technical Graduate  
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M.S. Purdue University

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B.S. St Cloud State University  
M.A. St. Cloud State University

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B. A. College of St. Scholastica  
M.S.N. Metropolitan State University

Paul Zimmerman, Diesel Mechanics  
Diploma, Alexandria Technical & Com-  
munity College

# FACULTY DIRECTORY

# STAFF DIRECTORY

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 Jill Albie, Admissions and Advising  
 Richard Altepeter, Automotive Technician Lab Assistant  
 Christina Anderson, Director of Business and Auxiliary Services  
 Lynn Anderson, Assessment Testing  
 Wendy Antolak, Records and Registration  
 Floyd Ashburn, Technology Services  
 Sue Austin, TRIO Student Support Services  
 Trudy Austin, Academic Affairs  
 Judy Barka, Ag Center of Excellence  
 Mike Barnaby, Director of Financial Aid  
 Hannah Barrett, Ag Center Research Analyst  
 Jean Beckmann, Box Office Manager/Event Planner  
 Andria Belisle, Disability Services  
 Julie Berczyk, Graphic Design Lab Assistant  
 Gregory Bergman, SBDC Director  
 Rebecca Best, Advisor DOL/RITA Grant  
 Charles Black Lance, TRIO Programs Director  
 Susan Bowman, Technology Services  
 Diane Breitling, Financial Aid  
 Chris Bremmer, Webmaster  
 Jennifer Brose, Director of Admissions  
 Eric Makowski Budrow, Customized Training  
 Sue Burnard, Financial Aid  
 Kori Busho, Customized Training  
 Jessie Cash, Horticulture Lab Assistant  
 Brenda Cooper, Maintenance  
 Jillian Cyann, Business Office  
 Dan Davidson, Admissions and Advising  
 Rebecca Davis, Financial Aid  
 Amy Disterhaupt, Student Services  
 Kenn Dols, Marketing Director  
 KaAnn Drone, Human Resources, Payroll  
 Teri Duff, Learning Commons/Library Lab Assistant  
 Ron Dvergsten, Ag Center  
 Sheila Edin, Business Office  
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 Cindy Foote, Assistant Director of Human Resources  
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 Daniel Gravdahl, Maintenance  
 David Groshong, MASE College Lab Assistant  
 Alicia Green, Career Exploration Initiative Program Coord.  
 Angela Guderjohn, Computer Lab Assistant  
 Jean Gullickson, Student Services  
 John Hamerlinck, RITA Grant Manager  
 Theresa Harsha, Veterans' Resource Center Coordinator  
 Cynthia Hase, Maintenance  
 Nicholas Heisserer, Director of Enrollment Services  
 Erich Heppner, Student Activities Coordinator  
 Corey Hins, Technology Services  
 Joan Jenkins, Admissions and Advising  
 Michelle Johnson, Maintenance  
 Eldon Kangas, Maintenance  
 Michelle Kangas, Registrar  
 Melissa Karels, Dental Assisting Lab Assistant  
 Mara Keen, Assessment & Testing Support  
 Teresa LaDoucer, Biology Lab Assistant  
 Jessica Larson, Technology Services  
 Julie Jo Larson, TRIO Student Support Services  
 Sampada Lehman, Secondary Relations Coordinator  
 Timothy Leskey, Occupational Skills Lab Assistant

Jody Longbella, Academic Affairs  
 Carla Loss, Business Office  
 Suzanne Lund, HE College Lab Assistant  
 Ellen Maier, Human Resources  
 George Marsolek, Theatre Technician  
 Stacy Marxer, TRIO Upward Bound Program  
 Amy Matter-Hines, Student Services  
 James McArdell, Physical Plant Director  
 Brenda Mehr, Maintenance  
 Karen Mertes, Academic Affairs  
 Diane Monnier, Maintenance  
 Patricia Murphy, Maintenance  
 Ron Nelson, Ag & Energy Research Center Manager  
 Pamela Nelson, Online Learning Specialist  
 Deb Norlin, Career, Transfer & Placement Services  
 Gayle Ollila, Nursing Lab Assistant  
 Phillip Olsen, Business Office  
 Crystal Olson, Financial Aid  
 Sally Patron-España, AME Grant Asst Dir  
 Elene Pawlu, Admissions/Student Services  
 Jason Perala, Ag Technician  
 Jessica Perrine, Communications Coordinator  
 Kimberly Pilgrim, Meta 5 Displaced Homemaker Program  
 Julie Platta, Records and Registration  
 Barb Reese, Business Office  
 John Reese, Maintenance  
 Michael Roelofs, Maintenance  
 Susan Roering, TRIO/Upward Bound  
 Jeffrey Roxberg, Maintenance  
 Nancy Schmidt, Heavy Equipment  
 Amanda Small, Check & Connect Coach  
 Sara Spaeth, Alumni & Foundation  
 Debbie Sterriker, Business Office  
 Myron Stevens, Maintenance  
 Scott Streed, Director of Technology Support Services  
 Audrey Thesing, Administrative Services  
 Sherilyn Thesing, Business Office  
 Peggy Thorn, Admissions & Advising  
 Eloise Thorson, Customized Training  
 Lori Thramer, Bookstore  
 Elizabeth Tinsley, Computer Commons  
 Tambara Topp, Education & Employment Advisor  
 Katrina Tretter, SBDC  
 Rose Tretter, Admissions & Advising  
 Steven Verdon, Welding Lab Assistant  
 Barbara Villwock, RITA Grant  
 Jane Vogt, TRIO Student Support Services  
 Melody Weber, Ag & Energy Center  
 Debbie Wesp, Administrative Assistant  
 Jane White, Bookstore  
 Pamela Wible, Staples Learning Commons Coordinator  
 Gayle Wonders, ACE/Assessment Testing  
 Bianca Wyffels, Bookstore  
 Ajeet Yadav, Environmental Health & Safety Officer  
 Joshua Zaborowski, TRIO Upward Bound

# ADMINISTRATION ADMINISTRATION

Hara Charlier, President  
 B.S. Cornell University  
 M.S. Miami University, OH  
 Ph.D. Old Dominion University, VA

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 B.S. Valparaiso University  
 M.A. College of St. Scholastica

David Hietala, Vice President of Academic and Student Affairs  
 B.S. Minnesota State University, Mankato  
 Ph.D. Union Institute & University

Jane Birkholz, Dean of Student Success  
 B.A. University of Wisconsin, Madison  
 M.S. Mankato State University  
 Ph.D. University of Nebraska

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 B. A., University of Minnesota, Minneapolis  
 M.S. University of Minnesota, Minneapolis  
 J.D. University of Minnesota Law School, Minneapolis

Martha Kuehn, Dean of Liberal Arts and Sciences  
 B.A. Hamline University  
 M.S. St. Cloud State University

Keith Olander, Dean of Agricultural Studies  
 B.S. University of Minnesota, Twin Cities  
 M. Ed. University of Minnesota, Twin Cities

Nancy Paulson, Director of Human Resources

Paul Preimesberger, Director of Secondary Relations  
 B.A. University of Wisconsin, Madison  
 M.A. University of Idaho

Mary Sam, Director of Diversity, Equity & Tribal Relations  
 B.S. Bemidji State University  
 M.S. University of Minnesota

Jana Shogren, Director of Resource Development & CLC Foundation  
 B.S. University of North Dakota

Tara Karels, Director of Nursing and Allied Health  
 A.S. Brainerd Community College  
 B.S. College of St. Scholastica  
 M.S. Walden University



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 Secretary to the Board

Patty McCann  
 Executive Assistant

Inge Chapin  
 Secretary to the Board

Patty McCann  
 Executive Assistant to the Board

## Admissions

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Scheduling campus tours  
Enrollment information  
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Program Information

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To apply online or to check out our  
admission services go to:  
[www.clcmn.edu/admissions](http://www.clcmn.edu/admissions)

### Brainerd Campus

501 West College Drive  
Brainerd, MN 56401  
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### Staples Campus

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Staples, MN 56479  
800.247.6836 | 218.894.5175

### Staples West Campus

10004 255th Avenue  
Staples, MN 56479  
218.894.5136

## Academic Calendar 2016-2017

### Fall Semester 2016

August 22...First Day of Classes  
September 5...Labor Day Holiday  
September 14...Student Success Day  
October 17...2nd Half of Semester begins  
October 20-21...School Vacation  
November 11...Veterans Day Holiday  
November 24-25...Thanksgiving Break  
December 13-16...Fall Semester Finals  
December 19-January 6...Semester Break

### Spring Semester 2016

January 9...First Day of Classes  
January 16...Martin Luther King Jr. Holiday  
February 20...Presidents' Day  
March 6...Second Half of Semester begins  
March 13-17...Spring Break  
May 8-11...Spring Semester Finals

### Summer Session 2016

June 1...First Day of Classes  
July 4...Independence Day Observed  
July 26...Last Day of Classes

Contact CLC  
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