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
Central Lakes College 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, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission as defined by law.

Harassment of an individual or group on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission has no place in a learning or work environment and is prohibited. Sexual violence has no place in a learning or work environment. Further, Central Lakes College shall work to eliminate violence in all its forms. Physical contact by designated system, college, and university staff members may be appropriate if necessary to avoid physical harm to persons or property.

This document is available in alternative formats to individuals with disabilities by calling Disability Services at 1.800.933.0346 ext 8175 or 1.218.855.8175 (Brainerd Campus) or 1.800.247.6836 ext 5182 or 1.218.894.5182 (Staples Campus). Consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.

Nancy Paulson, Director of HR
Central Lakes College
501 West College Drive, Brainerd, MN 56401
218.855.8054

Rights & Protections provided by the American Disabilities Act

Central Lakes College does not discriminate on the basis of disability in the admission or access to or treatment or employment in its programs or activities. The Office of Disabilities coordinates compliance with the nondiscrimination requirements contained in section 35.107 of the Department of Justice Regulations. Information concerning the provision of the Americans with Disabilities Act, and the rights provided thereunder, are available from the Office of Disabilities.

Contact Information:
Brainerd Campus: 218.855.8175
Staples Campus: 218.894.5182
Consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.
E-mail: disabilitieservices@clcmin.edu

STUDENT RESPONSIBILITY FOR CATALOG INFORMATION

Each student is responsible for compliance with the information appearing in this catalog. Failure to read the regulations and policies will not be considered an excuse for noncompliance.
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Liberal Arts & Sciences
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.
- At least 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 timeless presence, enables 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 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 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 our selves and others.

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
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.
- Apply quantitative reasoning in decision-making processes.
- Apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers.
- Detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers.

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

Goal Area 3 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 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. Students are required to complete courses from a minimum of two different disciplines; however, three different disciplines are recommended.
Goal Area 7

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 solutions.

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 others’ 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.
**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 bio-physical 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.

**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.
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)

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 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 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 or the Admissions Office at 218-855-8031 or askclc@clcmn.edu.

HYPERLINK

Liberal Arts & Sciences - Transfer Degree

Honors

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.
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 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 DHH 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

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 relationships, 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 do not 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
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 America ................................(3 cr)

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
**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 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)

**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 technican, 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 2467 Anatomy & Physiology I** (4 cr)
- **BIOL 2468 Anatomy & Physiology II** (4 cr)
- **CHEM 1401 General 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)
- **SOCI 1401 Introduction to Sociology** (3 cr)
- **SPCH 2421 Intercultural Communication** (3 cr) OR **SPCH 1421 Interpersonal Communication** (3 cr)

**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 REQUIRED: 51-52 credits**

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

*Denotes Prerequisite
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)
**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, 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.

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**Department Course Offerings**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANTH 1457</td>
<td>Cultural Anthropology</td>
<td>(3 cr)</td>
</tr>
</tbody>
</table>

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**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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ARTS 1401</td>
<td>Black and White Photo I</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1403</td>
<td>Color Photo I</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1420</td>
<td>The Art of Digital Photography</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1458</td>
<td>Drawing</td>
<td>(3 cr)</td>
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<td>ARTS 1459</td>
<td>2-D Design &amp; Color</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1467</td>
<td>Watercolor Painting</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1469</td>
<td>Painting</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1470</td>
<td>Art Appreciation</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1487</td>
<td>Ceramics: Beginning Hand Building</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1498</td>
<td>Ceramics: Beginning Throwing</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1499</td>
<td>Intermediate Ceramics</td>
<td>(3 cr)</td>
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<td>ARTS 1510</td>
<td>Autumn Landscape Photography</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 1512</td>
<td>The Art of Photographing Wildflowers</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>ARTS 1596</td>
<td>Topics in Art</td>
<td>(1-6 cr)</td>
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<tr>
<td>ARTS 1597</td>
<td>Topics in Art</td>
<td>(1-6 cr)</td>
</tr>
<tr>
<td>ARTS 1598</td>
<td>Topics in Art</td>
<td>(1-6 cr)</td>
</tr>
<tr>
<td>ARTS 2401</td>
<td>Black &amp; White Photo II</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 2403</td>
<td>Color Photo II</td>
<td>(3 cr)</td>
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<td>ARTS 2485</td>
<td>American Indian Art</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>ARTS 2486</td>
<td>Art History/Ancient</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 2487</td>
<td>Art History/Modern</td>
<td>(3 cr)</td>
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<tr>
<td>ARTS 2490</td>
<td>Art History/Neo-Western</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>ARTS 2583</td>
<td>Independent Study</td>
<td>(1-6 cr)</td>
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</tbody>
</table>
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, Anatonomist, Virologist, Neurobiologist, Horticulturist, Wildlife Biologist, Gerontologist, Taxonomist, Veterinarian, Ichthyologist, Biotechnologist, Field Biologist, Histologist, Reproduction Biologist, Immunologist, Conservation Biologist, Endocrinologist, Embryologist, Aplodontist, 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 (3 cr)
- 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 (4 cr)
- BIOL 2417 General Ecology Lab (1 cr)
- BIOL 2425 Microbiology (4 cr)
- BIOL 2467 Anatomy and Physiology I (4 cr)
- BIOL 2468 Anatomy & Physiology II (4 cr)

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-

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
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-
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 1536 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 1580 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 year at CLC 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.

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)

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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 1580 Digital Logic Design (3 cr)
ASSOCIATE IN ARTS DEGREE

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 I ................................. (4 cr)
ENGL 1421 Honors Composition II ................................ (4 cr)
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 cr)
ENGL 1478 Authors in Focus ........................................ (1-2 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 Equip-
ment 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 ................................................... (1 cr)
ENGL 2450 World Literature .......................................... (3 cr)
ENGL 2451 Women in Literature ..................................... (3 cr)
ENGL 2455 American Indian Literature ......................... (3 cr)
ENGL 2457 American 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)
ENGL 1469 American Short Story .................................. (3 cr)

ASSOCIATE IN ARTS DEGREE

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 teach 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

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)
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 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 (3 cr)
HLTH 1541 Human Sexuality (3 cr)
HLTH 2550 Internship in Health (1-4 cr)
HLTH 2570 Topics in Health (1-6 cr)

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 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)
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)
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 2458 Multivariable Calculus, MATH 2459 Differential Equations, and MATH 1460 Introduction to Statistics. These courses are essential for students pursuing a career in mathematics or science education.

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

Department Description
Students may take basic music classes in voice, piano, brass, woodwinds, and guitar as well as basic music history, music theory, and music appreciation classes. The music department offers courses such as Concert Choir, Chamber Singers, Jazz Band, Concert Band, and Brass Ensemble, allowing students the opportunity to maintain and develop musical skills. The music department also offers participation in music classes for those of all ages who wish to keep up their skills.

Special Department Information
Performing groups require a basic level of musical knowledge and a desire to take that level.

Department Learning Outcomes
- Demonstrate knowledge of specific areas of music.
- Demonstrate proficiency in preparing and performing musical works (performing groups).
- Demonstrate proficiency 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 major 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 classes, and music appreciation classes. The music department also offers students the opportunity to pursue a degree in music education or music therapy.

Department Course Offerings
- MUSC 1403 American Popular Music (3 cr)
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 that the 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 cliché 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, Vladclav 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)

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

ASSOCIATE IN ARTS DEGREE
PHILOSOPHY

ASSOCIATE IN ARTS DEGREE
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.

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 1532 Beginning Golf ..................................(2cr)
PHED 1536 Advanced Golf ...............................(2cr)
PHED 1541 Bowling ..............................................(1cr)
PHED 1544 Basketball - Good ................................(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 ............(1-4cr)
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 - Men's Basketball 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)
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
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 graphical 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 career paths includes Professor, Scientist, Engineer, Researcher, Scientific Analyst.

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)

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.

Department Course Offerings
PSYC 1411 Personal Growth & Behavior ...............................(3 cr)
PSYC 1420 Psychology & Modern Life ..................................(3 cr)
PSYC 1423 Positive Psychology: The Science of Well-Being .......(3 cr)
PSYC 2421 General Psychology .............................................(4 cr)
PSYC 2423 Honors General Psychology .................................(4 cr)
PSYC 2425 Conflict, Trauma, and Post Traumatic Stress Disorder ...(3 cr)
PSYC 2431 Human Development ............................................(3 cr)
PSYC 2433 Educational Psychology .......................................(3 cr)
PSYC 2470 Abnormal Psychology .........................................(3 cr)
PSYC 2570 Topics in Psychology ...........................................(1-4 cr)

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.
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 ............................. (1-4 cr)

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 courses 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)
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 in 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 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
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SOCL 1401</td>
<td>Introduction to Sociology</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 1403</td>
<td>Honors Introduction to Sociology</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 1472</td>
<td>Sociology of the Family</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2405</td>
<td>Criminology</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2411</td>
<td>Social Problems</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2422</td>
<td>Culture &amp; Environment</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2480</td>
<td>Sociology of Death and Dying</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2481</td>
<td>Race, Ethnicity &amp; Oppression</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SOCL 2599</td>
<td>Topics in Sociology</td>
<td>(1-6 cr)</td>
</tr>
</tbody>
</table>

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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPAN 1401</td>
<td>Beginning Spanish I</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>SPAN 1402</td>
<td>Beginning Spanish II</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>SPAN 1597</td>
<td>Topics in Spanish</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SPAN 1598</td>
<td>Topics in Spanish</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>SPAN 2401</td>
<td>Intermediate Spanish I</td>
<td>(4 cr)</td>
</tr>
</tbody>
</table>
### 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.

### 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, coworkers, 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)
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.

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 Empha... (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 3300)
Total 12 Credits
GRADUATION REQUIREMENT 30 CREDITS

Agricultural Commodities Marketing Certificate
Required Courses
- FBMT 1170 Introduction to Farm Commodities Mktg .......(3 cr)
- FBMT 1172 Directed Study - Introduction to Farm Commodit... (2 cr)
- FBMT 1180 Applying Commodity Mktg Fundamentals .......(3 cr)
- FBMT 1182 Directed Study - Applying Commodity Marketing Fundamentals ...(2 cr)
- FBMT 1190 Evaluating Farm Commodity Mktg Tools ........... (3 cr)
- FBMT 1192 Directed Study - Evaluating Farm Commodity Marke... (2 cr)
- FBMT 2170 Monitoring Farm Commodity Mktg Plans ....... (3 cr)
- FBMT 2172 Directed Study - Monitoring Farm Commodit... (2 cr)
- FBMT 2180 Strategies in Farm Commodity Marketing ....... (3 cr)
- FBMT 2183 Directed Study- Strategies in Farm Commodity Marketing ....(2 cr)
Total 26 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)

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.

Graduates will be able to:
- Continue in business after completing award area(s).
- Complete business planning annually and strategically;
- Complete accurate balance sheets annually or as needed;
- Complete business analysis annually;
- 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).

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.

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 Empha... (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 3300)
Total 12 Credits
GRADUATION REQUIREMENT 30 CREDITS

Agricultural Commodities Marketing Certificate
Required Courses
- FBMT 1170 Introduction to Farm Commodities Mktg .......(3 cr)
- FBMT 1172 Directed Study - Introduction to Farm Commodit... (2 cr)
- FBMT 1180 Applying Commodity Mktg Fundamentals .......(3 cr)
- FBMT 1182 Directed Study - Applying Commodity Marketing Fundamentals ...(2 cr)
- FBMT 1190 Evaluating Farm Commodity Mktg Tools ........... (3 cr)
- FBMT 1192 Directed Study - Evaluating Farm Commodity Marke... (2 cr)
- FBMT 2170 Monitoring Farm Commodity Mktg Plans ....... (3 cr)
- FBMT 2172 Directed Study - Monitoring Farm Commodit... (2 cr)
- FBMT 2180 Strategies in Farm Commodity Marketing ....... (3 cr)
- FBMT 2183 Directed Study- Strategies in Farm Commodity Marketing ....(2 cr)
Total 26 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)

Electives
Student must choose 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. FBMT 1211)
Total 10 Credits

GRADUATION REQUIREMENT 30 CREDITS

Specialty Crops Management Diploma
Required Courses
- SCMT 1110 System Goal Setting ............................................(1 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 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 2138 Special Topics – Soil Management ...............(2 cr)
- SCMT 2234 Value Added Ops. for Specialty Crops ...........(3 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 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 in the nation.

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)
- HORT 1104 Plant Science .................................................................(4 cr)
- HORT 1106 Applied Plant Science Lab ................................................(2 cr)
- NATR 1100 Introduction to Natural Resources ................................(3 cr)
- 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)
- ANSI 1100 Introduction to Animal Science ....................................(4 cr)
- ANSI 1100 Introduction to Natural Resources ................................(3 cr)
- ANSI 1115 Plant Taxonomy ...............................................................(2 cr)
- ANSI 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) ...................................................(2 cr)
- CHEM 1414 Fundamentals of Chemistry OR CHEM 1407 Life Science Chemistry OR PHYS 1401 College Physics I (Goal 3) ........(4 cr)
- Total – 9 credits

Required General Education
- ENGL 1410 Composition I OR ENGL 1420 Honors Composition I ........................................................................(4 cr)
- ENGL 1411 Composition II OR ENGL 1421 Honors Composition II (Goal 1) .........................................................(4 cr)
- MATH 1460 Introduction to Statics (Goal 4) OR ACCT 2011 .......................................................(4 cr)
- Total – 4 credits

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.

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)
Total 15 Credits

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)
Total 15 Credits

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)
Total 14 Credits

Spring Semester
BUSN 1168 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)
Total 13 Credits

Third Year – Fall Semester
VITI 1257* Fall Wine Production Internship ....................(3 cr)
Total 3 Credits

GRADUATION REQUIREMENT 31 CREDITS
*Denotes Prerequisites

Enology Diploma Curriculum
Program Course Requirements
First Year – Fall Semester
CHEM 1414 Fundamentals of Chemistry ........................(4 cr)
VITI 1146 Introduction to Enology .................................(3 cr)
VITI 1210 Introduction to Wine Microorganisms ..........(3 cr)
Elective ..........................................................................(2 cr)
Total 12 Credits

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)
Total 16 Credits

Second Year – Fall Semester
VITI 1257* Fall Wine Production Internship ....................(3 cr)
Total 3 Credits

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 (1/3) 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)
- SOCIL 2422 Culture and Environment (3 cr)

GRADUATION REQUIREMENT 15 CREDITS

Electives

Total 16 Credits

Spring Semester

- ESCI 1451 Oceanography (3 cr)
- ESCI 1454 Earth Science and the Environment (4 cr)

GRADUATION REQUIREMENT 32 CREDITS

*Denotes Prerequisites

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 occasions. 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 plantscaping firms.
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 ..........(3 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)
Total 15 Credits

Spring Semester
HORT 1106 Sustainable Greenhouse Management ........(4 cr)
HORT 1180 Sustainable Landscaping ...........................(3 cr)
Choose additional HORT course ................................(3 cr)
General Education ....................................................(6 cr)
Total 16 Credits

Second Year – Fall Semester
HORT 1113 Annuals and Perennials ............................(4 cr)
HORT 2140 Arboriculture ............................................(4 cr)
HORT 2165 Landscape Design .......................................(3 cr)
General Education ....................................................(6 cr)
Total 15 Credits

Spring Semester
HORT 1118 Indoor Flowering & Foliage Plants ..............(4 cr)
HORT 2116 Integrated Pest Management .....................(4 cr)
General Education ....................................................(6 cr)
Total 14 Credits

Graduation Requirement: 60 Credits
*Denotes Prerequisites

Program Information
This two-year Landscape Technology Diploma Program provides students with a broad knowledge of the landscape 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 Dentistry ...................................................(3 cr)
HORT 2150 Retaining Wall Construction .........................(3 cr)
or HORT 2155 Deck, Patio, and Pond Construction ..........(4 cr)
Total 15 Credits

Second Year – Fall Semester
HORT 1113 Annuals and Perennials .........................(4 cr)
or HORT 2155 Deck, Patio, and Pond Construction ..........(4 cr)
HORT 2150 Retaining Wall Construction .........................(3 cr)
or HORT 2155 Deck, Patio, and Pond Construction ..........(4 cr)
Total 16 Credits

Second Year – Spring Semester
HORT 1150 Turf Management ....................................(3 cr)
HORT 2165 Integrated Pest Management ....................(4 cr)
HORT 2170 Advanced Landscape Design .....................(4 cr)
General Education ....................................................(2 cr)
Elective .................................................................(2 cr)
Total 15 Credits

Graduation Requirement: 62 Credits
*Denotes Prerequisites

Program Information
This two-year Landscape Technology Diploma Program provides students with a broad knowledge of the landscape 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.
Program Information
The Natural Resource Program prepares students for work in the natural resource field by providing a well-rounded background of coursework 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 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)
Total 13 Credits

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)
Total 18 Credits

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)
Total 16 Credits

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)
Total 16 Credits

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)
Total 19 Credits

Graduation Requirement 63 Credits
* Denotes Prerequisites

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 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)
Total 13 Credits

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)
Total 18 Credits

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)
Total 16 Credits

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)
Total 16 Credits

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)
Total 19 Credits

Graduation Requirement 63 Credits
* Denotes Prerequisites
### 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 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

#### 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 viticultural 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 viticultural 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 (Oklahoma) 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.
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 (22 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 manage organizations and control and protect the assets of the business 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 record 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). CPAs 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)
Total 14 Credits

Spring Semester
ACCT 2123* Accounting Principles II ......................................(4 cr)
ACCT 2138* Computerized Accounting Software ....................(3 cr)
ACCT 2140 Accounting Applications .........................................(3 cr)

Second Year – Fall Semester
ACCT 2111 Accounting Principles I ...........................................(4 cr)
ACCT 2114 Payroll Accounting ...................................................(3 cr)
ACCT 2138* Computerized Accounting Software ....................(4 cr)
General Education .....................................................................(5 cr)
Total 16 Credits

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)
Total 14 Credits

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)
Total 10 Credits

Spring Semester
ACCT 2123* Accounting Principles II ......................................(4 cr)
ACCT 2122 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)
Total 14 Credits

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)
Fall Semester Total 11 credits

Spring Semester
ACCT 2123* Accounting Principles II ......................................(4 cr)
ACCT 2140 Accounting Applications .........................................(3 cr)
ACCT 2138* Computerized Accounting Software ....................(3 cr)
Spring Semester Total 9 credits

GRADUATION REQUIREMENT 20 CREDITS
* Denotes Prerequisites
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 communications, 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)

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

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)

GRADUATION REQUIREMENT 60 CREDITS

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)
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)

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 Entrepreneurship 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 (3 cr)
- BUSN 1166 Business Communications (3 cr)
- MGMT 1101 Entrepreneurship (3 cr)
- MGMT 1150 Entrepreneurship Capstone (1 cr)
- MKTG 1011 Marketing Principles (3 cr)
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
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 (CRR): The CRR credential is a certification granted by the Healthcare Financial Management Association (HFMA) professional organization. HFMA members and non-members are eligible to take the CRR exam. Recertification must be obtained every two years. The CRR credential is valuable for those that work within a hospital revenue cycle or work in a department that supports the hospital’s revenue cycle such as Patient Access, Financial Representative, Health Information Management, Finance, Compliance etc. Certified Technical Specialist: Accounting & Finance: TheCTS 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). CPAs 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.

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 technician 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 2011 Payroll Accounting ..................................................(3 cr)
BIOL 1404 Human Biology .......................................................(3 cr)

First Year – Spring Semester
ACCT 2140 Accounting Applications ...........................................(3 cr)
HINS 1150 Intro to DX and Procedure Coding ............................(3 cr)
HINS 1360 Medical Terminology .................................................(3 cr)
Total – 15 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)
MATH 1441 Concepts in Math (3 cr) OR MATH 1470 College Algebra ..................................................(3 cr)
Total – 15 Credits

Graduation Requirement: 60 Credits
* Denotes Prerequisites

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.
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

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 1160 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 * 18 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)
HINS 2190 Professional Practicum .................................... (2 cr)
Total – 8 credits

Spring Semester
BUSN 1166 Business Communications .............................. (3 cr)
HINS 1360 Medical Terminology ........................................ (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 18 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 1160 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)
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 (1/3) 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)

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 ELECT (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 CDEV 1115 Planning & Implementing Curriculum (3 cr)
Elecive (1 cr)
General Education (11 cr)
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)
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 1306 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 and Implementing Curriculum (3 cr) OR
CDEV 2340 Professional Leadership ..................................................(3 cr)
CDEV 1130 Infant/Toddler Development & Learning ................................(4 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

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 communication 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 these 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;
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 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. OSOS 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 Early Childhood Careers (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
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 1196 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 the Physical and 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 Disorders ......................(3 cr)
CDEV 2114 Introduction to Autism Spectrum Disorder ................................(2 cr)
GRADUATION REQUIREMENT 20 CREDITS
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 1525 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

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 ................................. (3 cr)
- OSKL 1148 Employability Skills I ......................................... (4 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 ............................... (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
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 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.

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

The Information Technology Specialist Program will help prepare graduates 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 onsite.

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 1220* Network Essentials .............................................. (4 cr)
General Education ................................................................... (1 cr)
Total – 15 credits

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)
Total – 15 credits

Second Year – Fall Semester

COMP 2152* Client Operating Systems Management .............. (4 cr)
COMP 2150* Ethics in Information Technology ......................... (2 cr)
COMP 2202* Computer User Support ....................................... (3 cr)
General Education ................................................................... (8 cr)
Total – 15 credits

Spring Semester

COMP 2111* Security Essentials ............................................. (4 cr)
COMP 2115* IT Project Management ......................................... (3 cr)
COMP 2170* Linux Systems ..................................................... (4 cr)
General Education ................................................................... (4 cr)
Total – 15 credits

GRADUATION REQUIREMENT 60 CREDITS

* Denotes Prerequisite or Co-requisite
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 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, 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)
Total 15 Credits

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 ................................................... (6 cr)
Total 15 Credits

Second Year – Fall Semester
COMP 2115* Advanced OS – Command Line and PowerShell (4 cr)
COMP 2130* Scaling Networks ..................................... (3 cr)
COMP 2311* Connecting Networks ................................ (3 cr)
General Education ................................................... (8 cr)
Total 16 Credits

Spring Semester
COMP 2115* IT Project Management ............................ (3 cr)
COMP 2132* Implementing Cisco IOS Network Security ...... (3 cr)
COMP 2313* Fundamentals of Voice Over IP ................. (3 cr)
COMP 2170* Linux Systems ........................................ (4 cr)
COMP Course Elective................................................. (1 cr)
Total 14 Credits

GRADUATION REQUIREMENT 60 CREDITS
*Denotes Prerequisites or Co-requisites

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 on behalf of 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 Intrusion Defender (GCID), GIAC Certified Intrusion Analyst (GCIAD), 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 Certport 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)
Total 15 Credits

Second Year – Fall Semester
COMP 2115* Advanced OS – Command Line & PowerShell (4 cr)
COMP 2130* Scaling Networks ..................................... (3 cr)
COMP 2311* Connecting Networks ................................ (3 cr)
General Education ................................................... (8 cr)
Total 16 Credits

Second Year – Spring Semester
COMP 2115* Advanced OS – Command Line & PowerShell (4 cr)
COMP 2130* Scaling Networks (CCNA – II) .................... (3 cr)
COMP 2154* Advanced Network Defense ....................... (3 cr)
General Education ................................................... (5 cr)
Total 15 Credits

GRADUATION REQUIREMENT 60 CREDITS
*Denotes Prerequisite or Co-requisite
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), Microsoft Certified Solutions Associate (MCSA), Comp TIA A+, and others. Central Lakes College is a Prometric, VUE, and Certiport Authorized Test Center. All certifications 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 Certiport 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 1220 Network Essentials .................................(4 cr)
COMP 2202 Computer User Support ............................(3 cr)
Total 17 credits

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 …. (3 cr)
Choose 5 or more credits from COMP courses ...............(5 cr)
Total – 15 credits

Graduation Requirement 32 Credits
*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)
Total 10 credits

Graduation Requirement 10 Credits
*Denotes prerequisites

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-
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, Excel, PowerPoint and Outlook. The 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 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, 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 System (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
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;
- Evaluate, design, and implement 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 Central Lakes College 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 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.

Mobile Application Development
A.A.S.
Fall Semester – Year 1
APPD 1110 Programming in C# ............................................ (3 cr)
APPD 1115 Problem Solving Using Logic .............................. (3 cr)
APPD 1115 Advanced Database Design ............................... (3 cr)
General Education .......................................................... (6 cr)
Total – 15 credits
Spring Semester – Year 1
APPD 1113 Programming in HTML5 with JavaScript and CSS .... (3 cr)
APPD 1120* Android Application Development Fundamentals (3 cr)
APPD 1125* Advanced Database Design ............................... (3 cr)
General Education .......................................................... (6 cr)
Total – 15 credits
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 .......................................................... (6 cr)
Total – 15 credits
Spring Semester – Year 2
APPD 2111* Android/Server Interaction .............................. (3 cr)
APPD 2124* Software Development Methodology .................. (3 cr)
APPD 2126* Advanced Windows Application Development Us- ing HTML5 and JavaScript ...........................................(3 cr)
APPD 2128* Advanced Windows Application Development Us- ing C# ................................................................. (3 cr)
APPD 2132* Advanced iOS Development ............................. (3 cr)
General Education .......................................................... (6 cr)
Total – 15 credits

Special Program Requirements
Students must have a valid Emergency Medical Re- sponder 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

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 must be certified by the Minnesota Board of Peace Offi- cer 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 Re- sponder 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.

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
Graduates will be able to:
- Practice in a range of settings, working with a variety of clients and communities;
- Demonstrate strong and effective written and oral communication skills;
- Understand the importance of ethics and ethical behavior in law enforcement.

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 must be 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.

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- 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;
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- 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 Re- sponder 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

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 must be 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 Re- sponder 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
**Courses required for Minnesota P.O.S.T. licensing must be completed within 3 years of starting the degree.**

CRJU 2140* Law Enforcement and Behavioral Science (3 cr)
CRJU 2114** Traffic Law (3 cr)
CRJU 2108* Criminal Investigations (3 cr)
CRJU 2106** Fitness for Law Enforcement (2 cr)
CRJU 2102* Criminal Procedures (4 cr)
CRJU 2116* Science of Fingerprints (4 cr)
CRJU 2118 Criminal Justice Photography (4 cr)
CRJU 2135 Internship (4-6 cr)
CRJU 2311 Basic Firearms (1 cr)
CRJU 2315 Post Prep (1 cr)
PHED 1525 Personal Protection Awareness (2 cr)

**These courses required for Minnesota P.O.S.T. licensing must be completed prior to or within the first year of starting the degree.**

CRJU 2166 Tactical Communications/Relations (2 cr)
CRJU 2164 Patrol Practicals (5 cr)
CRJU 2162 Firearms (2 cr)
CRJU 2160 Use of Force (2 cr)
CRJU 2118 Criminal Justice Photography (4 cr)
CRJU 2112 Ballistic and Firearms Identification (4 cr)
CRJU 2135 Internship (4-6 cr)
CRJU 2110* Criminal Justice (3 cr)
CRJU 1102* Juvenile Justice (3 cr)
CRJU 1112 Police and the Community (3 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)

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

**Denotes Prerequisite.**
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 in educational activities within and throughout Minnesota. Conservation officers often work from 4×4 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 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.

Requirements: 72 Credits

Required General Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATR 1130</td>
<td>Animal Behavior</td>
<td>3 cr</td>
</tr>
<tr>
<td>NATR 2110</td>
<td>Herpetology</td>
<td>2 cr</td>
</tr>
<tr>
<td>NATR 2140*</td>
<td>Fisheries Management</td>
<td>3 cr</td>
</tr>
<tr>
<td>NATR 2130*</td>
<td>Wildlife Management</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**These courses must be completed prior to SKILLS.

Additional Required Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJU 2111</td>
<td>Police and the Community</td>
<td>3 cr</td>
</tr>
<tr>
<td>CRJU 2108*</td>
<td>Fitness for Law Enforcement</td>
<td>2 cr</td>
</tr>
<tr>
<td>CRJU 2104*</td>
<td>Traffic Law</td>
<td>3 cr</td>
</tr>
<tr>
<td>CRJU 2124</td>
<td>General Evidence and Identification Preparation</td>
<td>4 cr</td>
</tr>
<tr>
<td>CRJU 2160*</td>
<td>Use of Force</td>
<td>2 cr</td>
</tr>
<tr>
<td>CRJU 2162*</td>
<td>Firearms</td>
<td>3 cr</td>
</tr>
<tr>
<td>CRJU 2164*</td>
<td>Patrol Practicals</td>
<td>5 cr</td>
</tr>
<tr>
<td>CRJU 2166*</td>
<td>Tactical Communications/Relations</td>
<td>2 cr</td>
</tr>
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</table>

Total: 24 credits

Non-Licensure Track

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATR 1112</td>
<td>Land Measurement</td>
<td>3 cr</td>
</tr>
<tr>
<td>NATR 1120</td>
<td>Dendrology</td>
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<tr>
<td>NATR 1140</td>
<td>Limnology</td>
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<tr>
<td>NATR 1200</td>
<td>Introduction to Natural Resources</td>
<td>3 cr</td>
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<tr>
<td>NATR 2180</td>
<td>Introduction to GIS &amp; GPS (Arc View)</td>
<td>2 cr</td>
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<tr>
<td>NATR 2130*</td>
<td>Wildlife Management</td>
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<td>NATR 2140*</td>
<td>Fisheries Management</td>
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Total: 20 credits

Required General Education

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1410</td>
<td>Composition I (Goal 1)</td>
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<td>ENGL 1411</td>
<td>Composition II</td>
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<tr>
<td>ENGL 2404</td>
<td>Literature &amp; Composition</td>
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<tr>
<td>ENGL 2405</td>
<td>Literature &amp; Composition</td>
<td>3 cr</td>
</tr>
<tr>
<td>ENGL 2406</td>
<td>Literature &amp; Composition</td>
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<tr>
<td>SOCL 2401</td>
<td>Race, Ethnicity and Oppression (Goal 5)</td>
<td>3 cr</td>
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<td>SOCL 2402</td>
<td>Race, Ethnicity and Oppression (Goal 5)</td>
<td>3 cr</td>
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<td>SOCL 2403</td>
<td>Race, Ethnicity and Oppression (Goal 5)</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOCL 2404</td>
<td>Race, Ethnicity and Oppression (Goal 5)</td>
<td>3 cr</td>
</tr>
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<td>SOCL 2405</td>
<td>Race, Ethnicity and Oppression (Goal 5)</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPAN 2420</td>
<td>Many Faces of Mexico (Goals 5, 10)</td>
<td>3 cr</td>
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<td>3 cr</td>
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<tr>
<td>SPAN 2420</td>
<td>Many Faces of Mexico (Goals 5, 10)</td>
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</tbody>
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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.
MANUFACTURING CAREERS

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;
- Graduate 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

Program Information

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, operating and operate a computer numerical control (CNC) turning center and machining center;
- Anticipate, choose, and troubleshoot the proper tooling based on machining 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 machine tools and robots, to improve quality, lower production costs, and remain competitive.

CNC Technologies A.A.S.

Program Information

CNC Technologies Diploma

Program Information

MANUFACTURING CAREERS

CNC TECHNOLOGIES

Career Description

Program Information

Career Description

Program Information

Program Information

Program Information

Program Information

GRADUATION REQUIREMENT 48 CREDITS

*Denotes Prerequisite

CNC Technologies Diploma

Program Information

Program Information

GRADUATION REQUIREMENT 60 CREDITS

*Denotes Prerequisite
### 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 troubleshooter.

### Machine Operations Diploma

**Program Course Requirements**  
**Fall Semester – 1st Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MTTS 1110</td>
<td>Principles of Machine Operations I</td>
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<td>MTTS 1111</td>
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<td>MTTS 1120</td>
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<td>MTTS 1121</td>
<td>Machine Operations II</td>
<td>3 cr</td>
</tr>
<tr>
<td>MTTS 1130</td>
<td>Print Reading</td>
<td>2 cr</td>
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<td>RAST 1109</td>
<td>Computers in industry</td>
<td>2 cr</td>
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<td>Total - 16 credits</td>
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### Spring Semester – 1st Year

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<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MTTS 1111*</td>
<td>Principles of Machine Operations II</td>
<td>2 cr</td>
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<tr>
<td>MTTS 1122*</td>
<td>Machine Operations III</td>
<td>3 cr</td>
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<tr>
<td>MTTS 1123</td>
<td>Introduction to Engineering Graphics</td>
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<tr>
<td>MTTS 1131*</td>
<td>Print Applications</td>
<td>2 cr</td>
</tr>
<tr>
<td>MTTS 1134*</td>
<td>CNC Programming and Process Planning</td>
<td>3 cr</td>
</tr>
<tr>
<td>MTTS 1140</td>
<td>CAD/CAM I</td>
<td>2 cr</td>
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<tr>
<td>Total - 16 credits</td>
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</tbody>
</table>

*Denotes Prerequisites

### Program Information

- **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 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CMAE 1502 OR CMAE 1529</td>
<td>Career Success Skills</td>
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<tr>
<td>MATH 1500</td>
<td>Applied Mathematics</td>
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<td>MTTS 1120</td>
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<tr>
<td>MTTS 1121</td>
<td>Machine Operations II</td>
<td>3 cr</td>
</tr>
<tr>
<td>MTTS 1130</td>
<td>Print Reading</td>
<td>2 cr</td>
</tr>
<tr>
<td>RAST 1109</td>
<td>Computers in industry</td>
<td>2 cr</td>
</tr>
<tr>
<td>Total - 16 credits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Denotes Prerequisites

- **Machine Technology Certificate**
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 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 O/AW;
- 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)
Total – 15 Credits

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)
Total – 15 Credits

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)
Total – 15 Credits

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 Programming ...................(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

MANUFACTURING WELDING TECHNICIAN

MANUFACTURING CAREERS

MANUFACTURING CAREERS

MANUFACTURING CAREERS
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

Program Information

Program Outcomes

Special Program Requirements

Career Opportunities
## 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 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 program 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.

### ROBOTICS/AUTOMATED SYSTEMS Technology A.A.S.

#### First Year – Fall Semester
- RAST 1101* Industrial Electronics I (3 cr)
- RAST 1109 Computers in Industry (2 cr)
- RAST 1111 Industrial Electronics Lab I (2 cr)
- RAST 1120 Intro to Engineering Graphics (2 cr)
- General Education (6 cr)

#### Spring Semester
- 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)
- General Education (3 cr)

#### Total – 21 Credits

#### Second Year – Fall Semester
- RAST 1104 Introduction to Automation (2 cr)
- RAST 1109 Computers in Industry (2 cr)
- RAST 1111 Industrial Electronics Lab I (2 cr)
- RAST 1120 Intro to Engineering Graphics (2 cr)
- General Education (6 cr)

#### Spring Semester
- RAST 1102* Industrial Electronics II (3 cr)
- RAST 1103* Motors and Drives (3 cr)
- RAST 1206* Programmable Logic Controllers I (3 cr)
- General Education (3 cr)

#### Total – 20 Credits

#### Summer Session
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2132* Robotic Programming (3 cr)
- 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

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (2 cr)
- General Education (3 cr)

#### Total – 6 Credits

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (2 cr)
- General Education (3 cr)

#### Total – 18 Credits

#### Summer Session
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

#### Summer Session
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

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**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 1104 Introduction to Automation (2 cr)
- RAST 1109 Computers in Industry (2 cr)

#### 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)
- General Education (3 cr)

#### Total – 18 Credits

#### Summer Session
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2132* Robotic Programming (3 cr)
- 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

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (2 cr)
- General Education (3 cr)

#### Total – 6 Credits

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (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)

#### Spring Semester
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

#### Spring Semester
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

**GRADUATION REQUIREMENT – 61 CREDITS**

*Denotes Prerequisites

**Robotics/Automated Systems Techno-logy 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 1104 Introduction to Automation (2 cr)
- RAST 1109 Computers in Industry (2 cr)

#### 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)
- General Education (3 cr)

#### Total – 18 Credits

#### Summer Session
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2132* Robotic Programming (3 cr)
- 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

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (2 cr)
- General Education (3 cr)

#### Total – 6 Credits

#### Second Year – Fall Semester
- RAST 2101* Application Planning & Layout (2 cr)
- RAST 2105* Transducers (2 cr)
- RAST 2116* Industrial Electronics Lab III (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)

#### Spring Semester
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

#### Spring Semester
- RAST 2154* Robot Controller Maintenance (2 cr)
- RAST 2395* Advanced Robot Controller Programming (2 cr)

**GRADUATION REQUIREMENT – 61 CREDITS**

*Denotes Prerequisites

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**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 1104 Intro 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

**Robotic Offline Programming Advanced Certificate**

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

#### Total – 9 Credits

**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

**Robotic Human Machine Interface Advanced Certificate**

- RAST 2121* Scada Programming (2 cr)
- RAST 2122* HMI Programming (2 cr)

#### Total – 8 Credits

*Denotes Prerequisite
**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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>RAST 1104</td>
<td>Introduction to Automation</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>RAST 2134</td>
<td>Robotic ARC Welding</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>WELD 1100</td>
<td>Introduction to Welding</td>
<td>(2 cr)</td>
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<tr>
<td>WELD 1101</td>
<td>Shielded Metal ARC Welding</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>WELD 1111</td>
<td>Blueprint Reading</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>WELD 1117</td>
<td>Gas Metal ARC Welding</td>
<td>(3 cr)</td>
</tr>
</tbody>
</table>

**GRADUATION REQUIREMENT 16 CREDITS**

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**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 Institute 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**


**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.
### 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 cored welding, 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 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.

**Fall Semester**
- **WELD 1100** Introduction to Welding ........................................ (2 cr)
- **WELD 1101** Shielded Metal ARC Welding .............................. (2 cr)
- **WELD 1111** Blueprint Reading I ................................. (2 cr)
- **WELD 1117** Gas Metal ARC Welding ................................ (2 cr)
- **WELD 1140** Welding Trade Knowledge ............................... (2 cr)

**Total – 18 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 ........................... (2 cr)
- **WELD 1128** Gas Metal ARC Welding................................. (3 cr)
- **WELD 1132** Testing/Code & 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**
- **WELD 1100** Introduction to Welding .................................... (2 cr)
- **WELD 1101** Shielded Metal ARC Welding.......................... (2 cr)
- **WELD 1111** Blueprint Reading I ........................................ (2 cr)
- **WELD 1117** Gas Metal ARC Welding ................................ (2 cr)
- **WELD 1140** Welding Trade Knowledge ............................... (4 cr)
- **WELD 1160** Welding Theory .............................................. (2 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.......................... (2 cr)
- **WELD 1112** Blueprint Reading II (Welding Systems)............... (2 cr)
- **WELD 1115** Gas Tungsten ARC Welding I .......................... (2 cr)
- **WELD 1117** Gas Metal ARC Welding ................................ (2 cr)
- **WELD 1140** Welding Trade Knowledge ............................... (4 cr)
- **WELD 1160** Welding Theory .............................................. (2 cr)

**Total – 18 credits**

**Spring Semester**
- **CCST 1530** Employment Strategies .................................... (3 cr)
- **WELD 1102** Shielded Metal ARC Welding II ........................ (3 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 .................. (2 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
Introducory 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.
Career Description
A graphic designer is a creative problem solver who is trained to perceive, 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, copywriters, 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 towards the technical core of the diploma or degree must be at least 2.0; and
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, newspaper designer, magazine designer, video editor, book designer, and newspaper designer.

Graphic Design A.A.S

<table>
<thead>
<tr>
<th>First Year – Fall Semester</th>
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<tbody>
<tr>
<td>GDES 1105 Concepts of Design</td>
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<tr>
<td>GDES 1134 Typography</td>
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<tr>
<td>GDES 1126 Intro to Adobe Creative Cloud</td>
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<td>VPRO 1114 Camera Operations</td>
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<tr>
<td>General Education</td>
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<th>First Year – Spring Semester</th>
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<tbody>
<tr>
<td>GDES 1120 Publication Design</td>
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<td>GDES 1122 Graphic Design Production</td>
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<td>GDES 1124 Corporate ID</td>
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<td>VPRO 1128 Business of Media</td>
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<tr>
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<tbody>
<tr>
<td>GDES 2100 Graphic Design I</td>
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<tr>
<td>GDES 2102 Packaging</td>
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<td>GDES 2130 Media Production</td>
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<td>GDES 2132 Social Media Design</td>
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<tr>
<td>GDES 2102 Graphic Design II</td>
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<tr>
<td>GDES 2113 Art Direction</td>
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GRADUATION REQUIREMENT 60 CREDITS

Graphic Design Diploma

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<tr>
<td>GDES 1105 Concepts of Design</td>
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<td>GDES 2102 Graphic Design II</td>
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GRADUATION REQUIREMENT 54 CREDITS

Graphic Design Media Technologies Diploma

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<tr>
<td>GDES 1105 Concepts of Design</td>
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<tr>
<td>GDES 2130 Media Production</td>
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<td>GDES 2132 Designs in Social Media</td>
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<td>PHIM 1126 Introduction to Adobe Creative Cloud</td>
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<tbody>
<tr>
<td>GDES 1105 Concepts of Design</td>
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<th>Fall Semester – 2nd year</th>
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<tbody>
<tr>
<td>GDES 2352 Shop Internship</td>
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<td>Total – 12 credits</td>
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GRADUATION REQUIREMENT 43 CREDITS
**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 video production applications and creating special effects;
- Analyze and apply appropriate lighting techniques for motion picture production; and
- Encode video files for distribution to broadcast, web, and digital recording.

**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. Bredin, 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.

**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).

**Videography Production A.A.S.**

First Year – Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>GDES 1105</td>
<td>Concepts of Design</td>
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<tr>
<td>VPRO 1126</td>
<td>Media Lighting and Sound</td>
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<tr>
<td>VPRO 1100*</td>
<td>Media Script Writing</td>
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<tr>
<td>ENGL 1422</td>
<td>Practical Writing</td>
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Second Year – Spring Semester

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<td>VPRO 1110</td>
<td>Video Editing Workflow</td>
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<td>VPRO 1114</td>
<td>Camera Operations</td>
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<td>GDES 2130</td>
<td>Designs in Social Media</td>
<td>3 cr</td>
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<tr>
<td>VPRO 2104</td>
<td>CLC Productions I</td>
<td>3 cr</td>
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<tr>
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**Videography Production Diploma**

First Year – Fall Semester

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<thead>
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<th>Course Code</th>
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<tr>
<td>ENGL 1422</td>
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<td>GDES 1105</td>
<td>Concepts of Design</td>
<td>3 cr</td>
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<tr>
<td>GDES 1126</td>
<td>Introduction to Adobe Creative Cloud</td>
<td>3 cr</td>
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<tr>
<td>VPRO 1100*</td>
<td>Media Script Writing</td>
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Second Year – Fall Semester

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<tr>
<td>GDES 2130</td>
<td>Designs in Social Media</td>
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<tr>
<td>VPRO 2104</td>
<td>CLC Productions I</td>
<td>3 cr</td>
</tr>
<tr>
<td>VPRO 2110</td>
<td>Advanced Camera</td>
<td>3 cr</td>
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<td>VPRO 2112</td>
<td>Advanced Video Editing</td>
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**Video Production Diploma**

First Year – Spring Semester

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<tr>
<td>GDES 1105</td>
<td>Concepts of Design</td>
<td>3 cr</td>
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<td>GDES 1126</td>
<td>Introduction to Adobe Creative Cloud</td>
<td>3 cr</td>
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<tr>
<td>VPRO 1100*</td>
<td>Media Script Writing</td>
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<tr>
<td>VPRO 1110</td>
<td>Video Editing Workflow</td>
<td>3 cr</td>
</tr>
<tr>
<td>VPRO 1114</td>
<td>Camera Operations</td>
<td>3 cr</td>
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Second Year – Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>GDES 2130</td>
<td>Designs in Social Media</td>
<td>3 cr</td>
</tr>
<tr>
<td>VPRO 2104</td>
<td>CLC Productions I</td>
<td>3 cr</td>
</tr>
<tr>
<td>VPRO 2110</td>
<td>Advanced Camera</td>
<td>3 cr</td>
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<tr>
<td>VPRO 2112</td>
<td>Advanced Video Editing</td>
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**Second Year – Spring Semester**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>GDES 2132</td>
<td>Designs in Social Media</td>
<td>3 cr</td>
</tr>
<tr>
<td>VPRO 2104</td>
<td>CLC Productions 2</td>
<td>4 cr</td>
</tr>
<tr>
<td>VPRO 2130</td>
<td>Creative Development</td>
<td>4 cr</td>
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<td>TOTAL – 11 credits</td>
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**General Education**

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<tr>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENGL 1410</td>
<td>Composition</td>
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<tr>
<td>VPRO 2106</td>
<td>CLC Productions II</td>
<td>4 cr</td>
</tr>
<tr>
<td>VPRO 2130</td>
<td>Creative Development</td>
<td>4 cr</td>
</tr>
<tr>
<td>TOTAL – 15 credits</td>
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</tbody>
</table>

**Graduation Requirements**

- 54 credits
- 60 credits
- 54 credits
- 54 credits
## 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. 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. 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.

## Dental Assisting A.A.S Curriculum
### First Year – Fall Semester
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DENT 1106</td>
<td>Dental Orientation &amp; Anatomy</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 1108*</td>
<td>General Anatomy</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>DENT 116*</td>
<td>Dental Clinic I</td>
<td>(8 cr)</td>
</tr>
<tr>
<td>DENT 1116*</td>
<td>Dental Clinic I</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 1118*</td>
<td>Dental Radiology I</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 1120</td>
<td>Preventive Dentistry</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 1124</td>
<td>Biometrics</td>
<td>(2 cr)</td>
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<td>Total – 19 Credits</td>
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### First Year – Spring Semester
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<tbody>
<tr>
<td>DENT 1124*</td>
<td>Dental Internship (336 hours)</td>
<td>(7 cr)</td>
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<td>Total – 7 Credits</td>
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<tbody>
<tr>
<td>DENT 1114</td>
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<td>(336 hours)</td>
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<tr>
<td>DENT 1131</td>
<td>Intermediate Dental Care</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>DENT 1132*</td>
<td>Dental Specialties</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 1133*</td>
<td>Principles of Practice Management and Communication</td>
<td>(2 cr)</td>
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<tr>
<td>Total – 18 Credits</td>
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### Summer Session
<table>
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<tr>
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<tbody>
<tr>
<td>DENT 1150</td>
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## Dental Assisting Diploma
### Fall Semester
<table>
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<td>(8 cr)</td>
</tr>
<tr>
<td>DENT 1118*</td>
<td>Dental Radiology I</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 120</td>
<td>Preventive Dentistry</td>
<td>(2 cr)</td>
</tr>
<tr>
<td>DENT 124</td>
<td>Biometrics</td>
<td>(2 cr)</td>
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### Spring Semester
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</table>

## Graduation Requirements
GRADUATION REQUIREMENT 60 CREDITS

* Denotes Prerequisites

## Dental Assisting Diploma
### Fall Semester
<table>
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<tr>
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### Summer Session
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<tr>
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<tbody>
<tr>
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**Denotes Prerequisites**
* B IOL 1404 Human Biology (3 credits), or B IOL 2467 Anatomy and Physiology I and B IOL 2468 Anatomy and Physiology II (4 credits each) may be substituted for DENT 1108 General Anatomy.

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**Infectious Diseases**
- 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. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory and clinic. Program policies are available upon request.

**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**
- **DENT 1108 General Anatomy**
- **DENT 1116 Dental Clinic I**
- **DENT 1118 Dental Radiology I**
- **DENT 1120 Preventive Dentistry**
- **DENT 1124 Biometrics**

Total – 19 Credits

### First Year – Spring Semester

- **DENT 1106 Dental Orientation & Anatomy**
- **DENT 1108 General Anatomy**
- **DENT 1116 Dental Clinic I**
- **DENT 1118 Dental Radiology I**
- **DENT 1120 Preventive Dentistry**
- **DENT 1124 Biometrics**

Total – 19 Credits
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 examination 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:
1. Communicate effectively with patients, families, providers and healthcare team members in a respectful and caring manner.
2. Apply administrative business office procedures and implement medical documentation systems.
3. Assist providers and healthcare team members in clinical procedures related to examination and treatment.
4. Effectively use quality assurance requirements in performing clinical and laboratory procedures.
5. Perform common diagnostic procedures under a licensed healthcare provider ensuring patient comfort and safety; and
6. 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 campuses 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 Medical 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 (3 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 Development (3 cr)
PNUR 1140 Medication Calculations for Healthcare Careers (1 cr)
Total 39 credits

Career Opportunities
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)
- BIOL 1401 Beginning Spanish (Goal 8) (4 cr)
- BIOL 1404 Human Biology (Goal 3) (3 cr)
- COMM 2402 Intercultural Communication (Goals 1, 7) (3 cr)
- ENGL 1422 Practical Writing (Goals 1, 2) (3 cr)
- ENGL 1410 Composition I (Goal 1) (4 cr)

Choose additional 1-2 credits from the Minnesota Transfer Curriculum.
Total 15 credits

Electives
Choose 6 additional credits.
Total 9 credits

Graduation Requirement - 60 credits
* Denotes Prerequisites

NOTE: American Heart Association Healthcare 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 Medical 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 Development (3 cr)
- PNUR 1140 Medication Calculations for Healthcare Careers (1 cr)
Total 19 Credits

Spring Semester
- BIOL 1404 Human Biology (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 9 Credits

Total 15 Credits

Graduation Requirement - 90 credits
* Denotes Prerequisites

NOTE: American Heart Association Healthcare Provider CPR is a prerequisite before working on patients.
PHLEBOTOMY TECHNICIAN CERTIFICATE

Career Description
A Phlebotomy Technician (Phlebotomist) is an integral member of the 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 be 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.

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 healthcare 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.

PHLEBOTOMY TECHNICIAN CERTIFICATE

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, 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 healthcare 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 applicants will be completed with a priority deadline of February 1st for the Fall start and with a priority deadlines 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.

Transfer Opportunities
Broader career opportunities are available for RNs with a...
HEALTH CAREERS

NURSING CONT.

**Denotes Prerequisites

* * * 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)
Engr 1410 Composition I .............................................................(4 cr)
Engr 1411* Composition II .........................................................(4 cr)
Nurs 1547* Professional Nursing Role Transition ..............................(3 cr)
Phill 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 ..............................(3 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

Career Opportunities

RNPs 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.nursingjobs.org/rn/minnesota.

Nursing A.S. Curriculum

Semester One

Chem 1407* ** Life Science Chemistry ........................................(4 cr)
Engr 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)
Engr 1411* Composition II ...........................................................(4 cr)
Nurs 1544* Professional Nursing Concepts I ..............................(4 cr)
Nurs 1545* Professional Nursing Practicum I .............................(2 cr)
Phill 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

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 frameworks 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.

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.

<table>
<thead>
<tr>
<th>Fall Semester</th>
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<tbody>
<tr>
<td>PNUR 1149* Clinical Lab I</td>
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<tr>
<td>PNUR 1160* Practical Nursing Skills Lab</td>
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<tr>
<td>PNUR 1165* Psychosocial Nursing</td>
<td>(3 cr)</td>
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<tr>
<td>PNUR 1265* Medical Surgical Nursing</td>
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<tr>
<td>PNUR 1150* Clinical Lab II</td>
<td>(3 cr)</td>
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<tr>
<td>PNUR 1175* Maternal Child Health</td>
<td>(2 cr)</td>
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<tr>
<td>PNUR 1270* Medical Surgical Nursing II</td>
<td>(6 cr)</td>
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<td>Total 13 Credits</td>
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GRADUATION REQUIREMENT – 36 CREDITS

*Denotes Prerequisites

**Students may substitute PSYC 2431 Human Development, 3 credits for PNUR 1130 Life Span
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 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 1102 Transportation Industry Skills I** ........(1 cr)
Total – 9 credits

Spring Semester – First Half
AUTM 1107 A7 Heating & Air Conditioning ................. (4 cr)
AUTM 1102 A2 Automatic Transmission & Transaxle ........ (4 cr)
Total – 9 credits

Summer Semester
AUTM 1103 A3 Manual Drive Train & Axles ............(4 cr)
Total – 8 credits

Fall Semester – Second Half
AUTM 1108* A8 Engine Performance I** ............(4 cr)
AUTM 1110* A6 Electrical/Electronic Systems II** ....(4 cr)
AUTM 1121 Transportation Industry Skills II** .......... (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

Graduation Requirement: 45 Credits
* Denotes Prerequisites
** High School Certifiable Courses
**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 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.**

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<tr>
<th>Fall Semester</th>
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<tr>
<td>DHET 1103 Intro to Construction Equipment (1 cr)</td>
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<tr>
<td>HEOM 1200 Intro to Operations (1 cr)</td>
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<td>MATH 1500 Applied Math (3 cr)</td>
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<td>The following classes are offered in the fall and the spring:</td>
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<td>DHET 1125 Hydraulic Theory (3 cr)</td>
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<td>DHET 1129 Power Trains Lab (2 cr)</td>
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<td>DHET 1130 Welding for Diesel Equipment (1 cr)</td>
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<td>DHET 1123 Customer Service/Service Management 1 (1 cr)</td>
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<td>ENGL 1520 Language Fundamentals (1 cr)</td>
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<td>ENGL 1521 Technical Writing Fundamentals (1 cr)</td>
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<td>ENGL 1522 Writing Fundamentals for Diesel &amp; Heavy Equipment Technicians (1 cr)</td>
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<th>Summer Semester</th>
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<tr>
<td>DHET 1132* On Highway Vehicle Systems Theory (3 cr)</td>
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<td>DHET 1133* On Highway Vehicle Systems Lab (4 cr)</td>
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<td>HEOM 1165 CDL (3 cr)</td>
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**Diesel & Heavy Equipment Technology Diploma**

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<td>GRADUATION REQUIREMENT 67 credits</td>
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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 operation. 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 program.

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)
Total 15 Credits

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)
Total 15 Credits

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)
Total 18 Credits

Spring Semester
HEOM 1251* 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)
Total 16 Credits

GRADUATION REQUIREMENT 64 CREDITS
*Denotes Prerequisites
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 1120 Lawn & Garden ...................................... (2 cr)
MASE 1140 Snowmobile Systems & Lab .................... (4 cr)
General Education ...................................................(5 cr)
Total 18 Credits

Spring Semester
MASE 1136 Industry Certification I ............................ (2 cr)
MASE 1134 Marine Lower Unit ................................ (4 cr)
MASE 1130 Marine Outboard I ................................ (4 cr)
MASE 1132* Marine Outboard II ............................... (4 cr)
General Education ...................................................(2 cr)
Total 18 Credits

First Year – Spring Semester
MATH 1500 Applied Mathematics .............................. (3 cr)
MASE 1140 Snowmobile Systems & Lab .................... (4 cr)
MASE 1101 Basic Engines I ........................................ (3 cr)
MASE 1120 Lawn & Garden ...................................... (2 cr)
MASE 1103 Basic Engines I Lab ................................(4 cr)
General Education ...................................................(5 cr)
Total 16 Credits

Second Year – Fall Semester
MASE 1136 Industry Certification II ......................... (2 cr)
MASE 1134 Marine Lower Unit ................................ (4 cr)
MASE 2164 ATV Motorcycle Systems II ................... (4 cr)
MASE 2169 Machine Shop ........................................ (2 cr)
MASE 2165* ATV Motorcycle Systems I .................. (4 cr)
MASE 2164* ATV Motorcycle Systems II ................... (4 cr)
General Education ...................................................(3 cr)
Total 15 Credits

Spring Semester
MASE 2169* MASE Tune Up .................................... (3 cr)
MASE 2136 Industry Certification II ......................... (2 cr)
MASE 2134 Advance Marine .................................... (3 cr)
MASE 2132 Marine Outboard II ............................... (4 cr)
MASE 2130 Marine Outboard I ................................ (4 cr)
MASE 2133* Advance Marine ................................ (4 cr)
General Education ...................................................(1 cr)
Total 18 Credits

Second Year – Spring Semester
MASE 2143 Diagnostic Troubleshooting ................... (3 cr)
MASE 2164 ATV Motorcycle Systems II ................... (4 cr)
MASE 2162* ATV Motorcycle Systems I .................. (4 cr)
MASE 1134 Marine Lower Unit ................................ (4 cr)
MASE 1130 Marine Outboard I ................................ (4 cr)
MASE 1132 Marine Outboard II ............................... (4 cr)
General Education ...................................................(5 cr)
Total 16 Credits

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)
Total 16 Credits

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 Certification I ............................ (2 cr)
Total 16 Credits

Second Year – Fall Semester
MASE 2133 Industry Certification II ......................... (2 cr)
MASE 2134 Advance Marine .................................... (3 cr)
MASE 2132 Marine Outboard II ............................... (4 cr)
MASE 2130 Marine Outboard I ................................ (4 cr)
MASE 1134 Marine Lower Unit ................................ (4 cr)
General Education/Electives .................................. (5 cr)
Total 18 Credits

Second Year – Spring Semester
MASE 2143 Diagnostic Troubleshooting ................... (3 cr)
MASE 2164 ATV Motorcycle Systems II ................... (4 cr)
MASE 2162* ATV Motorcycle Systems I .................. (4 cr)
MASE 1134 Marine Lower Unit ................................ (4 cr)
MASE 1130 Marine Outboard I ................................ (4 cr)
MASE 1132 Marine Outboard II ............................... (4 cr)
General Education ...................................................(5 cr)
Total 16 Credits

Graduation Requirement 64 Credits
*Denotes Prerequisites

Course Descriptions
ACCOUTING
ACCT 2114 Payroll Accounting Credits: 3
Prerequisite: 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 2114
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 2123 Intermediate Accounting II Credits: 4
Prerequisite: ACCT 2121
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 2123
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 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 2123
This course covers the use of computerized accounting software. Topics include accounting principles, computerized accounting software packages, computer hardware and software, file management, and computer accounting systems. The course includes the use of computer lab equipment.
Transfer Curriculum Goal(s): none

ACCT 2140 Accounting Applications Credits: 3
Prerequisite: none
Students will apply various skills, knowledge, and tools when analyzing and solving hands-on accounting application problems. Students will train students how to deliver timely, accurate accounting information that is relevant and essential for business decision-making.
Transfer Curriculum Goal(s): none

ACCT 2161 Cost Accounting Credits: 3
Prerequisite: ACCT 2123
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 uses cost accounting information for decision making.
Transfer Curriculum Goal(s): none

ACCT 2165 Income Tax Credits: 4
Prerequisite: ACCT 2111
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 an 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
This course will train students of both advanced and intermediate tax preparers how to use tax software for preparing tax returns, using the Roth conversion and other current tax planning tools.
Transfer Curriculum Goal(s): none

ACCT 2180 Tax Accounting Internship Credits: 1-9
Prerequisite: instructor’s consent
The accounting internship is designed to provide the student with a job-related practical experience. This course is open to students who want to gain experience in the accounting field through an internship in a public accounting firm, government agency, or other business organization.
Transfer Curriculum Goal(s): none

ACCT 2250 Special Problems in Accounting Credits: 3
Prerequisite: instructor’s consent
This course will allow students to study advanced topics in accounting, ranging from financial reporting and analysis to advanced topics in management accounting.
Transfer Curriculum Goal(s): none

ADMINISTRATIVE ASSISTANT
ADMN 1150 Administrative Support Applications Credits: 3
Prerequisite: COMP 1109, COMP 1131, COMP 1132
This course will teach students to develop skills in performing typical office tasks including electronic and manual file management, mail processing, computerized data processing, business correspondence, and business English grammar, spelling, word usage, punctuation, and business rules.
Transfer Curriculum Goal(s): none

ADMN 1250 Business English Skills Credits: 2
Prerequisite: COMP 1109
This course will train students in the basics of business English, including grammar, correct spelling, and correct usage of words and phrases.
Transfer Curriculum Goal(s): none

ADMN 1300 Introduction to Keyboarding Credits: 3
Prerequisite: none
This course provides students with an introduction to the skills and knowledge learned in previous courses in the field of keyboarding. The course will focus on teaching the students the basic skills needed to meet the demanding needs of the agriculture industry.
Transfer Curriculum Goal(s): none

AGRICULTURAL STUDIES
AGRI 1100 Introduction to Precision Agriculture Credits: 2
Prerequisite: none
This course will prepare students for the advanced technology and agriculture systems that are emerging in the agriculture industry. Students will develop skills in geographic information systems, global positioning systems, yield monitoring, and remote sensing technologies. Classroom experiences will enable students to combine technologies needed to meet the demanding needs of the agriculture industry.
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 practical 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 to describe and identify shapes, and introductory aspects. Students will learn to exchange placement and give directions, make requests, completions 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): 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 and identify shapes, 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): none  

ANIMAL SCIENCE  
ANIM 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  

ANTHROPOLOGY  
ANTH 1598 Topics in Anthropology  
Credits: 3  
Prerequisite: none  
Co-Requisite: none  
This course will examine selected topics of interest in Anthropology. Offered on demand.  
Transfer Curriculum Goal(s): none  

APPD 1110 Programming in C#  
Credits: 3  
Prerequisite: none  
Co-Requisite: none  
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. Course Preparation: The studies in this course are primarily intended for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft 7-483.  
Transfer Curriculum Goal(s): none  

APPLICATION DEVELOPMENT  
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 concepts. By using pseudocode (high level language) to represent solutions and developing an understanding of a programming language to implement the solution, students will have the foundation for understanding how 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  

ARCHITECTURE  
ARCH 1500 Architectural and Engineering Science I:  
Credits: 4  
Prerequisite: none  
Co-Requisite: none  
This course 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 culture and community. The course also examines the historical treatment of deaf people as well as educational influences, causes, and treatment of deafness.  
Transfer Curriculum Goal(s): none

APPD 1113 Programming in HTML5 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-
Co-Requires: none
This course is an advanced course in programming languages using HTML5 and JavaScript. This course is designed to help students 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 database development, such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst. 
Transfer Curriculum Goal(s): none

APPD 3100 Mobile Application Development Fundamentals
Credits: 2
Co-Requires: none
This course is designed to introduce students to mobile 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, code 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 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 database development, such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst. 
Transfer Curriculum Goal(s): none

APPD 3166 Developing Windows Applications Using HTML5 and JavaScript
Credits: 3
Co-Requires: none
This course is designed to introduce students to HTML5 and JavaScript. This course is the third course in a series of courses that prepare students for careers in information technology such as Programmer, Application Developer, Business Analyst and Database Analyst. 
Transfer Curriculum Goal(s): none

APPD 4121 iOS Development Fundamentals
Credits: 3
Co-Requires: none
This course is designed to introduce students to iOS development using the Objective-C programming language and Xcode. This course is the third course in a series of courses that prepare students for careers in industry certification exams. Programs in this course will be prepared using the Xcode IDE platform to prepare 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, Business Analyst and Database Analyst. 
Transfer Curriculum Goal(s): none

APPD 4124 Software Development Methodology
Credits: 3
Co-Requires: 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 Agile methodology. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Business Analyst and Database Analyst. 
Transfer Curriculum Goal(s): none

APPD 4122 Advanced iOS Development
Credits: 3
Co-Requires: 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. 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 be given both in the classroom and field sessions. 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 be given both in the classroom and field sessions. 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 concepts used in 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 student to develop their mind to the cultural significance of visual art 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 three-dimensional and two-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 1450 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 1450 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 course 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. It is 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 contexts 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 placed 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 will be discussed. The aesthetics of pottery and vessels will be explored.

Transfer Curriculum Goal(s): 6

ARTS 1488 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 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 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 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 2481 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 2483 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
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

ARTS 2495 American Indian Art Credits: 3
Prerequisite: Accuplacer Reading score of 56 or greater
Co-Requisite: none
This 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 2485 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 2533 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, diagnosis, 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 NATFEC 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 NATFEC 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 NATFEC 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 NATFEC 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 includes 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 102 required NATFEC 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 electronic principles, starting and charging, body electronics, and computer operation. This course provides a minimum of 125 clock hours of the 230 required NATFEC 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: recovery evacuating, component replacement, charging and performance testing on the systems. This course provides a minimum of 100 clock hours of the 90 required NATFEC 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 NATFEC clock hours.

Transfer Curriculum Goal(s): none

AUTM 1111 A9 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 NATFEC clock hours.

Transfer Curriculum Goal(s): none

AVIATION

AVIA 1110 Aeronautics Credits: 4
Prerequisite: none
Co-Requisite: none
This course teaches the 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 graduate to take the FAA Private Pilot Aeronautical 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, and aircraft operation, flight instruction, flight rules, and flight 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 Lab Credits: 4
Prerequisite: AVIA 1110, AVIA 1114
Co-Requisite: none
This course provides basic instruction in flight, navigation, and aircraft operation, flight instruction, flight rules, and flight regulations. Successful completion of this course allows the student to take the FAA Instrument Pilot Checkride.
Transfer Curriculum Goal(s): none

AVIA 1130 Commercial Ground & Flight Lab Credits: 4
Prerequisite: AVIA 1120, AVIA 1122
Co-Requisite: none
This course provides basic instruction in flight, navigation, and aircraft operation, flight instruction, flight rules, and flight regulations. Successful completion of this course allows the student to take the FAA Commercial Pilot FAA Knowledge Exam.
Transfer Curriculum Goal(s): none

AVIA 1132 Commercial Ground & Flight Lab Credits: 4
Prerequisite: AVIA 1120, AVIA 1122
Co-Requisite: none
This course provides basic instruction in flight, navigation, and aircraft operation, flight instruction, flight rules, and flight regulations. Successful completion of this course allows the student to take the FAA Commercial Pilot FAA Knowledge Exam.
Transfer Curriculum Goal(s): none

AVIA 1140 Certified Flight Instructor Ground & Flight Lab Credits: 4
Prerequisite: AVIA 1130, AVIA 1132
Co-Requisite: none
This course provides basic instruction in flight, navigation, and aircraft operation, flight instruction, flight rules, and flight regulations. Successful completion of this course allows the student to take the FAA Private Pilot Checkride.
Transfer Curriculum Goal(s): none

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 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

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 health 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 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 environment. Plants, animals, behavior, evolution, ecology, or biotechnology. Two hours lecture and a two-hour lab weekly.
Transfer Curriculum Goal(s): 3

BIOL 1415 Environmental Biology Credits: 4
Prerequisite: none
Co-Requisite: none
This course addresses the interrelationships and population interactions of ecosystems. 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): 3

BIOL 1420 Nutrition Credits: 3
Prerequisite: Accuplacer Reading Score of 50
Co-Requisite: none
This course examines the basic principles of nutrition, including: the composition, sources and dietary requirements 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 the biosphere, 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.
Transfer Curriculum Goal(s): 3

BIOL 1431 General Biology I Credits: 5
Prerequisite: none
Co-Requisite: none
This course is structured so that students can see the variations and complexities of nature. Topics covered include 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 1435 General Ecology Credits: 4
Prerequisite: none
Co-Requisite: none
This course is focused on evolution, genetics, and development. Topics covered include the evolution and genetics of natural populations, including natural selection, evolution, genetics, and development. 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

BIOL 1436 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 covered include 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 2415 General Ecology Credits: 4
Prerequisite: BIOL 1404 and CHEM 1407, or BIOL 1404 and CHEM 1424, or BIOL 1431, or BIOL 2401, or BIOL 247
Co-Requisite: none
Microbiology is the study of microorganisms such as bacteria, viruses, and fungi. Structure and function of microorganisms are examined, with an emphasis placed on the transmission, pathogenesis and control of microbial infections. In addition to medical aspects, the course covers an introduction of industrial roles of microbes. Microbiological lab techniques include culturing, staining, and identification of microbes. This course may be repeated for two hours of lecture and two-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 2474 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
This 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 technologies, fetal development, contraception, sexually transmitted diseases and reproductive organ cancers, menopause, and global women's health issues. Lab included. This course is intended for non-science majors and is not for women only.
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

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
This course is designed to help 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...
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, technology 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 setup, 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, vertical grinding lab projects. Students will also learn the care 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 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 algebraic 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 and octal. Technical 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

 **CHEM 1407 Life Science Chemistry**

Credits: 4  
Prerequisite: Accuplacer Arithmetic score of 65 or higher  
Co-Requisite: none

This course is designed to 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): 3,10

 **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: Accuplacer Arithmetic score of 65 or greater, or Accuplacer Elementary Algebra score of 52 or greater, or MATH 0790  
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, 1501, 1502, 1504, or MATH 0800  
Co-Requisite: none

This course covers the general laws of chemistry, periodicity, atomic and molecular structure, physical and chemical changes.  

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 shape of molecules, chemical kinetics, chemical equilibria, acid-base theories, common ion and buffer systems, precipitation reactions, thermodynamics, entropy 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: CHEM 2472  
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 and education settings.  

Transfer Curriculum Goal(s): none

 **CDEV 1105 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, child care 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 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 1135 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, child care 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
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, capital utilization rates, setting/costing/paying for services, setting fee structures, 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 ROI standards.

Transfer Curriculum Goal(s): none

CDEV 1162 Internship in Specialized Setting
Credits: 2
Prerequisite: none
Co-Requisite: none
This course provides 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 1185 Child Health
Credits: 1
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 1186 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 1199 Topics in Child Development
Credits: 1
Prerequisite: none
Co-Requisite: none
This course provides students with an overview of school age development. Students will explore 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 1201 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 1210 Characteristics of Students w/Learning and Behavior Disorders
Credits: 3
Prerequisite: none
Co-Requisite: none
This course focuses on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practices, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

Transfer Curriculum Goal(s): none

CDEV 1211 Collaboration Skills & Transition Training
Credits: 2
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 1211 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 2110 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 2139 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 0-3 years.

Transfer Curriculum Goal(s): none

CDEV 2210 Topics in Child Development
Credits: 1
Prerequisite: none
Co-Requisite: none
This course focuses on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practices, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

Transfer Curriculum Goal(s): none

CDEV 2211 Collaboration Skills & Transition Training
Credits: 3
Prerequisite: none
Co-Requisite: none
This course focuses on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practices, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

Transfer Curriculum Goal(s): none

CDEV 2211 Collaboration Skills & Transition Training
Credits: 3
Prerequisite: none
Co-Requisite: none
This course focuses on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practices, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

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 2393 School Age Development and Learning
Credits: 3
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 skills 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
CSST 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

CSST 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 identity and stress 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

CSST 1520 Career Planning
Credits: 2
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): none
CCST 1550 Introduction to College
Credits: 1
Prerequisite: none
Co-Requisite: none
This course will introduce 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 campus resources.
Transfer Curriculum Goal(s): none

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 1555 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 included 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, 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 between math and identifying math in your life and future career. Students will explore a variety of math concepts with hands-on activities and cooperative learning. Students will 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
This course is designed 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 towns 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

COMM 1410 Introduction to Communication
Credits: 3
Prerequisite: Accuplacer Reading score of 50 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 50 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 communica- tion 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 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 evaluating job offers. 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.
Transfer Curriculum Goal(s): 1

COMM 1430 Public Speaking
Credits: 3
Prerequisite: Accuplacer Reading score of 50 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 topics. Topics included are topic selection and research/development; message and argument construction; audience analysis, occasion analysis, critical thinking and evaluation; outlining and structure; and delivery and presentation skills. Students will also work with those skills to create mediated communication. This course will feature an expanded reading load, as well as in-class assignments and discussions.
Transfer Curriculum Goal(s): 1

COMM 1450 Introduction to Mass Communication
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1460 Introduction to Political Communication
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1470 Introduction to Digital Media
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1480 Introduction to Advertising
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1490 Introduction to Media Literacy
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1495 Introduction to Broadcast Media
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1500 Introduction to Journalism
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1

COMM 1505 Introduction to Film Studies
Credits: 3
Prerequisite: Accuplacer Reading score of 50 or greater
Co-Requisite: none
This course will examine selected topics of interest in College & Career Studies. On demand.
Transfer Curriculum Goal(s): 1
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 indi-
viduals 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 suc-
cessful relationships to help them better succeed in their pro-
fessional and personal lives. We’ll look closely at culture,
exploring both international and domestic variables. Topics
will include intercultural communication theory, history,
identity and historical background. This course will
also explore the ways in which verbal behaviors, nonverbal
behaviors, perception, rules, values, ethics and worldview,
as well as barriers to communication such as ethnocentrism,
tereotyping, prejudice and discrimination. Courses in the
Honors Program emphasize independent inquiry, informed
research, and seminars that embrace detailed
reading, writing, and discussions.
Transfer Curriculum Goal(s): 1, 7

COMP 1101 Computer Fundamentals
Credits: 3
Prerequisite: none
Co-Requisite: none
This course is a slow moving and a step by step procedure
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 function will be
explored along with proper etiquette. Students will
organize tasks, connecting to and using the internet, search-
ing the web effectively, working with sounds and picture
documents, and understanding privacy issues and how to prevent
identity theft when using computers and the internet.
Transfer Curriculum Goal(s): none

COMP 1102 Introduction to Computer Applications
Credits: 3
Prerequisite: none
Co-Requisite: none
This course covers the current computer application soft-
ware programs used in 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 charts and tables,
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,
and 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 busi-
ness 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 Prepa-
ration: None. Core Transfer: ICS - Key Applications.
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
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 function will be
explored along with proper etiquette. Students will
organize tasks, connecting to and using the internet, search-
ing the web effectively, working with sounds and picture
documents, and understanding privacy issues and how to prevent
identity theft when using computers and the internet.
Transfer Curriculum Goal(s): none

COMP 1104 Computer Basics-Aplications
Credits: 1
Prerequisite: none
Co-Requisite: none
This course is a slow moving and a step by step procedure
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 hardware and applications;
adding and removing programs; saving files; using the basic
functions of word processing, spreadsheet, database and presentation software to create
and format documents, understanding the basics of a net-
work for the office and across the internet, the use of email
clients, basics of networking, how to attach documents and
organize tasks, connecting to and using the internet, search-
ing the web effectively, working with sounds and picture
documents, and understanding privacy issues and how to prevent
identity theft when using computers and the internet.
Transfer Curriculum Goal(s): none

COMP 1110 1T Essentials
Credits: 3
Prerequisite: none
Co-Requisite: none
1T Essentials curriculum provides an introduction to the
computer hardware and software skills needed to help meet
the growing demand for entry-level Information and Com-
munication 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 will
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 knowledge and thinking complex
problem-solving skills. The course emphasizes the practical
application of skills and procedures needed to install and
upgrade hardware and software packages and troubleshoot
devices. The IT Essentials (ITE) curriculum emphasizes practical ex-
perience to help students develop fundamental computer and careers.
ITE helps students prepare for entry-level career opportuni-
ties 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 stu-
dents prepare for careers such as Computer Support Special-
list, PC Repair Technician, Network Administrator, Network
Engineer, Systems Analyst, and Systems Engineer. Certification Prepa-
rations: Optional. Core Transfer: ICS - Key Applications.
Transfer Curriculum Goal(s): none

COMP 1115 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 to have the Cisco Certified Network
Associate (CCNA) Certification.
This course introduces the architecture, structure, functions,
components, and protocols of the Internet and other computer
networks. The principles of addressing, routing, and switch-
ging, as well as advanced concepts such as security, network-
ing, and the responsibilities of an ICT professional. 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, Network Administrator,
Network Engineer, Systems Analyst, Network Engineer,
Network Administrator, LAN Administrator, and Systems Engineer.
Certification Preparations: Optional. Microsoft CCNET & CompTIA
Networking 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 to have the Cisco Certified Network
Associate (CCNA) Certification.
This course describes the architecture, components,
and operations of routers and switches in a small network.
Students will learn how to configure a router and 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 RIP, 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. Career Preparation: Optional. Co-Requisite: none 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 Office Word Suite software application. Students will use Microsoft Word 2010 to create, format, and edit documents with citations and references, business letters with a letterhead and tables, and documents with a title page, tables, and watermarks. Students will use review tools. Students will generate form letters, implement mail merge functions and create mailing labels, and directories. Students will creating 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 will be efficient with using operating system features as this course focuses on the application itself with the assumption that students have effective operating system knowledge. 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. Co-Requisite: MDT: 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 1133 Microsoft PowerPoint Comprehensive
Credits: 3
Prerequisite: none Co-Requisite: none
This course focuses on basic through advanced skill sets using the current Microsoft Office PowerPoint Suite software application. Students will learn how to 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 learn how to create presentations using data and actions buttons, develop presentations from an outline and create a photo album presentation with shapes. Students will create and edit presentations using data and actions buttons, create presentations using data graphs and analysis, enhance presentations with multimedia. Students will learn project planning guidelines, how to publish Office Web pages online, and saving presentations to the Web. This course covers the skills set and exam objectives for the Microsoft Office PowerPoint 2010 Expert Exam 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, Administrative Support, Administrative Assistant, and Help Desk/Computer Repair Technician. Certification Preparation: Optional. Co-Requisite: Microsoft Office PowerPoint 2010 Expert 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: 4
Prerequisite: none Co-Requisite: none
This course focuses on basic through advanced skill sets using the current Microsoft Office Outlook Suite software application. The course learning objectives are centered on the use of current 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 1138 iPadi Technologies
Credits: 3
Prerequisite: none Co-Requisite: none
This course will help students maximize the power of their iPad or iPod touch. Students will learn killer navigation forms, PivotTables, and PivotCharts. Students will learn how to design a database and then administer a database system. This course covers the skills set and exam objectives for the Microsoft Office Specialist Exam for Excel, Access, and PowerPoint. Students will learn how to design a database and then administer a database system. This course covers the skills set and exam objectives for the Microsoft Office Specialist Exam for Excel, Access, and PowerPoint. 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. Co-Requisite: MDT: Microsoft Office Specialist Exam 77-742. 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 1140 Survey of Web-Based Tools
Credits: 3
Prerequisite: none Co-Requisite: none
This course focuses on using current technology tools for collaboration, entertainment, communication, research, and business needs. This course will help students prepare for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician, Administrative Assistant and Administrative Support. Certification Preparation: Optional. Co-Requisite: MDT: 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 1145 PC Repair Technician
Credits: 3
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 simple maintenance of microcomputer components. Topics include complete system assembly, maintenance, operating system architecture, installation, maintenance and troubleshooting, simple networking, viruses, data backup, and system 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).
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, network administration, and basic troubleshooting. This class will also introduce students to the use of Microsoft operating systems such as Windows Server 2008 R2 and 2012 R2. Students will learn how to configure various network services and applications, including network printers, file shares, and DNS. Students will also learn how to troubleshoot basic network problems, such as connectivity issues and performance problems. This course will help students prepare for careers as Network Administrators, Network Engineers, and Systems Analysts.

Transfer Curriculum Goal(s): none

COMP 1315 Computer Literacy and E-Learning
Credits: 3
Prerequisite: none
Co-Requisite: none
This course is designed to provide an overview of the fundamental concepts and skills necessary for using computers effectively. Students will learn how to use basic software applications, such as word processors, spreadsheets, and presentation software. Students will also be introduced to the basics of the Internet, including how to use web browsers and search engines. This course will help students prepare for careers as Network Administrators, Network Engineers, and Systems Analysts.

Transfer Curriculum Goal(s): none

COMP 1930 Topics in Digital World Technologies
Credits: 3
Prerequisite: none
Co-Requisite: none
This course focuses on the use of technology in a rapidly changing world. Students will learn about the impact of technology on business, industry, and society. Topics may include emerging technologies, such as artificial intelligence, blockchain, and virtual reality, as well as how these technologies are being used to improve productivity, efficiency, and competitiveness. This course will help students prepare for careers in a variety of fields, including business, technology, and management.

Transfer Curriculum Goal(s): none

COMP 1335 Computer Hardware and Troubleshooting
Credits: 4
Prerequisite: COMP 1109
Co-Requisite: none
This course covers the fundamentals of computer hardware, including the components of a computer system, such as the CPU, memory, and storage devices. Students will learn how to troubleshoot common hardware issues, such as hardware failures and performance problems. This course will help students prepare for careers as Network Administrators, Network Engineers, and Systems Analysts.

Transfer Curriculum Goal(s): none

COMP 2111 Security Essentials
Credits: 4
Prerequisite: COMP 1122 or COMP 1230
Co-Requisite: none
This course addresses the objectives of CompTIA's Security+ Certification and will help prepare students for the CompTIA Security+ Certification Exam. Topics covered include network security, security threats, and security controls. This course will help students prepare for careers as Network Administrators, Network Engineers, and Systems Analysts.

Transfer Curriculum Goal(s): none

COMP 2116 IT Project Management
Credits: 3
Prerequisite: COMP 1109
Co-Requisite: none
This course focuses on the principles of managing information technology (IT) projects. Students will learn about project management concepts, including the project management life cycle, project scope, time, cost, and quality management. Students will also learn about project management tools and techniques, such as the project management software. This course will help students prepare for careers in project management, including careers as Project Managers, Project Coordinators, and Project Analysts.

Transfer Curriculum Goal(s): none

COMP 2117 Command Line and PowerShell Administration
Credits: 4
Prerequisite: COMP 1179
Co-Requisite: none
This course focuses on the command line interface and scripting technology, including PowerShell. Topics covered include the basics of PowerShell, including Windows PowerShell and Linux/Unix shells. Students will learn how to use PowerShell to automate tasks and manage computer systems. This course will help students prepare for careers in system administration, including careers as System Administrators, System Coordinators, and Computer Support Specialists.

Transfer Curriculum Goal(s): none
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 (MCP/T) certification 70-646. was previously COMP 1254. Transfer Curriculum Goal(s): none

COMP 2119 Network Infrastructure Credits: 4 Prerequisite: COMP 2118 Co-Requirement: 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 (MCP/T) certification 70-646. was previously COMP 1255. Transfer Curriculum Goal(s): none

COMP 2120 Network Planning and Design Credits: 4 Prerequisite: COMP 2119 Co-Requirement: 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 (MCP/T) certification 70-646. was previously COMP 1254. Transfer Curriculum Goal(s): none

COMP 2121 Directory Services Infrastructure Credits: 4 Prerequisite: COMP 2120 Co-Requirement: 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 necessary to 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 Directory, 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, and 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 (MCP/T) certification 70-646. was previously COMP 1254. Transfer Curriculum Goal(s): none

COMP 2123 Implementing Cisco IA0 Network Security Credits: 3 Prerequisite: COMP 1124 Co-Requirement: none This course will help students prepare for careers in Networking such as CCNA, CDNP, 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 2132 Implementing Cisco IOA Network Security Credits: 3 Prerequisite: COMP 1124 Co-Requirement: none This course will help students prepare for careers in Networking such as CCNA, CDNP, 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-Requirement: 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 telephone gateways, call control, and voice-enabled applications. 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 employed by small to medium-sized companies as well as 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, CDNP, 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-Requirement: 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 covers 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 Administration, Implementing Local Storage, Implementing File and Print Services, Implementing Group Policy, Implementing 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-Requirement: 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 Servers 2012 exam objectives. Transfer Curriculum Goal(s): none

COMP 2152 Windows Server Administration III Credits: 5 Prerequisite: COMP 2151 Co-Requirement: 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 core services such as user and group management, network access, and data security. In addition, this course also covers such valuable skills as: Implementing and Managing 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 Servers 2012 exam objectives. Transfer Curriculum Goal(s): none
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 identification. 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 Forest (AD FS) 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: 3
Prerequisite: COMP 1230, COMP 1253
Co-Requisite: None
This course is part of a series of Microsoft Operating System Administration and Engineering courses that help prepare students for client support and help desk MCISA Microsoft Certification. This course provides students with the knowledge and skills essential to administer 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 Networking and System Administration such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Microsoft 70-668.

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 in the Windows environment. 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, GSE, CCNA, MCTA, MCISA, security analyst, information security officer/private network security administrator, network security engineer, security systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, and as advanced certification, Network Administrator, Certified Ethical Hacker (CEH), GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GIAIA), 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 the 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 students in-depth knowledge and practical experience with the current security systems. Foundational concepts include how perimeter defenses work and scanning and attacking networks. Attacks will examine how intruders eavesdrop on privileged and what steps can be taken to secure information technology system. Content topics include: intrusion detection, policy conformance, security engineering, Disruptive Denial-of-Service (DDoS) attacks, buffer overflows, and virus creation. Career preparation: GSEC, GSE, CCNA, MCTA, MCISA, security analyst, information security officer, network security administrator, 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 (GIAIA), 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 introduces 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 professionals and users, computer crime, internet crime, privacy laws, constitutional freedoms, intellectual property, software piracy, 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, IT support technician, 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 and group administration, security, Linux file systems, networking fundamentals, and security. The studies in this course help students prepare for careers in Networking, such as Linux Administrator, Security Administrator, Network Engineer, Systems Analyst, LAN Administrator, Certification Preparation: None.

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. Students include historical changes in computer use, end-user application support, help systems, communication and voice management. Career preparation: Certified Help Desk Technician, Help Desk Technician, Help Desk Support, Help Desk Support Specialist. Certification Preparation: MCSE, MCTA, LPI LPIC-1 (101 and 102).

Transfer Curriculum Goal(s): none

COMP 2213 Computer Careers Internship Credits: 1-6
Prerequisite: Instructor's consent
Co-Requisite: None
This course 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. The course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Network Manager, Help Desk Technician, Engineering, Network Manager, 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 understanding 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, Engineer, Systems Analyst, Systems Engineer and Business Analyst. Certification Preparation: None.

Transfer Curriculum Goal(s): none

COMP 2222 Introduction to Visual Basic and Scripting Credits: 4
Prerequisite: COMP 1109
Co-Requisite: None
This course provides an overview of Visual Basic programming and scripting to prepare students for programming fundamentals including variables, controls, data types and structures, emphasizing design and development considerations for Windows based applications as well as integration and supporting technologies. 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 and debugging for data calls and command line arguments. Career Preparation: The studies in this course will help students begin preparation for careers in Computer/Information Technology such as Computer Support Specialist and Network Administrator, Engineer, Systems Analyst, Systems Engineer and Business Analyst. Certification Preparation: None.

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
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 give 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 policing theories 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, 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 2110 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 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 trajectory operational signatures, projectile impact signatures, and gunshot powder residue analysis, both spectrographic 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 2115 Crime Scene Investigation
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 identifying 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 2117 Criminal Justice Public Policy
Credits: 3
Prerequisite: none
Co-Requisite: none
A primary focus of this course will be the study of criminal justice public policy and the political and social issues that are central to the development of criminal justice policy.
Transfer Curriculum Goal(s): none

CRJU 2120 General Evidence and Identification Preparation
Credits: 4
Prerequisite: CRJU 2101 and CRJU 2114, cumulative GPA of 2.0 or higher, current valid MMP (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.
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/DWI, 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

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 come 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 dentition of the teeth 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 and excretory 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 knowledge of emergency 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 relationships 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 care 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 setting. 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 of a practical application of chair-side procedures within a dental practice setting. The student's progress is monitored by an instructor and supervised by a licensed dentist.
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. Batteries 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 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 1129
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 course. 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 1136 Road 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, 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 fundament 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
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 an inquiry 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 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 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. At least one extended field trip may be required.
Transfer Curriculum Goal(s): 3.10

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 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 K-12 students, and helping others with experimental design and construction, and interpreting data.
Transfer Curriculum Goal(s): 3

ECO 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

ECO 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 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.”

ECON 1420 Principles of Economics-Macroeconomics
Credits: 3
Prerequisite: none
Co-Requisite: none
This course covers 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 1421 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

ECTOURISM AND ENVIRONMENTAL STUDIES

ECOT 1100 Introduction to Ecotourism
Credits: 1-3
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, 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. 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 to the human cell, forces that are interconnected throughout 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 online 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 1520 CPR
Credits: 1
Prerequisite: none
Co-Requisite: none
This course is an introduction to basic life support, with use of an AED and provide basic life support, with use of an AED
EMTC 1520 CPR
Credits: 1
Prerequisite: none
Co-Requisite: none
This course is an introduction to basic life support, with use of an AED
EMTC 1520 CPR
Credits: 1
Prerequisite: none
Co-Requisite: none
This course is an introduction to basic life support, with use of an AED
EMTC 1520 CPR
Credits: 1
Prerequisite: none
Co-Requisite: none
This course is an introduction to basic life support, with use of an AED
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 trauma and/or medical emergency and provides basic life support. 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 the National Registry of EMT-Basic computer adaptive exam, and Passing the NREMT exam fulfills the Minnesota EMT’s Regulatory 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 of injury. This course’s learning experience provides 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

Co-Requisite: none

ENGR 1560 Digital Logic Design Credits: 3
Prerequisite: MATH 1470 or concurrent enrollment

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 of project documentation, time management, and decision making skills that are essential in working as a team.

Transfer Curriculum Goal(s): none

ENGR 1560 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 of project documentation, time management, and decision making skills that are essential in working as a team.

Transfer Curriculum Goal(s): none

ENGR 1560 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 of project documentation, time management, and decision making skills that are essential in working as a team.

Transfer Curriculum Goal(s): none

ENGR 2547 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 Kirchoff’s Voltage Law are used for analysis. The basic elements and networks containing independent 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 coursework material.

Transfer Curriculum Goal(s): none

ENGR 2548 Dynamics Credits: 3
Prerequisite: ENGR 1412, ENGR 2447 and MATH 1478
Co-Requisite: none

This course is the study of kinematics and kinetics as applied 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 Mechanics of Materials Credits: 3
Prerequisite: ENGR 2447

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 geometry will be used to determine moments of inertia.

Transfer Curriculum Goal(s): none

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 argumentation/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 research 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.

Transfer Curriculum Goal(s): 1

ENGR 2549 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 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 argumentation/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 research 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.

Transfer Curriculum Goal(s): 1

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
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: ENGL 1420
Honors Composition II is a research-based writing-intensive course that teaches students how to write in a professional and public capacity with an authentic voice. Through 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 research, 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. Results of student learning will extend beyond the college classroom, reflecting common forms of civic engagement that exist in diverse and pluralistic societies.

Introduction to film as art form, tracking genre evolution, and development of film as modern art. This course is an introduction to film as an art form, tracking theory—with emphasis on the evolution of directorial and cinematic technique through the context of film history. Critical evaluation and in class discussion will be integral parts of the course.

Transfer Curriculum Goal(s): 6

ENGL 1428 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. Becoming an effective, professional, writer 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 1429 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 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 per—emphasis on the evolution of directorial and cinematic technique through the context of film history. Critical evaluation and in class discussion will be integral parts of the course.

Transfer Curriculum Goal(s): 6

ENGL 1456 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 poems. 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 to understand 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 very 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 extra-ordinary 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): 1, 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, Regionalism, etc.). 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 contemporary and classical works ranging from Shakespeare to the present. A Minnesota poet may be available 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, 8

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 1477, 1478 and 1479 are one-credit mini-courses on selected writers and their works. Offered on demand.

ENGL 1478 Authors in Focus Credits: 1-3
Prerequisite: 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 equips 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 1512 Technical Writing Fundamentals Credits: 1
Prerequisite: none
Co-Requisite: none
Transfer Curriculum Goal(s): none

ENGL 1513 Technical Writing Fundamentals Credits: 1
Prerequisite: none
Co-Requisite: none
This course offers the student the opportunity to study the writing process and practice in preparation for reading, understanding, communicating, and generating the most common writing tasks. The course will utilize the writing process focusing on audience, purpose, and method in order to generate documents such as letters, proposals, email, memos, surveys, 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 TV.

Transfer Curriculum Goal(s): none

ENGL 1515 Technical Writing Fundamentals Credits: 1
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 1516 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

Transfer Curriculum Goal(s): 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, novels, 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 (1865-1960). The emphasis will be 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 strategies (Stump) 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 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 2220 - 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 2211 - 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 2213 - 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 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 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 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 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 2220 - 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 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 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 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
their skills in business management. It provides an opportu-
nity 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
couraged 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 Busi-
ness 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 opportu-
nity 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
couraged to enroll in this course in sequence with FBMA
2213 - Current Issues in Farm Business Management.)
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 useful tools plan today and tomor-
row 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 to-
gether and implement a business plan for the farm business.
Transfer Curriculum Goal(s): none

FBMA 3320 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 up-
grading and improving decision-making resources, tools and
skills. Particularly, this course will lead the student to criti-
cally 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 in-
formation 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
Transfer
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 devel-
oment of handbooks, compensation/incentive packages, indi-
vidual work 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, addi-
ton or enhancement. The course will develop a set of pro-
cedures for exploring and evaluating alternative choices.
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 account 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
markets for their 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 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
record keeping and 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 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 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 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
record keeping and 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 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 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 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
record keeping and 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 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 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.
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
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 1212 Managing A Farm System in A Global Economy
Credits: 2
Prerequisite: none
Co-Requisite: none
This course assists the students in achieving awareness of developing 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 knowledge 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
This course will provide 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 management strategy.
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
These courses cover special topics of interest in general farm management.
Transfer Curriculum Goal(s): none

FBMT 2200 Special Topics - General Farm Management
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in general farm management.
Transfer Curriculum Goal(s): none

FBMT 2207 Special Topics - General Farm Management
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in general farm management.
Transfer Curriculum Goal(s): none

FBMT 2208 Special Topics - General Farm Management
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in general farm management.
Transfer Curriculum Goal(s): none

FBMT 2209 Special Topics - General Farm Management
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in general farm management.
Transfer Curriculum Goal(s): none

FBMT 2210 Special Topics - Marketing
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2211 Special Topics - Marketing
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2212 Special Topics - Marketing
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2213 Special Topics - Marketing
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2214 Special Topics - Marketing
Credits: 1
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2215 Special Topics - Marketing
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2216 Special Topics - Marketing
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2217 Special Topics - Marketing
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2218 Special Topics - Marketing
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2219 Special Topics - Marketing
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in marketing management.
Transfer Curriculum Goal(s): none

FBMT 2220 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2221 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2222 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2223 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2224 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2225 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2226 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2227 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2228 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none

FBMT 2229 Special Topics - Crops
Credits: 2
Prerequisite: none
Co-Requirement: none
These courses cover special topics of interest in crop management.
Transfer Curriculum Goal(s): none
Transfer Curriculum Goal(s): none
These courses cover special topics of interest in livestock management.
Co-Requisite: none
Prerequisite: 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 2320 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 2321 Environmental Interactions in Agriculture Credits: 2
Prerequisite: none
Co-Requisite: none
Transfer Curriculum Goal(s): none

FBMT 2322 Family Wellness and Business Relationships Credits: 2
Prerequisite: none
Co-Requisite: none
Transfer Curriculum Goal(s): none

FBMT 2327 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 2328 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 2329 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 2330 Business Math Principles Credits: 2
Prerequisite: none
Co-Requisite: none
Transfer Curriculum Goal(s): none

FBMT 2331 Business Math Principles Credits: 2
Prerequisite: none
Co-Requisite: none
Transfer Curriculum Goal(s): none

FBMT 2332 Family Wellness and Business Relationships 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

FBMT 2336 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

Transfer Curriculum Goal(s): 5, 8

GEOG 1410 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-environment 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 1588 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

Co-Requisite: none

Transfer Curriculum Goal(s): 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:** none  
**Co-Requisite:** none  

This course will examine selected topics of interest in Geography. On demand.

**Transfer Curriculum Goal(s):** none

### GDES 1122 Graphic Design Production

**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 1401 Introduction to Global Studies

**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 emphasis will reflect learning experiences 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 factors that shape their world, present 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 GLS 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 covered.

**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 media. 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 explored. 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 direct a 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 and resume 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. Students will study 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):** none

### HLTH 1501 Personal Health and Wellness

**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 site. Image manipulation, mobile devices, FTP software, and basic animation will also be covered.

**Transfer Curriculum Goal(s):** none

### HKTH 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):** none

### HLTH 1510 Intro to Massage

**Credits:** 2  
**Prerequisite:** none  
**Co-Requisite:** none  

Transfer Curriculum Goal(s): 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

HNLH 1520 Principles of Nutrition
Credits: 3
Prerequisite: none
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

HNLH 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, mensturation, childbearing, menopause and aging, sexuality, body image and violence toward women.

Transfer Curriculum Goal(s): 11

HNLH 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, STIs, sexual dysfunction, sexual coercion and commercial sex, as well as healthy sexual expression. Explanation of norms and beliefs will offer opportunities to learn about sexuality.

Transfer Curriculum Goal(s): 11

HNLH 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

HNLH 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
This course will introduce the use of modern drugs and their effects on physiological functions, roles and responsibilities. The course will cover 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 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 combining them to form medical terms. Definitions and spelling of words, prefixes, and suffixes emphasized. Emphasis is placed on spelling and defining medical words. A foundation is created for the continuous 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 1510 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 1515 Medical Coding II
Credits: 4
Prerequisite: HINS 1150 and BIOL 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 uses 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 1524 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 coded 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/preview 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: 2
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 skill set to help prepare them for work in the industry. Student must be enrolled as a...
HEOM 1108 Math/Estimating
Credits: 1
Prerequisite: none
Co-Requisite: none

This course covers the basic fundamentals of M&G (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.
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 manufacturer's recommendations and is a continuation 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 1265 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 MN DOT.
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.
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 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 Gradning 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 tolerances.
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
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. 

Transfer Curriculum Goal(s): 5, 7

HIST 1475 Honors U.S. History 1865 to Present
Credits: 3
Prerequisite: none
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

HORT 1106 Applied Plant Science Lab
Credits: 3
Prerequisite: none
Co-Requisite: none
This course will apply sustainable management and production practices to the controlled environment of a greenhouse. Students will approach water quality from an environmental prospective down through a human recreational standpoint. 

Transfer Curriculum Goal(s): none

HORT 1110 Sustainable Greenhouse Management
Credits: 4
Prerequisite: none
Co-Requisite: none
This course covers the principles of 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

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 1421 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 settlement period, federal Indian policy in the early national period, conflict on the plains, efforts to “Americanize” the American Indian, and the development of the “People of Minnesota”. This course will focus on the many sources that shaped the Midwest and indeed much of the United States.

Transfer Curriculum Goal(s): 5, 7

HIST 2411 American History
Credits: 3
Prerequisite: none
Co-Requisite: none
This course will examine the development of world civilization 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

HORT 1118 Indoor Flooring & Feltiages
Credits: 4
Prerequisite: none
Co-Requisite: none
This course covers identification, characteristics, cultural requirements, and care 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

HIST 1472 U.S. History to 1865
Credits: 3
Prerequisite: none
Co-Requisite: none
This course will acquaint students with the basic chronologi- cal 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
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 Design LANDCAD, Landscaper, 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 will 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: MTTS 1120, MTTS 1121
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. Multi-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 parts. Students will learn editing functions to increase efficiency or error removal. Application of safety concepts will be emphasized.
Transfer Curriculum Goal(s): none

MTTS 1254 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 Metalurgy
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, sparking, 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 CAD studio. Programming will include test simulations of complex designs. Advanced jigs and fixtures will be required to manage safety requirements. 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

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, and teamwork.
Transfer Curriculum Goal(s): none

MGMT 1012 Capstone Project
Credits: 3
Prerequisite: none
Co-Requisite: none
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

MGMT 1014 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 1016 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 1101 Entrepreneurship
Credits: 3
Prerequisite: none
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 starting and growing small businesses. 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 1114 Entrepreneurship Capstone
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

MGMT 1115 Entrepreneurship Internship
Credits: 1-6
Prerequisite: none
Co-Requisite: none
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 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. It is 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 sections 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 on 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 remanufacturing, 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: 3
Prerequisite: MASE 1130, MASE 1132 and MASE 1134
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

MATH

Math 0790 Beginning Algebra
Credits: 3
Prerequisite: Accuplacer Arithmetic score of 40 or greater
Co-Requisite: none

This course introduces the student to the basic tools of 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 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, count, 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 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, count, 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, numerical 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 distribution, estimation, inference, and regression. It is designed for students who have completed at least one college-level math course or have an Accuplacer score of 63-85 on the college-level math exam. It is intended for non-math majors who need a basic understanding of statistical concepts.

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 provides an in-depth and rigorous introduction to the fundamentals of statistics. Students will engage in detailed examinations of the material and feature close working relationships with instructors. In addition, students will participate in group projects, present projects to the class, and develop original survey questions. Daily assignments will involve use of online homework to accompany the readings from the course. A grade of C or better 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 and logarithmic functions, sequences and series, systems of equations and inequalities, and problem solving. A graphing approach is used and the use of a graphing calculator will be highly emphasized.
Transfer Curriculum Goal(s): 4

MATH 1472 Precalculus
Credits: 5
Prerequisite: Accuplacer College Math score of 63-85 on the college-level math exam, ACT Math score of 24 or above, or MATH 1400
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, applications, 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
This course covers the fundamental concept and properties of a function. Emphasis is placed 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. Antiderivatives and elementary differential equations. Definite integral as a limit of a sum and as related to antiderivative via the Fundamental Theorem of Calculus. Applications to maximum and minimum problems. 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
This course is a continuation of Calculus I, 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 expected 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, writing assignments, or as part of a team project, is an essential component of the course. It is highly beneficial to engage with the material through the use of a graphing calculator.

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. 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 trigonometric functions.
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, ratios, 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. It focuses on developing and applying mathematical concepts, skills, and problem-solving strategies related to algebraic and trigonometric functions.
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 at the discretion of the instructor.
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 vector, 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 extremal, 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 differential equations 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 cardiovascular, 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

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 body systems is critical 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: MATH 1100
Co-Requisite: none
This course is a continuation of Body Structure and Function I. It will cover the cardiovascular, 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 system 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.
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: 2
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 record management, written communications, and medical documents, including electronic medical records.

Transfer Curriculum Goal(s): none

MEDA 1136 Administrative Procedures II Credits: 2
Prerequisite: none 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, 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 class in 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 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 created 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

MUSIC 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 woodwind ensemble setting. The group prepares and performs traditional and contemporary woodwind ensemble literature in public performance with one concert per year and various performances in varying venues as opportunities arise.

Transfer Curriculum Goal(s): 6

MUSIC 1410 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 band setting. The group prepares and performs traditional and contemporary brass ensemble literature in public performance with one concert per semester.

Transfer Curriculum Goal(s): 6

MUSIC 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

MUSIC 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 and various performances in varying venues as opportunities arise.

Transfer Curriculum Goal(s): 6

MUSIC 1421 Cantare’ Concert Chorale Credits: 1
Prerequisite: none Co-Requisite: none
This is a mixed choral ensemble that rehearses and performs various vocal styles of music such as choral madrigal, jazz, American pop, multicultural, musical theater, and more. Achieving vocal excellence and chorale 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

MUSIC 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 performance 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

MUSIC 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.
This course covers the basics of music theory, aural perception, listening, group activities, guest performers, concerts, 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.

Transcript Curriculum Goal(s): 6

MUSC 1453 Audio Recording I Credits: 3
Prerequisite: none
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 1454 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 brass and performance 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 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 accurate playing, notation, tonality, phrase structure, simple form, fundamental harmony, and basic keyboard facility.

Transfer Curriculum Goal(s): 6

MUSC 1460 Dendrology Credits: 3
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 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 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 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 morphol- ogy 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
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 1120 Dendrology Credits: 3
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 1130 Mammalogy Credits: 3
Prerequisite: none
Co-Requisite: none
This course covers the identification and biology of mam-mals. 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 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. Students will learn 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 his-tories of aquatic macro-invertebrates in the upper Midwest. Ecological relationships of aquatic invertebrates with water quality and fisheries will be investigated. Measures and metrics for determining the health of macro-invertebrate communities and ecological health will be covered.
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 watershed. Students will also work with cooperating agencies, lake associations, or schedule sampling, present results, or provide other elements of customer service.  
Transfer Curriculum Goal(s): none

NATR 1290 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 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 Katio to Lake Superior, and the BWCA from Ely to Grand Maris.  
Transfer Curriculum Goal(s): none

NATR 1302 Fall Field Experience  
Credits: 2  
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, backpacking, and plant survival checks.  
Transfer Curriculum Goal(s): none

NATR 1305 Winter Field Experience  
Credits: 1-8  
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/acknowledges 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: 3  
Prerequisite: none  
Co-Requisite: none  
This course is a combination of the S-130, S-190 Basic Firefighter 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: 1-4  
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 2415, 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 watershed 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 influenced in lab activities.  
Transfer Curriculum Goal(s): none

NATR 2161 Ecosystem Management  
Credits: 3  
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 will discuss forest 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
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, legal and ethical considerations, 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 ap- plication 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, legal and ethical considerations, 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 clinical reasoning 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 course focuses on the pathophysiology and RN role for the following concepts: Nursing Process, Teaching and Learning, OSEN, Evidence Based Practice, Pharmacology, Gastrointestinal, Nutritional-Metabolic, Mental Health, Community Health Nursing, and Gender and Health. 
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 is the clinical component that focuses on the use of nursing judgment, evidenced-based practice, and infor- matics in the application of the nursing process, including assessment, planning, intervention, and evaluation with in- dividuals 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, continued application of the nursing process and the educator judgment to assess, plan, and implement nursing interventions to promote safe, quality, patient-centered care and 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 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 evidence-based nursing practice, and the processes of critical thinking and synthesis. 
Transfer Curriculum Goal(s): none

NURS 2510 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 nurs- ing judgment to assess, plan, and implement nursing inter- ventions to promote patient safety, quality, care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to teaching/learn- ing 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: Cardiovas- cular, Circulatory and Hematological Function, Activity-Ex- ercise Pattern: Gas Exchange and Respiratory Function, and Nutrition and High Risk Ante/Intra/Postpartum and Newborn Care. 
Transfer Curriculum Goal(s): none

NURS 2520 Professional Nursing Concepts Through the Lifespan II Credits: 6 
Prerequisite: NURS 2501, NURS 2513, NURS 2518, NURS 2519 Co-Requisite: NURS 2502 
This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Core concepts include the LPN and RN, including scope of practice, advanced communication skills, critical thinking and decision making. Clinical sites may include acute care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading. 
Transfer Curriculum Goal(s): none

NURS 2519 Clinical Reasoning & Skills Lab Credits: 1 
Prerequisite: admission to ADN Program Co-Requisite: NURS 2503 
This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Core concepts include the LPN and RN, including scope of practice, advanced communication skills, critical thinking and decision making. Clinical sites may include acute care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading. 
Transfer Curriculum Goal(s): none

NURS 2519 Clinical Reasoning & Skills Lab
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, 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 promote quality care 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 Respiratory Function, Activity-Exercise Pattern: Gas Exchange and Respiratory Function, Normal Intra/Postpartum and Newborn Care, and Nutritional-Metabolic Pattern: Fluid and Electrolyte Balance. 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, subacute care, 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 communication 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 of 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 psychomotor skills through quizzes, worksheets, exams, videos, audio power points, skills test out and simulation. 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-entry 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 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, psychological, psychosocial, sociocultural, spiritual and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to promote safe, quality, patient-centered care 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 Risk Intracranial/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: Mental Function. Transfer Curriculum Goal(s): none

OCT 1010 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

OCT 1040 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: 3
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 decision making, problem solving the workplace and in their personal life. Topics covered include: relationship choices and dynamics, Stress and anger management, work setting, time management, development and 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 1145 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 time management, development and 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 1150 Employability Skills II Credits: 4
Prerequisite: OSKL 1148
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 workplace and demonstrating professional accountability at the workplace and exploration of entry-level job opportunities to solidify job goals. Transfer Curriculum Goal(s): none

OSKL 1155 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
Students are exposed to experiences focusing on diversity, verbal, written, 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 as 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

PHILO 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

PHILO 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

PHILO 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, hypomonarchism and functionalism will be examined in terms of their relationship to various ages of survival, contemporary views derived from near death experiences, quantum physics and probability will also be considered. Transfer Curriculum Goal(s): 2.6

PHILO 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

PHILO 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 The purpose of this course is to examine a variety of contemporary moral issues from a philosophical standpoint and to
PHIL 2422 Medical Ethics
Credits: 3
Prerequisite: None
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: 3
Prerequisite: None
Co-Requisite: None
Students learn to “finish” images using folders, frames, matting, laminating, 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 images. 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 basics 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 1150 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 additional 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), photography, 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 1336 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 designers to work together to create products. Commercial photography techniques are emphasized. Students will demonstrate learned skills, share information, and provide feedback during 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 Photo- finishing Engineers certification as well as the SkillsUSA...
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 out 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

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 calisthenics aerobics.
Transfer Curriculum Goal(s): 11

PHED 1515 Advanced Yoga
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 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 its blending of meditation as a way to reduce and deal with stress and 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 (vinyasas) 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 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 advanced course in body conditioning and 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 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 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 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
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: 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 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 1579 Honors Fitness for Life**  
Credits: 2  
Prerequisite: none  
Co-Requisite: none  
This course is a special class for Honors students of all ages that covers all aspects of exercise and physical fitness. The focus is on self-evaluation 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  
Second season of athletic participation in intercollegiate softball.  
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

**PHYS**  
**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 emphasis 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 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
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 emphasis 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, student presentations, and theses projects 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, 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: 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 various different tribal government have taken toward tribal business entities and the use of tribal business proceeds.

Transfer Curriculum Goal(s): 5,9

POL S 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. Students will also include comparative governmental systems, especially those 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

POL S 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

POL S 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, 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 along with how to use medication references.

Transfer Curriculum Goal(s): 5,9

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, bioavailability 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 using 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 care 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 care accurately.

Transfer Curriculum Goal(s): none

PNUR 1150 Clinical II
Credits: 3
Prerequisite: PNUR 1132, PNUR 1138, PNUR 1140, PNUR 1149, PNUR 1158, 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 1149
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 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 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 conditions will be presented.
Transfer Curriculum Goal(s): none

PNUR 1162 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 continues 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 MIN Board of Nursing for relicensure prior to beginning class
Co-Requisite: none
This course is designed to refresh Licensed Practical Nurses who have been away from the practice of nursing. The course will review the Minnesota Board of Nursing, Topics covered in this class are the role of the LPN, the State of Minnesota Nurse Practice Act, legislation, ethical issues, modalities in current day 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 1425 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 1426 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 use of the environment, and 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 foods 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 a sustainable 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 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 course 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 development. This course will explore current 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
Prerequisite: PSYC 2421 or PSYC 2423
Prerequisite: none
Credits: 3
PSYC 2470 Abnormal Psychology
Prerequisite:  PSYC 2421 or PSYC 2423
Credits: 3
Transfer Curriculum Goal(s):  none
Co-Requisite: none
and available treatments. Topics covered include anxiety, sensitivity.
tional process, can explore how psychology can be applied and students interested in understanding their own educa-
tional 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 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

ROBOTICS
RAST 1101 Industrial Electronics I
Credits: 3
Prerequisite: none
Co-Requisite: RAST 1101
This course covers 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 convert-
ers.

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 convert-
ers.

Transfer Curriculum Goal(s): none

RAST 1103 Motors and Drives
Credits: 3
Prerequisite: RAST 1101
Co-Requisite: RAST 1113, RAST 1206
This course covers industrial electronics, 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, contacts, 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, deci-
sion 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 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 1110 Introduction to Engineering Graphics
Credits: 2
Prerequisite: none
Co-Requisite: none
This course introduces students to parametric modeling using the SolidWorks program. SolidWorks 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 1110 Introduction to Automation
Credits: 2
Prerequisite: none
Co-Requisite: none
This course covers industrial electronics, 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, contacts, motor starters, and variable frequency drives. Preventive maintenance and troubleshooting techniques will also be covered.

Transfer Curriculum Goal(s): none

RAST 1212 Industrial Electronics Lab II
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers industrial electronics, 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, contacts, motor starters, and variable frequency drives. Preventive maintenance and troubleshooting techniques will also be covered.

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 with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the 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 contacts, motor starters, 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 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 which include basic uses of PLC operation, wiring input and output devices, sequencing, timing systems, countersing systems, math functions, and programming techniques. This course introduces the ladder logic pro-
gramming environment. Troubleshooting programs along with wiring will be practiced in the lab.

Transfer Curriculum Goal(s): none

RAST 1121 Industrial Electronics Lab I
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers hands-on skills in basic electronics. A proto-board is used with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the theory course. The laboratory procedure teaches the student basic test and measurement techniques.

Transfer Curriculum Goal(s): none

RAST 1122 Industrial Electronics Lab II
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers hands-on skills in basic electronics. A proto-board is used with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the theory course. The laboratory procedure teaches the student basic test and measurement techniques.

Transfer Curriculum Goal(s): none

RAST 1123 Industrial Electronics Lab III
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers hands-on skills in basic electronics. A proto-board is used with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the theory course. The laboratory procedure teaches the student basic test and measurement techniques.

Transfer Curriculum Goal(s): none

RAST 1124 Industrial Electronics Lab IV
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers hands-on skills in basic electronics. A proto-board is used with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the theory course. The laboratory procedure teaches the student basic test and measurement techniques.

Transfer Curriculum Goal(s): none

RAST 1125 Industrial Electronics Lab V
Credits: 2
Prerequisite: RAST 1211
Co-Requisite: RAST 1103, RAST 1113
This course covers hands-on skills in basic electronics. A proto-board is used with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the theory course. The laboratory procedure teaches the student basic test and measurement techniques.

Transfer Curriculum Goal(s): none

RAST 1126 Programmable Logic Controllers II
Credits: 3
Prerequisite: RAST 1101
Co-Requisite: RAST 1103, RAST 1113
This course covers the basic concepts of operation common to PLCs which include basic uses of PLC operation,
The course will introduce students to offline or virtual programming utilizing a 3-D graphical simulation software platform utilized by a major robotics manufacturer.

Prerequisite: RAST 1111 Co-Requisite: RAST 1120

This course continues with "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 robots used within the cell, electrical interfacing of controls, programming flowcharting, 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 transducers will be covered in both lecture and lab activities. These include inductive, photo, capacitive, analog, and machine vision. Students will during the lab portion obtain testing equipment 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 hardware and 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 2111

This course covers the design, construction, placement, voltages/current and 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

This 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 and maintain 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

This 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 satisfy product, piece size, and various quality assurance measurements. Students will create and set up certain industrial networks in order to communicate with other systems.

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 light, infra-red, 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 2125 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 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 robotic end of arm tooling, product fixtureing, 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 operation 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 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 troubleshooting real and simulated faults within the controller using electrical and software troubleshooting procedures outlined within the manufacturers’ manuals. Safe troubleshooting 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 pump systems, basic circuits, properties of both fluid and compressed air. Steelers, connections, valves, and flow measurement 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: 3

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 and software 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 cur- riculum.
Transfer Curriculum Goal(s): none

SOCIOL

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, devi- ance 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 principles of 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 family 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 re- fine 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 criminal- ity, 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 sociopolitical 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 socio- logical 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? Consid- ering 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-deny- ing” 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 Sociol- ogy. 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 groups (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. Pretense tense of regular verbs will be introduced, time permitting. Graded level readings are used for comprehension and paired activities and a daily slate 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 vocabu- lary 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: pretent, 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 culture.
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.
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 lan- guage 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: Re- flexives, Ser/Estar, passive voice, perfect tenses and finally, the introduction of imperfect subjunctive. Grammar practice and the perfection of language structures is emphasized. Vo- cabulary 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, video, newspapers, magazines and native speaker guests serve as a basis for class discussion, enhance read- ing, 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 (Cortes – 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 specialty 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 acre- age. 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.

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 evaluate the financial 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 labor costs, 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 Pest Harvest Processing of Specialty Crops Credits: 1
Prerequisite: none
Co-Requisite: none
In this course, students will learn about processing 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 crop 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 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 2311 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 2312 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 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 mathematical 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
**SUSTAINABILITY STUDIES**

**SUST 1400 Introduction to Sustainability**

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  
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 areas of the theatre: i.e. 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  
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 application within small, transformative, and seminar-style classes that explore 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 productive 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. Assignments 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: 3
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 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 who are interested about this course should participate 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 builds the student diver’s ability to prevent problems and, if necessary, manage dive emergencies using a variety of techniques. The course is designed to be demanding, realistic in its content, context 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 leadership skills through both classroom and independent study. The student will complete water skills and stamina exercises, as well as training exercises that require 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 offered the first year 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 training and open water dives. These topics include: diving physics, physiology, dive medicine, US Navy Dive Tables, Canadian dive tables, record keeping, commercial air diving equipment, maintenance, commercial diving procedures, rigging, diving tasks, diving environments, underwater burning and welding, and OSHA, ADC, DCBC, and ANAB 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, 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 lines 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 videojography skills used to produce motion pictures from conception to completed video. Students will produce commercials, documentaries and formal events as part of the course. 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. Safety handling of equipment will be emphasized. Instruction will include standard functions critical for professional-level video & DSLR camera operation; focus, 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 student 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 broadcasting lighting. 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 planning, 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 improve new editing tools 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 1209 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. Students are required 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 of a two-course sequence. In CLC Production 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 the 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 student 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 of video cameras and supporting 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 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 your company you work for will require 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 will also provide consultant services as you guide your client or supervisor through the process of determining the best-fit video for their needs.
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 2123 Creative Development
Credits: 4
Prerequisite: for 2nd year students only
Co-Requisite: none
This course focuses on completing the production cycle for students and allows 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 2250 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 2270 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 commercial 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 interested 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 specific 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 harvest, spraying, pruning, fertilizing, and forklift operation. Transfer Curriculum Goal(s): none

VITI 1156 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, equipment and materials, tanks, barrels and barrel alternatives, filtration system, 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, physiological impact 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 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. 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 scientific and technology of winemaking practices taught in Introduction to Enology course VITI 1146. 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 the 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 wine 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 1158, VITI 1160, VITI 1268
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 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. Students are chosen for the laboratory exercises demonstrating the taste development and differentiation of sensory skills and techniques. Transfer Curriculum Goal(s): none

VITI 1272 Wine Production Internship
Credits: 3
Prerequisite: VITI 1146, 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. Students are chosen for the laboratory exercises demonstrating the taste development and differentiation of sensory skills and techniques. Transfer Curriculum Goal(s): none

VITI 1274 Wines of the World
Credits: 3
Prerequisite: VITI 1266
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 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
This 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.

VITI 1296 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
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. Students are chosen for the laboratory exercises demonstrating the taste development and differentiation of sensory 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
This 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.
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 practice a combination of welding 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 basic 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 and include topics such as safety, equipment selection and setup, electrode selection and application, and basic 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. Students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

Transfer Curriculum Goal(s): none

WELD 1103 Blueprint Reading III (CAD Systems)

Credits: 2
Prerequisite: WELD 1111, WELD 1112
Co-Requisite: none

This course will expand on skills obtained in WELD 1101 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 use of metals. Students will study identifying, 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, oxygen-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 basic 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 characteristics 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 basic 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 assigned by the instructor. 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 1123 Metal Fabrication

Credits: 3
Prerequisite: WELD 1111
Co-Requisite: none

Fundamental sheet metal layout, bending and forming allowances, safety 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 welding 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 completing individual testing module and perform motions in compliance with The American Welding Society standard to obtain full certification. During the class, students will explore various welds, testing 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 safety, 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 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 student 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 (GMAW), 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

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
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 ultrasonic. 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
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.

Below is a list of College in the Schools courses. Please see the course descriptions online.
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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.


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
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 tied 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 60602-2594 Phone: 608.261.7400 or 321.263.0456 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. The college 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 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 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 students 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. 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 Defermert

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-
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 Col- lege 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 disabilitieservices@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 re-quiring 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, according 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 will 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 baccaulaureate 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 baccaulaureate 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 disabilitieservices@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 retest 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 previous 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 Exemption process.

Students seeking exemption from testing based on ACT/SAT subscores that are within two years old must submit documentation for re-view to Assessment Center staff.

Subpart B. Students enrolled in partnership agreements and/or management programs (FBM, SBU, 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.
Post Secondary Enrollment

Tal coursework during the first year. This normally will
students to complete their development
minimum assessment
tuition and count toward financial aid eligibil-
1000 and do not count toward credits in degree and
Developmental courses have course numbers under


Part 3. Developmental Coursework

Developmental coursework 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).
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 dates 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 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.

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 Admissions
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:
**Admission of English As a Second Language and Other Language Learners**

English as a Second Language (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.
   c. A grade C or better in a college level English.
   d. Ownership of a home in Minnesota;
   e. Permanent residence in Minnesota.
   f. Other public records, e.g., birth and marriage records.

Students determined to be 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. 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 institutions 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 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 218-694-5114 at Staples campus. Students who complete the test with the appropriate scores will continue through the Admissions/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.

**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 or senior applying as a CIS student must meet the following criteria:

1. High School Grade Point Average: a. 12th grade must have a GPA of 2.5 or greater.
   b. 11th grade 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 stan- dardized norm-referenced test, or letter of recommendation from a 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 appliants who do not meet the admissions requirements 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:

1. 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.
2. 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.
3. 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 reconsidered.

REGISTRATION
Registration Procedures

Students may register for courses by using the CLC Web site: www.clcmn.edu/registration. Registration procedures vary depending upon whether the student is a new, returning, or in a program at the time of en- rollment. 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-enroll- ment. Students who wish to enroll in more than 19 credits fall or spring semester, must have a ‘Request for Additional Credit’ 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 at- tend 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 meet- ing, 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 pur- poses 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 de- gree and in the computa- tion 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 tran- script. Tuition and fees will be charged each time. Re- peated coursework is not auto- matically 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 in electronic and PDF format.

Transcript Requests

The Records and Registration office maintains student academic records. Transcript requests 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 per-son, 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 institu- tion may 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. Unofficial Transcripts may be obtained on the CLC registration Web site www.clcmn.edu/registration. Stu- dents 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 Hold

Academic student transcripts are not released for stu- dents with financial obligations. This includes unre- turned library materials, media equipment, and physi- cal education equipment and unpaid tuition, fees, or bookstore charges.

The following grades are used at CLC:

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>Excellent</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td>Above Average</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td>Above Average</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>Above Average</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td>Average</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
<td>Average</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>Average</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
<td>Average</td>
</tr>
<tr>
<td>D+</td>
<td>1.33</td>
<td>Minimum Passing</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td>Minimum Passing</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Failing (For courses #1000 level and above)</td>
</tr>
<tr>
<td>FN</td>
<td>0.0</td>
<td>Non-attendance</td>
</tr>
<tr>
<td>FW</td>
<td>0.0</td>
<td>Unofficial Withdrawal</td>
</tr>
<tr>
<td>S</td>
<td>0.0</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>U</td>
<td>0.0</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>W</td>
<td>0.0</td>
<td>Withdrawal (Student generated)</td>
</tr>
<tr>
<td>I</td>
<td>0.0</td>
<td>Incomplete</td>
</tr>
<tr>
<td>IP</td>
<td>0.0</td>
<td>In Progress</td>
</tr>
<tr>
<td>NC</td>
<td>0.0</td>
<td>No Credit (For courses numbered below 1000)</td>
</tr>
</tbody>
</table>

Definitions:

• The “I” grade is an agreement between the faculty member and the student. The student may be given up to one semester to com- plete the course require- ments. 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 80% 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 lim- ited 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 indi- cate that he/she chooses to audit a class. The audit permits attendance and participation in course activi- ties. If academic credit is earned for the audit course, and finan- cial 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 mea- sured.

• 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 add- ing 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, WP, IP, S, 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 x 3= 12.00
B= 3.00 x 3= 9.00
C= 2.00 x 3= 6.00
D= 1.00 x 3= 3.00
F= 0.00 x 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. 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 ap- proval from their advisor. For other 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 Cen- tral 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 regis- ter for a maximum of 22 credits among all MnSCU colleges and universities. Visiting Students are not eligible for Financial Aid at Cen- tral 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 pro- gram requirements. Credits must be earned in cours- es 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 hon- ors.

For the graduation ceremony, honors and high honors are determined at the end of fall semester. At this time,
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.

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 syllabus or course outline for the course. Other documentation may be required.

Transfer 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:

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 that 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 in accordance with 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 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.

Withdraw 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 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 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.
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 the course fees. 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 at http://www.clcmn.edu. Select e-Services at the top of the screen and log in using your StarID. Tuition and other fees due or made a $350 down payment towards tuition, fees, and parking fees and all other applicable fees. The college shall cancel student registration for all course related 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;

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 signed by the student 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 the opportunity to attend one class session for each registered, for-credit course, without obligation. Sub-ject 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 four-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 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
- College error
- Employment related condition
- Significant personal circumstances
- Student leader stipends
- Course conditions (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

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 student. 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. 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 completed a 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 re-reviewed on a first-come, first-serve basis. Separate applications are processes are needed for Post-Secondary Child Care Grant pro-gram, 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
   - Federal Pell Grant - This is a federal grant awarded to eligible students. Students must demonstrate financial need.
   - 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 available.

2. Minnesota State Grant - This is for Minnesota residents attending a Minnesota college only on the basis of eligibility.

3. Post-Secondary Child Care Grant Program - Income-based grant for students who have children in day care. Awards are limited to funds available.

4. Medical 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.

5. 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.

6. 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 are eligible to work an hour’s pay for an hour’s work. Jobs are available both on campus or at designated off-campus sites. A list 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 Mas- ter Promissory Note and complete a separate online loan acceptance process. Central Lakes College requires a 30 day delay for stu- dents who are new borrowers to receive their loan proceeds. In addition, all Federal Direct loans are subject to multiple disbursement regulations:
   - Federal Direct Student Loan programs (subsidized and unsubsidized) - Low-interest loans obtained via CLC, through the U.S. De- partment of Education. Interest will not exceed 8 1/4% with long-term pay- ments beginning six months after enrollment drops below six credits.
   - Federal Direct Parent Loan for Undergraduate Stu- dents (PLUS) - This loan has a variable interest rate, not to exceed 9%, with pay- ments due within 60 days after the loan is fully disbursed.
   - Federal Perkins Loan - A student must show high financial need and be enrolled in a degree program. The Perkins loan will be 5% subsidized.
   - Federal Direct Unsubsidized Loan - This loan is not based on financial need and is available to all students.

   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.

4. 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 who attended, at a minimum, one class session in each course in which student has registered, if a repayment is owed to the federal 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 that 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 Federal 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. Use the U.S. Dept. of Education software to determine how much refund will be considered unearned and will need to be re-tumed. 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 average 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’s 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 your 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 explore/Planning courses provide participants with a more comprehensive look at their interests, abilities, personal characteristics, 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 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 out- side 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.

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 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 dis-abilities, traumatic brain injuries, Aspergers/autism and attention deficit disorders.

Assumptions made about students with disabilities 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 disabilitieservices@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 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 at as 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 funds to 261 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. Second, the College is an inclusive and comprehensive model for engaging and retaining students in higher education pursuits. Upward Bound serves high school students from low income families and high school students from families in which neither parent

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
Steroids: Steroid users experience a sudden increase in muscle and weight and an increase in aggression and combattiveness. 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.

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
• United Way 2-1-1 Phone: 211 or 1-800-543-7709 Website: 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.sjmcrd.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.org/AA/Minnesota.htm

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 alcohol and drug free environments.

All members of the college community are held responsible for their behavior and for re- specting the right 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 indivi- duals.

Alcohol Policy
The unlawful possession, use, production, distribution or sale of alcohol by any student or employee is prohibited on the college property, on property owned or controlled by the College, and at College sponsored events:

• No person, under the age of 21, may drive with any amount of alcohol in their system.
• No person who is less than 21 years of age may purchase or use alcoholic beverages.
• No person, under the age of 21, may drive with any alcohol in their system.
• No employee shall report to work under the influence of alcohol.
• No employee shall operate use or drive any equipment, machinery or vehicle of the State of College 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 the 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 have a copy of the policy and information regarding sanctions that may result from this violation. Sanctions, although specific to students and employees,
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 a $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 drug paraphernalia confiscated by local law enforcement.
- Students may be referred to Vice President Of Student Affairs for disciplinary action.
- Faculty and staff may be referred to the President for disciplinary action.
- Students, faculty and staff may have 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.

Definitions:

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/CLC Sexual Violence Policy and Procedures and MnSCU/CLC Central Lakes College Sexual Violence Procedure

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 see, 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: 1. Designated Title IX Officer, Student Conduct Officer (Mary Sam, 218-855-8159, Office E132) or 2. Affirmative Action Officer (Nancy Paulson, 218-855-8054, Office C211) or 3. 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 Education, Minnesota Department of Human Rights, an attorney or a police officer. For more information, please view MnSCU System Policy 18.1

Sexual assault:

Sexual assault means an actual, attempted, coercion, or threatened sexual assault with another person that is unwarranted, unwanted, 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-
Because of laws concerning government data confidentiality, 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. 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 C201)
- 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)
- 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 or campuses 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 re-straining 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 confidentiality, Minnesota Government Data Practices Act, colleges and universities cannot guarantee confidentiality to those who report incidents of sexual violence except where their reports are privileged and the communications are 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.

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.

This policy 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 vol- untarily 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 status 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 college or university 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 status 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, or other verbal or physical conduct of a sexual nature.

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual’s employment or education, or an individual’s academic performance, or term or condition of participation in student activities or in other events or programs where the individual is otherwise adversely affected.
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 deprivations of 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 or intimidating an individual with or without the intent of causing harm; or 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 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, regarding 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;

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 according 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 18.3 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 employer 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 18.1 and Procedure 18.1.1. Complaints are strongly encouraged to report incidents of harassment and discrimination to campus authorities. Central Lakes Con- tact: includes:

- 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 Indian 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 "myCLCPlusCard" 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://clcbookstore.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://clcbookstore.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, supplement, mental 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 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 (JSD #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, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission as defined by law.

This document is available in alternative formats upon request, by contacting Disability Services, disability-services@clcmn.edu or 218-855-8175. Consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.
FACULTY DIRECTORY

Mark Ambroz, Videography
B.A. University of Minnesota

Andrew Anderson, Heavy Equipment
A.A.S. Central Lakes College

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B.S. North Dakota State University
M.A. St. Cloud State University

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B.S. Bemidji State University
M.A. University of Minnesota

Beck, Robyn, Farm Business Management
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M.S. South Dakota State University

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Diploma, St Cloud Technical College
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M.S. St. Cloud State University

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M.S. St. Cloud State University

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M.A. Bethel University

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B.A. Concordia College
M.A. University of Minnesota, Twin Cities

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M.S. The College of Saint Scholastica

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M.A. University of Phoenix

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B.A. College of St. Scholastica
M.S. St Cloud State University

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B.A. Concordia of St Paul
M.S. St. Cloud State University

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M.S. St. Cloud State University

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M.S. St. Cloud State University

Steve Devlah, Counselor
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M.S. St. Cloud State University

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Diploma, American Floral Arts School, Chicago

B.S. University of MN
M.S. University of MN

Dennis Eastman, Physical Education
B.S. Moorhead State University
M.S. Mayville State University
M.S.S. U.S. Sports Academy

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B.A. Concordia College

Samuel Espina Lopez, Computer Technology
B.S. Winona State University
M.S. University of St Thomas

William “Bill” Faber, Natural Resources
A.A. St Cloud State University
B.S. University of Minnesota
M.S. The Swedish University of Agricultural Sciences
Ph.D. The Swedish University of Agricultural Sciences

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M.S. The University of Iowa

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B.A. University of Minnesota, Morris
M.A., Northeastern University, Boston

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B.A. St. John’s University
M.A. St. Cloud State University

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B.A. Bemidji State University
M.A. University of North Dakota

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M.A. University of ND

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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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M.F.A. Illinois State University

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B.S. Bemidji State University

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B.A. Hamline University
M.A. Syracuse University

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A.A. St. Paul Technical College
B.A. College of St. Benedict
M.Ed. University of Minnesota

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B.A. Concordia College

Ron Houle, Computer Careers
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B.A. College of St. Scholastica
M.A. College of St Scholastica

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M.A. St. Cloud State University

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M.S. Northern Arizona University

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M.A. University of Minnesota Duluth

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B.A. St. Cloud State University
M.A. St. Cloud State University

Jeff Kneir, Heavy Equipment
Diploma, Dakota County Technical College

Tracey Kloeckl-Jimenez, German and Spanish
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M.A. Minnesota State University Mankato

Thurman Knight, Speech
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M.A. University of Minnesota
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M.S. Texas A & M University
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Diploma, Central Lakes College
Lori Beth Larsen, English
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M.A. St Cloud State University
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M.A. University of Minnesota Duluth
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M.S. Bemidji State University
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B.S. Villanova University
M.S. St. Joseph’s University
Debra McCarthy, Business
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M.A. College of St. Scholastica
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Diploma, Willmar Technical School
A.A. Degree, Central Lakes College
B.S., Bemidji State University
M.S. Southwest Minnesota State University
Paul Mickelson, Biology
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M.S. University of Minnesota-Duluth
Kenton Montgomery, NATR
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M.S. University of Minnesota-Duluth
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B.S. Bemidji State University
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B.S. College of St. Benedict
M.S. Minnesota State University, Moorhead
Laura Oeltjenbruns, Nursing
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M.S. University of Phoenix
Herb Otilla, Philosophy
B.S. & M.S. Minnesota State University
Mankato
Mamfe Osaro, Mathematics
B.S. University of Cape Coast, Ghana
M.S. Minnesota State University, Mankato
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B.B.A. University of North Dakota Grand Forks
MBA University of North Dakota Grand Forks
Gary Payne, Sociology
B.A. University of Kansas
M.A. St. Mary’s College
Ph.D. South Dakota State University
Jane Peterson, Volleyball Coach, Phy Ed
B.A. College of William and Mary
M.S. St. Cloud State University
Nathan Peterson, Robotics
A.S. Brainerd Community College
B.S. Bemidji State University
Elizabeth “Betsy” Picciano, Reading
B.S. St. Cloud State University
M.Ed. University of Minnesota
Roger Pickering, Mathematics
B.A. Macalester College
M.S. University of Oregon
Mark Pratta, Biology
B.S. & A.S. University of Wisconsin - Stevens Point
M.A. St. Cloud State University
Sandy Porter, Mathematics
B.S./B.A. University of North Dakota
M.S. Bemidji State University
Curts Pribnow, Law Enforcement
A.A. Lakewood Community College
B.S. Minnesota State University, Mankato
M.S. Minnesota State University, Mankato
Pam Pruitt, Mathematics, Earth Science
B.S. University of Michigan
M.S. University of Michigan
Ronn Redemseke, Machine Trades
Diploma, Staples Technical College
Tom Reese, Business Management
A.A. North Hennepin Community College
B.A. College of St. Thomas
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B.S. Gustavus Adolphus College
M.S. University of Minnesota Duluth
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B.S. University of Minnesota
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B.S. Mankato State University
M.S.N. Saint Xavier University
Susan Risbrandt, Nursing
A.D. Nursing M State Fergus Falls
B.S. Minnesota State University
Moorhead
James Russell, Men’s Basketball, Phy Ed & Health
B.A. Tabor College, Kansas
M.S. St. Cloud State University
Michael Sams, Heavy Equipment
Certificate, Staples AVTI
Greg Scheler, Robotics
Diploma, St. Paul Technical College
Kirby Scott, Chemistry
B.S. St. Cloud State University
M.S. University of Minnesota
Patricia Sloan, Occupational Skills Program
B.S. Winona State University
Patrick Spradlin, Theatre
B.A. West Virginia Wesleyan College
M.A. Northern Illinois University
M.F.A. Northern Illinois University
Cynthia Tougas-Mann, Child Development
A.A. Central Lakes College
B.S. SCSU
M.S. MSU, Moorhead
Karen Treangen, Nursing
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A.S. Fergus Falls Community College
B.S., The College of St. Scholastica
Edward Uhlenkamp, Farm Business Management
A.S. and B.A. University of MN, St Paul

FACULTY DIRECTORY

Cory Uhrich, Heavy Equipment
Gordon Vierkant, Heavy Equipment
Staples Vocational Technical Graduate
A.A. Central Lakes College
Michael Vogt, Photographic Imaging Technology
Diploma, Staples Technical College
Therese Wasiewski, Horticulture
B.S. University of Wisconsin - Stevens’s Point
M.S. Purdue University
Stephen Wenzel, Political Science
B.S. St Cloud State University
M.A. St. Cloud State University
Julie Wolfaia, Nursing
B. A. College of St. Scholastica
M.S.N. Metropolitan State University
Paul Zimmerman, Diesel Mechanics
Diploma, Alexandria Technical & Community College
Admissions

Contact us for:
Scheduling campus tours
Enrollment information
Application packets
Program Information

E-mail us
askclc@clcmn.edu
To apply online or to check out our admission services go to:
www.clcmn.edu/admissions

Brainerd Campus
501 West College Drive
Brainerd, MN 56401
800.933.0346 | 218.855.8037

Staples Campus
1830 Airport Road
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 222…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

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