About the College

Central Lakes College – Brainerd and Staples is one of 37 Minnesota State Colleges and Universities, offering excellent, affordable education in 54 communities across the state.

We are a comprehensive community and technical college serving about 5,500 students per year. With a knowledgeable, caring faculty and modern, results-oriented programs in comfortable facilities, CLC is the college of choice for seekers of success.

Our roots are deep in a tradition dating to 1938 in Brainerd and 1950 in Staples. Communities across central Minnesota are filled with our graduates.

Central Lakes College (CLC) begins making an impact early, meeting each student at different points along their educational journey and helping them toward their chosen pathway. A robust concurrent enrollment program, well-tailored technical programs, and an associate of arts degree enables a student to start at CLC, saving time and money. Students who have earned the associate's degree may then elect to transfer to any Minnesota State four-year college or university.

The range of options for students at CLC is unique to the region and includes more than 70 program selections that will jumpstart career opportunities after graduation. Home to the North Central Regional Small Business Development Center, CLC is the center of economic development helping young businesses thrive, while it remains at the cutting edge of farm research through its Ag and Energy Center.

Mission:
We build futures.
At Central Lakes College, we-
- provide life-long learning opportunities in Liberal Arts, Technical Education, and Customized Training programs;
- create opportunities for cultural enrichment, civic responsibility, and community engagement; and
- nurture the development and success of a diverse student body through a respectful and supportive environment.

Values:
Excellence, Innovation, Inclusion, Community

Vision Statement:
Central Lakes College inspires learning, advances innovation, and transforms lives.

History
The roots of Central Lakes College run deep in both our Brainerd and Staples communities. The college's origins date back to 1938, when Brainerd Junior College opened on the third floor of Washington High School with 12 students. It operated as part of the Brainerd School District under the leadership of Emil Heintz.

With growth of enrollment, the college expanded to the basement and first floor of Lincoln Elementary School in 1957.

Across the river in Staples, the State Board of Education granted approval for an area vocational technical school in Staples. Classes started in fall 1960 under the leadership of Michael J. (Mike) Mantanich.

By 1963, liberal arts and career education began defining their individual focus. That led to Brainerd State Junior College becoming part of the new state system. The local school district retained the career programs, which becomes Brainerd Area Vocational Technical School in 1964.

The first building on the campus in southwest Brainerd (now CLC) was the first in Minnesota built specifically as a junior college in 1964. There, programs expanded, including community theatre. Under the leadership of Bob Dryden, a new Fine Arts building addition is completed, featuring a 300-seat performance space in 1971.

Just two years later, the school changed names from Brainerd State Junior College to Brainerd Community College (BCC).

The college's footprint continues to expand with the addition of a student services and administrative areas in 1989. Two years later, the State Technical College Board combined the administration of the two technical colleges to create Brainerd Staples Technical College (BSTC).

By 1995, three state systems for higher education combined to form the Minnesota State Colleges and Universities system (now Minnesota State). This paved the way for Brainerd Community College and Brainerd Staples Technical College to merge and become Central Lakes College. A year later, a $24 million two-story addition opened as part of the newly combined college. The building featured all new technical program labs and a central core for student services.

Expansion continued in Staples when a 360-acre Heavy Equipment Campus, including a lab/classroom facility was built in 2003. Come 2007, a 30,000-square-foot service center was added.

Today, the college continues its mission in helping students "Build Futures" through inspired learning, innovation and transforming lives.

Accreditation
Central Lakes College is accredited by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools located at:
30 North LaSalle Street, Suite 2400
Chicago, IL 60602-2504
Phone: 800.621.7440/312.263.0456 Fax: 312.263.7462
www.ncahigherlearningcommission.org

First accredited as a single entity on July 1, 1995. The result of the merger of Brainerd Community College, first accredited in 1977, and Brainerd Staples Technical College, granted Candidate for Accreditation status in 1994.

Most recent reaffirmation of accreditation: 2012 - 13

Next reaffirmation of accreditation: 2022 - 23

Scholarships
The Central Lakes College Foundation is a nonprofit 501C-3 organization formed to solicit, receive and administer gifts, grants, bequests and donations. It provides a tax-exempt vehicle for people to donate to the college and thereby provide educational opportunities for Central Lakes College students. Private and corporate contributions are critical to fulfilling the college's missions. Persons or groups desiring to contribute to the Foundation may contact the Foundation Director. The mission of the CLC Foundation is to provide financial assistance in the form of scholarships to students at CLC. Scholarship applications are available through the Foundation office or can be submitted online at www.clcmn.edu/foundation.

Annual Notice
Central Lakes College is an open entry institution offering liberal arts and sciences and career and technical programs in the following areas of study:
• Liberal Arts and Sciences/A.A Transfer Degree
• Agricultural, Horticulture and Natural Resources
• Business and Accounting
• Child Development and Special Education
• Dental and Nursing
• Information Technology and Computers
• Law Enforcement
• Welding, Robotics and Machine Tool Technology
• Graphic Design and Videography
• Automotive, Marine and Diesel Mechanics and Heavy Equipment Operation
• Occupational Skills

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.

Lack of English skills will not be a barrier to admission or participation. In order to eliminate barriers we take appropriate measures to assess each student's ability to participate and benefit through placement testing and counseling. Based on the assessment and counseling, students are then provided with campus services or a referral to community services to be better prepared for successful participation.

Nondiscrimination Coordinators:
Title IX Coordinator – Mary Sam, E132, 218-855-8159
Accessibility Services Coordinator – Mallori Sheik, Room E138, 218-855-8175
This document is available in alternative formats to individuals with disabilities. Consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.
The lack of English skills will not be a barrier to admission and participation.

Admissions

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, 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.

Admission to Central Lakes College
It is the policy of CLC 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:
1. Early application is recommended for best selection of classes at registration.
2. Online applications are available at www.clcmn.edu. Paper versions are available upon request.
3. 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.
4. Admission to the Heavy Equipment, Nursing and Criminal Justice programs require additional criteria. Contact the Admissions Department for details.
5. 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.

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 postsecondary 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 exemption to any or all of the required immunizations should request a separate form for required physician and notary signatures.

Immunization against Communicable Diseases
It is strongly recommended that all entering freshmen and transfer students be immunized for measles and rubella before they register for classes at CLC.

College Readiness
Students are encouraged to take College and Career Studies courses as early in their college career as possible. These College and Career Studies skills are prerequisites for some courses.

Assessment Testing for College Readiness
Central Lakes College is dedicated to supporting student success. As part of that commitment to student success, Central Lakes College adheres to the Minnesota State policy to assess the reading and mathematical skills of new students in an attempt to match current skills with the CLC curriculum.

CLC shall require all incoming students to complete assessments that include measures of reading comprehension and mathematics on system-endorsed tests. The incoming student assessment shall not be used to make college admissions decisions. Placements received as a result of assessment testing are mandatory.

Students with documented disabilities shall be tested with system-endorsed, adaptive tests through Accessibility Services. Please contact them at 218-855-8175 or accessibilityservices@clcmn.edu to inquire.

Self-identified English Language Learner (ELL) students can select to take demonstrate English proficiency by one of the following:

- 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)
- Official ELL results from an ELL center.
- Completion of the ELL Accuplacer assessment. ELL students will be assessed in all areas of reading, writing, sentence meaning and listening
- ELL students may select an English for Academic Purposes course, which focus on reading, writing, listening and speaking.
- The lack of English skills will not be a barrier to admission and participation.
- Exemptions: Students who have indicated on their admissions application that they are not seeking a degree, diploma, or certificate do not need to take the assessment tests unless they register for: (1) classes in English and mathematics; or (2) classes requiring a prerequisite based on scores/placements received during assessment testing. Information regarding prerequisites can be found in the course listing section of the semester schedule. (NOTE: Students indicating that they are not seeking a degree, diploma or certificate are not eligible for financial aid.)
- Students enrolled in partnership agreements and/or management programs (FBM), non-credit continuing education or customized training classes are exempt from testing.
- Students with college-level coursework in English composition or mathematics shall have documented credits evaluated to determine exemption status. Students taking six or fewer credits within one term are exempt from testing unless they register for English or mathematics classes.
- Students may transfer assessment scores to CLC from other Minnesota State institutions provided that they have been taken within the past three years for reading and past two years for math on Minnesota State system endorsed tests. Scores will then be evaluated for placement into CLC coursework.

Minimum Standards for Access to General Education Courses
CLC shall adhere to Minnesota State guidelines for placement into college level courses in reading and math. Students placing below college level coursework shall be placed into developmental coursework as indicated. CLC instructors shall evaluate student's progress through curriculum and determine next sequenced placement. 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. Annual Report on College Readiness CLC shall annually report its assessment data, according to system reporting procedures.

Accuplacer Testing Exemptions
Students seeking exemption from testing based upon previous college coursework must work with a CLC Advisor to complete the Assessment Exempt process. Students holding a two-year or four-year degree from an accredited U.S. institution may be exempt from assessment testing and may be determined to meet the program entrance requirements for a technical program. Students seeking exemption from testing based on previous degrees must work with a CLC Advisor to complete Assessment Exempt Process. Students seeking exemption from testing based on ACT/SAT subscores that are within two years old must submit documentation for review to Assessment Center staff. Students enrolled in partnership agreements and/or management programs (FBM), non-credit continuing education or customized training classes are exempt from testing.

Course Placement in Developmental Education
Students shall enroll in the developmental coursework in which they were placed. Subsequent progression will be determined by the instructor and prerequisites. Retesting of current students will occur only if instructor recommended. For technical programs, students must meet the requirements to begin program coursework. If developmental coursework is required, developmental coursework must begin during the first semester of enrollment.

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 241 PSEO students are held accountable. These include policies regarding academic standing and student conduct.

PSEO Admissions Criteria
12th grade student/Senior must have a high school GPA of 2.5 or greater.
11th grade student /Junior must have a high school GPA of 3.0 or greater.
10th grade student /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.

PSEO Admissions Process
1. Student applying as a PSEO student must provide the following information to the Admissions Department:
    a. CLC Application for Admission
    b. Completed PSEO form signed by student, high school official and parent (if under 18).
    c. Current high school transcript

PSEO Enrollment Information
- ∞ PSEO students shall not register for developmental courses (college courses numbered below 1000 or Technical Education courses numbered below 1000).
- ∞ PSEO students will register on assigned registration days according to total credits earned. Students must complete a post secondary option form each semester, which must be signed by a high school official and parent (if under 18). This form must be submitted to the Admissions Department.
- ∞ 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 Academic Standard for GPA and Course Completion
PSEO applicants who do not meet the admissions requirements and are denied acceptance have the right to appeal the decision to the college. An appeal must include:

a. A written statement by the student defining how they 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. Notification of the decision will be sent to the student 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 Accessibility Services Office 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 Minnesota State institutions should complete the eTranscript Request form to alert CLC to conduct a transfer review of their Minnesota State credits.

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:

a. A completed International Student Application for Admission.
b. 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.
c. Documentation of English proficiency by providing one of the following:
d. 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)
e. Official ESOL results from an ESOL center. Must have completed 109 for admissions or
f. A grade C or better in a college level English.
g. Completion of the ESOL Accuplacer assessment. ESOL students will be assessed in all areas of reading, writing, sentence meaning and listening
h. 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.
i. U.S. Form I-134 Affidavit of Support is required if a third party provides some or all support while attending CLC.

Internal Student 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:

1. Purchase the Minnesota State International Student Accident and Illness Insurance Plan upon enrollment.
2. Provide written proof of immunization against diphtheria, tetanus, measles, rubella, and mumps as required by Minnesota Law (M.S. 135A.14)
3. Be enrolled full time completing at least 12 credits each term.
4. Pay tuition in full by required due dates.

Admission of English as a Second Language and Other Language Learners
Self-identified English requiring ELL 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. 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.

International Students who are unable to meet the acceptance criteria for Admission may appeal for admission into Central Lakes College. For more information, please contact the Central Lakes College Admissions Department.

The lack of English skills will not be a barrier to admission and participation.

Determination of Residence
Students who seek to qualify for in-state residence status must meet the following threshold requirements:

a. Students must have resided in Minnesota for at least one calendar year immediately prior to applying for instate tuition; and
b. Residence in Minnesota must not be merely for the purpose of attending a college or university.

Students determined to be a non-residents at the time of application, may appeal their status by completing an Admission 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. CLC charges in-state tuition to all students unless another state's reciprocity agreement dictates otherwise.

Program Major Changes
Students who are planning to change programs need to follow the following process:
1. Complete a Program Change form (available online under Admission/forms).
2. It is recommended that students meet with an Advisor to discuss a program change.
3. Submit the completed Program Change form to the Admissions office.

Students are accepted into programs on a first-come, first-serve basis by the date of application or by the date of the Program Change form. Students who do not follow the proper procedure to change programs may be placed on a waiting list for their desired program if space is not available.

College in the Schools (CIS)
The College in the Schools Program (CIS) was established as an enrichment program for high school students giving them an opportunity to take college classes in their high schools. Students are expected to perform to the standards to which the college's non-CIS students are held accountable. These include policies regarding academic standing and student conduct.

College in the Schools Criteria
A high school junior/senior applying as a CIS student must meet the following criteria:
1. 12th grade/senior must have a GPA of 2.5 or greater
2. 11th grade/junior must have a GPA of 3.0 or higher
3. 9th or 10th grade must rank in the upper one-tenth of their class or attain a score at or above the 90th percentile on a nationally standardized, norm-referenced test, or letter of recommendation from high school official.

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.
3. CIS students are not eligible for financial aid, CLC scholarships or student employment. CIS Admissions Appeal Process CIS applicants who do not meet the admissions requirements and are denied acceptance have the right to appeal the decision. Students will contact their high school representative for details on appeal process.

What constitutes an Appeal for Admission into CIS?
An appeal must include a letter of recommendation from the high school counselor or principal stating the student can be academically successful at CLC and that the high school supports the student's admission to the college. CIS Academic Standard for GPA and Course Completion CIS students are required to maintain a minimum grade point average and course completion rate in order to continue their participation in the program. CIS students must maintain a cumulative GPA of 2.0 (C average) in their CLC courses and complete 67% of the courses that they attempt. If a student falls below either of these levels, they will receive a letter indicating that they are dismissed from the PSEO program. Under extraordinary circumstances appeal or dismissal from the CIS program will be re-considered.

Registration

Records and Registration Services
Many of the Records & Registration services such as adding and dropping courses, changing your address, and printing your own unofficial transcript are now available on the Web. For Records & Registration Services on the Web, go to www.clcmn.edu and click on the E-Services. To access registration services on the Web you will need your StarID & Password. You must activate your StarID before you can use it. Your Password is considered your "signature" and must be kept confidential since it will allow access your private data. If you have any problems activating or using your StarID, contact the Minnesota State ITS Help Desk at 1-877-466-6728.

Registration Procedures
Students may register for courses by using the eservices. Registration procedures vary depending upon whether the student is a new, returning, or in a program at the time of enrollment. When enrollment has discontinued for one year, the student is subject to the degree, diploma, or certificate requirements stated in the program that is current at the time of re-enrollment. Students who wish to enroll in more than 19 credits fall or spring semester, must have a 'Request for Additional Credits' form signed by an advisor. Students who wish to enroll for more than 9 credits during the summer semester, must have a 'Request for Additional Credits' form signed by an advisor. The college reserves the right to withhold registration privileges from students with unpaid college financial obligations.

Add/Drop Courses
Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation. Students are permitted to add and drop courses up to the first five days of the semester, or one business day after the first class meeting, whichever is later. Students are financially obligated for any classes not dropped after the fifth business day of the term, or one business day after the first class session, whichever is later and students are not able to have those courses removed from their academic record. For purposes of this policy, business days are defined as Monday through Friday (excluding posted holidays).

Repeating a Course
A course may be repeated for an improved grade. Only the highest grade earned will be counted toward a degree and in the computation of the overall numerical grade point average. This policy applies to all grades including "F" grades. However, both the original and the repeated grade will appear on the student's transcript. Tuition and fees will be charged each time.

Preferred Name Policy
CLC Policy 1B.1.3 Preferred Name Policy. CLC recognizes and supports students who wish to use preferred names where legally permissible. Students may designate a preferred name to be used in the course of college business and education. Preferred Name Change Forms are available in the Office of Records and Registration.

Transcript Requests
The Records and Registration Office maintains student academic records. Transcript records show all course work for which a student was registered during each term of enrollment and the grades awarded for those courses. Requests for transcripts can be made in person, by fax, by mail or electronically. Transcript requests will not be accepted via e-mail. If an official Central Lakes College (CLC) transcript is needed for a Minnesota State college or university, that institution may be able to obtain the CLC transcript electronically.

Please contact that institution directly for further information. A complete listing of the Minnesota State colleges/universities can be found at www.minnesotastate.edu/campuses. Unofficial transcripts may be obtained on the CLC registration website www.clcmn.edu/registration. Students will need their StarID and password to access their transcripts.

Transcript Hold
Academic student transcripts are not released for students with financial obligations. This includes unreturned library materials, media equipment and physical education equipment and unpaid tuition, fees or bookstore charges.

Academic Grading System
The college operates on a semester system. After each semester students may retrieve their grades from the Central Lakes College website www.clcmn.edu/registration.

The following grades are used at CLC:

Grade	GPA	Description
A+	4.0	Excellent
A	4.0	Excellent
A-	3.67	
B+	3.33	Above Average
B	3.0	
B-	2.67	
C+	2.33	
C	2.0	Average
C-	1.67	
D+	1.33	Minimum Passing
D	1.0	
D-	0.67	
F	0.0	Failing (For courses #1000 level or above)
FN	0.0	Non-attendance
FW	0.0	Unofficial Withdrawal
S	0.0	Satisfactory
U	0.0	Unsatisfactory
W	0.0	Withdraw (Student generated)
I	0.0	Incomplete
IP	0.0	In Progress
AU	0.0	Audit (Must be student generated at time of registration)
NC	0.0	No Credit (For courses numbered below 1000)

Definitions:

- The “I” grade is an agreement between the faculty member and the student. The student may be given up to one semester to complete the course requirements. An instructor will submit a grade change once the course requirements have been met. Students not completing the course requirements after the one semester will automatically receive an “F.”
- Students who have not attended the first 5 days of class will receive an “FN” grade and will not receive financial aid for this class.
- The “FW” grade means the student stopped attending class prior to 60% of the term being completed.
- The “S” grade represents average achievement of “C” or above. Arrangements for “S” grades must be made with the instructor.
- Credits of “S” will be limited to 30% of the total credits for the degree, diploma, or certificate.
- The “AU” grade means the student will audit the class. At the time of registration the student must indicate that he/she chooses to audit a class. The audit permits attendance and participation in course activities. No credit is earned for the audited course, and financial aid does not cover the course. However, tuition and fees remain the same. Regular attendance without registration is not authorized.
- Credit: The unit by which academic work is measured.
- Registered Credits: The total number of credits for which a student is officially enrolled at the end of the registration drop/add period of each semester.
- Earned Credits: Successfully completed credits.

Grade Point Average (GPA)
The grade point average (GPA) is determined by adding all grade points earned and dividing by the sum of all credits attempted in courses where letter grades of A, B, C, D, or F were received. Courses with grades of I, W, IP, S, U, AU, NC, and all transfer grades do not apply toward GPA calculations. A semester example is shown below.

Address Changes
Students may now change their address and phone number using eServices. Students are responsible for keeping their address current with Central Lakes College.

Classification of Students
Students are not required to take a minimum number of credits each semester. However, to make progress toward the completion of a 60-credit associate degree or diploma within a two-year time frame, students must complete an average of 15 credits each semester.

Students planning to take more than 19 credits fall and spring semesters and more than 9 credits summer semester must obtain approval from an advisor. For reporting purposes, students are classified according to the following:

- Full-time: A student who is enrolled in at least 12 credits during a semester.
- Part-time: A student who is enrolled in 11 or fewer credits during a semester.
- Freshman: A student who has completed 29 or fewer semester credits.
- Sophomore: A student who has completed 30 or more semester credits.

Visiting Students
Central Lakes College allows students registered at other Minnesota State colleges and universities to register for courses at Central Lakes College as long as those courses traditionally have not had demand from Central Lakes College admitted students, which historically had exceeded available seating capacity in the course.

Visiting students are not required to apply to Central Lakes College to register for their selection of courses and are permitted to register for a maximum of 22 credits among all Minnesota State colleges and universities. Visiting Students are not eligible for Financial Aid at Central Lakes College, but may be eligible for federal financial aid at their home college or university.

Graduation Requirements

1. Candidates for degrees, diplomas and certificates must comply with the following criteria:
2. Complete all degree, diploma and certificate program requirements. Credits must be earned in courses numbered 1000 or above.
3. Achieve a cumulative grade point average (GPA) of 2.0 or better on a 4.0 grading scale.
4. Fulfill all financial obligations to the college.
5. Complete one-fourth of their credits at Central Lakes College.
6. Submit an “Application for Graduation” form to the Records and Registration Office the semester before graduation.
7. Students who receive a 3.25-3.74 cumulative GPA will graduate with honors. Students who receive a 3.75-4.0 Cumulative GPA will graduate with high honors.

For the graduation ceremony, honors and high honors are determined at the end of fall semester. At this time, spring grades are not included.

Transfer of Credit
Students seeking a degree, diploma or certificate that have attended a previous college must have all official transcripts sent directly from that college to Central Lakes College Records and Registration. If the transcript is hand-delivered by the student, it must be delivered in an unopened college envelope. Student copies and faxed transcripts are not considered official. A course syllabus or course outline may be requested to determine course transferability.

Courses completed from colleges or universities which do not possess regional accreditation will be considered on an individual basis for evaluation but do require a syllabi or course outline for the course. Other documentation may be required. Transfer of credits shall be accomplished in accordance with Minnesota State Colleges and Universities policy and the policy of Central Lakes College. Once a course has met the criteria necessary for inclusion in the Minnesota Transfer Curriculum in any area of emphasis, the course must be accepted for full credit in that area of emphasis at all Minnesota State colleges and universities.

Lower division courses (100, 200, or 1000, 2000 numbered) completed with a grade of “D-” or better at regionally accredited colleges will be accepted in transfer. “S” grades will be accepted if the transcript legend designates the “S” grade equals a “C” grade or higher.
Not more than six upper-division (300, 400 or 3000, 4000 numbered) semester credits may be used in transfer.

Your Rights as 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
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 Minnesota State 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: www.Minnesota State.edu/board/procedure/321p1.html.

Credit for Military Experience
An enrolled student may request an evaluation of military experience and education for college credit from an official military transcript.

This is evaluated and awarded by the Registrar according to the standards of the American Council on Education (ACE), the American Association of College Registrars and Admissions Officers (AACRAO), and the policies of Central Lakes College. Contact the Records and Registration Office for information.

Credit for Advanced Placement Testing
Central Lakes College will award credit for Advanced Placement testing provided the student earned a score of 3 or above on the exam. The amount of credit granted will not exceed the credit granted for an equivalent course or course sequence offered by CLC.

Approved credits will be transcripted as “Advanced Placement” credits. Students wishing to apply for Advanced Placement credit should request to have test results mailed to Records and Registration.

Credit for CLEP
Credit for both subject and area examinations of CLEP (College Level Examination Program) will be evaluated for credit according to the recommendation of the American Council on Education and according to the policies of Central Lakes College. Students wishing to apply for credit should have results mailed from CLEP directly to the Records and Registration office. Approved credits will be transcripted as “CLEP” credits. Information about CLEP is available in the Counseling Center.

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 by Evaluation
If a student is confident that he/she has the competencies needed to meet the objectives for a diploma program course, he/she may make a request for Credit by Evaluation by following these steps:

1. Contact the instructor of the course you would like credit for to see if this option is available.
2. If the student decides to proceed, he/she should complete the Credit by Evaluation form
3. After the student completes the form, the VP of Academic Affairs or designee will assign the appropriate instructor to administer the evaluation. The evaluation may be oral, written, demonstration, or a combination of these.
4. The student will go to the cashier to pay the appropriate non-refundable fee. Students are reminded that financial aid does not cover any of the Credit by Evaluation fees.
5. The student will then meet with the assigned instructor to set up the test time and finalize criteria for the evaluation.
6. The examination will be administered to the student.
7. The instructor will return the Credit by Evaluation form to the VP of Academic Affairs who will ensure the credits are appropriately transcribed.
8. Only the grade of "S" will be allowed for Credit by Evaluation courses.

Withdrawing from a Course
Students may withdraw online using e-services by selecting the "drop/withdraw" function after selecting the course you wish to withdraw from. When a student withdraws from a course, his/her transcript will show a "W" grade for the course. The last date to withdraw from a course is course specific. This information is located on the course webpage in eServices. 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.

Tuition & Fees

Tuition & Fees
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 acknowledgement on the part of the student that he/she will attend and pay for the registered courses. It is the responsibility of the student to review their account in Student e-Services and pay their bill by the due date.

- Tuition is due 15 days prior to the start of the semester.
- Tuition payments must be received, in the Business Office, by the tuition due date.
- Financial Aid is disbursed on the 12th day of the semester. For current student account information please check online at www.clcmn.edu. Select e-Services at the top of the screen and log in using your StarID.

Tuition
For planning purposes, students may estimate tuition and fees at $200 per credit.

- Central Lakes College charges in-state tuition to all students unless another state's reciprocity agreement dictates otherwise.
- Tuition for online courses is an additional $30 per credit.
- Certain technical and lab courses may be charged a higher rate of tuition.
- Additional charges may apply depending on the courses for which a student registers.

Mandatory Fees

- Parking Fee: Students are charged $2.50 per credit and a maximum of $40 per semester for on campus parking. This fee supports parking lot and sidewalk construction, improvements and maintenance. This fee is not assessed for online or off campus credits, nor is it assessed for summer term.
- Statewide Student Association Fee: This fee is $0.35 per credit and supports the Minnesota State Colleges Student Association (MSCSA).

Other Fees

- Activity Fee: This fee is $5.45 per credit and supports campus cultural activities, student senate and student clubs. The fee maximum is $112.50 per semester.
- Athletics Fee: This fee is $4.20 per credit and supports student athletics and free access to home games. The fee maximum is $55 per semester
- Technology Fee: This fee supports student and classroom technology. The fee maximum is $10.65 per credit.
- Service Charges: Charges for items that become the personal property of a student and have an educational or personal value beyond the classroom or for services for or on the behalf of the students. The actual cost shall be the allowable maximum charge. These charges may include but are not limited to testing fees, assessment fees, processing fees, or other course related fees.

Senior Citizen Charges and Fees

As defined in Minnesota Statutes §135A.51 a senior citizen is a legal resident of Minnesota who has reached 62 years of age before the beginning of any term, in which a course of study is pursued. Senior citizens pay an administrative fee of $20 per semester credit in lieu of tuition. Senior citizens are exempt from student activity fee and athletic fee, but are required to pay all other applicable student fees. Senior citizens who audit a course do not pay the $20 administrative fee, student activity fee, athletic fee, technology fee, or student association fee, but are still responsible parking fees and all other applicable fees.

Due Dates

The tuition due date is 15 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 6th business day of the term. Full payment is due 25 business days after the start of the term unless the student has obtained an approved tuition and fee payment plan. Financial aid disburses on the 12th 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 tuition and fees due or made a $350 down payment towards tuition and fees;
- FAFSA (Free Application for Student Aid) has been received by the college;
- The student has enrolled in a Nelnet payment plan;
- The student has received an approved third party funding deferral and the college is in possession of an authorization, in an amount adequate to cover charges; or
- The student has received an approved waiver or scholarship toward tuition and fees due.

The registration cancellation process occurs on the 6th business day of the term, after the free add/drop period has ended.

By meeting the minimum criteria of the payment policy, registration is secured and students should attend their courses. If plans change and the student will not be attending, it is the student's responsibility to login to e-Services and drop/cancel their course registration by the end of the 5th day of the term. Students should not rely on the Registration Cancellation process to drop their courses for them.

Payment Plans

Nelnet Payment Plan: Central Lakes College offers Nelnet as a convenient budget plan. The cost to budget an interest-free monthly payment plan is a $24 per semester, non-refundable enrollment fee. Tuition, fees and books may be included in the plan. Payments are made through an automatic withdrawal from either a checking, savings, or credit card account. Payments are processed on the 5th or 20th of each month. Additional information is available at www.clcmn.edu/businessoffice/.

CLC Payment Plan: Student accounts not paid in full or enrolled in a Nelnet payment plan, by the 25th day of the term are past due, are considered to be on the CLC internal payment plan and are charged a $30 payment plan fee. After the fee is applied, students have until the last day of the term to pay their account in full.

Unpaid Balances, Holds and Late Fees

An Unpaid Balance Hold is applied to accounts on the 25th day of the term. This hold prevents registration for additional courses at any Minnesota State college or university. Payment in full is required before you may register for subsequent

courses and before the hold is removed. Accounts not paid in full by the end of the semester are charged a $50 late fee and could be referred to Minnesota Department of Revenue for collections. After referral, additional collection fees are applied to the past due account.

Deferment for Textbooks and Course Materials
Bookstore charging is open 4 weeks each term; beginning 3 weeks prior to the start of each term and ending the 5th day of the term. Students that have met the minimum tuition payment criteria, and are not in danger of having their course registrations cancelled, may charge up to $1,000 in the campus bookstore for textbooks and related supplies. A picture ID (student id, driver's license) and a course schedule are required to charge books. Books can also be purchased online at clcbookstore.com, and charged to financial aid, PSEO or credit card.

Dishonored Checks/NSF Fee
Checks will be considered NSF/dishonored after they have been presented to the bank twice and are returned to Central Lakes College unpaid due to non-sufficient funds, closed account, stop payment, etc. Dishonored checks will be backed out of the account to which they were deposited and the NSF fee will be charged. If the reversal of the receipt causes the account to become unpaid after the due date, applicable late charges will also be added to the account. The NSF fee is $35 and is subject to change without notice.

Students' Receiving Financial Aid
The fee statement does not list the amount of financial aid a student is eligible to receive. It shows the amount of tuition and fees owed. The financial aid award letter lists the types and amounts of funding a student is eligible to receive based on the number of enrolled credits. The two documents should be compared to determine if the student will personally owe the college for any of the tuition costs.

A separate master loan promissory note must be completed in order to borrow a student loan. If you decide to borrow a student loan, there are new regulations from the Federal Government regarding loan disbursements:
• For all borrowers, a single term loan (i.e. fall semester) must have two disbursements. The first disbursement will be in the first half of the term, and the second disbursement will occur after the midway point.
• For first-time borrowers, the first disbursement will be delayed until after the 30th day of the first term. Attendance is required to earn 100% of your financial aid award. Your record is reviewed to ensure compliance financial aid rules.

If you do not complete your courses, you may be required to pay back a portion or your entire financial aid award. Financial aid recipients may not use their current aid to pay unpaid balances from previous academic years.

Refunds for Dropped Classes
Students are entitled to have the opportunity to attend one class session for each registered, for-credit course, without obligation. Subject to the refund for full withdrawal provision, students are financially obligated for any classes dropped after the fifth business day of the term, or one business day after the first class session, whichever is later. Business days are defined as Monday through Friday (excluding posted holidays). If a student is financially obligated for a dropped class, the student may petition Central Lakes College to apply the amount of the tuition and/or fees for the dropped class to the cost of an added class for the current term.

For courses less than three weeks in length, the no-obligation drop-and-refund period is one business day after the first class session for each for-credit course.

Refunds for Withdrawals
Individual 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 Percentage
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 Percentage
1st through 5th day of term 100%
6th through 10th day of term 50%
After the 10th day of term 0%

Waivers
The president may waive amounts due to Central Lakes College for the following reasons:

- Employee benefit provided by a collective bargaining agreement.
- Death of a student
- Medical reasons
- College error
- Employment related condition
- Significant personal circumstances
- Student leader stipends
- Course conditions (A course condition exists when the location or timing of the course results in the student not being able to use the services intended by a fee).
- Natural disasters or other situations beyond the control of the campus.
- The president may waive amounts due to Central Lakes College for individual institutional waivers as approved by the Board.
- Central Lakes College shall define the terms under which any authorized waiver will be granted. Central Lakes College maintains documentation for all waivers.

Central Lakes College, in accordance with Board policy, cannot waive the MSCSA student association fee.

Appeals for Tuition and Fee Refund
After the drop/add period has expired, a refund of all or part of the tuition paid may be given under certain circumstances. Students may apply for an Administrative Refund for the following reasons only:

- Medical reasons: Injury or illness that requires a prolonged absence. A doctor's statement, on physician's letterhead, is required and must declare that the medical condition impairs the student's ability to attend or complete classes.
- Significant personal circumstances defined as a life event beyond the student's control that can be corroborated by an independent professional, such as a social worker, lawyer or law enforcement agent.
- Military duty (letter of assignment or notice of re-call is required).
- Death in the immediate family (that can be documented).

Financial aid is based on the number of registered and paid credits. If an Administrative Refund is approved, a student's financial aid may be reduced, which would require the student to repay a portion of his/her financial aid. Students need to contact the Financial Aid Office before applying for a tuition refund to determine if their aid package will be impacted.

If an Administrative Refund is granted, classes are dropped, no grades are awarded and the student's transcript is not impacted. Appeal forms are available from the Financial Aid Office and the Business Office. Forms must be completed and signed by the student.

- Forms must be completed and signed by the student.
- Appeals must be made within ninety (90) calendar days of the end of the semester for which the debt was incurred. Appeals will not be considered for debt greater than ninety days old. A committee reviews all Administrative Refund Appeals.

Financial Assistance

Financial Assistance
Central Lakes College is dedicated to bringing the highest quality of education within reach of every person who has a desire to pursue a college education. The Financial Aid Office at CLC has developed a comprehensive financial aid program based on federal, state, and institutional resources to help cover the cost of education. CLC annually awards assistance to about 70 percent of its student body.

Therefore, no prospective student should hesitate to apply for admission because of financial circumstances. The CLC Financial Aid staff encourages all students to apply for financial aid. For the most current information regarding Financial Aid please visit the CLC website at www.clcmn.edu/financialaid. CLC has a financial aid office on each campus.

Eligibility Requirements: Unless otherwise stated, students receiving financial aid must:

1. Demonstrate financial need, as determined by the results of the Free Application for Federal Student Aid (FAFSA);
2. Have a high school diploma or GED;
3. Be enrolled and attend class as a regular student in a degree program of at least one academic semester in duration that leads to a certificate, degree or other recognized credential and prepares students for gainful employment in a recognized occupation;
4. Maintain federal and state regulations requiring that all persons receiving financial aid meet the college's Standards of Academic Probation and Suspension.
5. Be a U.S. citizen or an eligible non-citizen;
6. Not be in default on any student loan or owe a refund to any student grant program;
7. Be registered for Selective Service (if required).

How is Eligibility Determined?
Most financial assistance is awarded on the basis of financial need and may include a combination of the various types of aid. Need is defined as the difference between the cost of attending Central Lakes College and the available resources of the student and student's family to meet these costs (determined by the results of the Free Application for Federal Student Aid).

How to Apply for Financial Aid:
The Free Application for Federal Student Aid (FAFSA) is available after October 1 of each year. (The FAFSA needs to be completed online each year the student is in school.) If you have Internet access, you can file a FAFSA at www.studentaid.gov. A paper FAFSA may be requested by directly contacting the US Department of Education. Please contact the Financial Aid office if you have questions.

Students who have a completed financial aid application on file with the college by June 1 receive priority consideration for campus-based aid (Federal Supplemental Educational Opportunity Grant (FSEOG) and student employment). After June 1, applications are reviewed on a first-come, first-serve basis. Separate applications are processes are needed for Post-Secondary Child Care Grant program, Alliss Grant, Foundation Scholarships and any student loan.

Types of Financial Assistance
Financial aid comes in three basic categories: Grants and Scholarships, Student Employment and Loans.

1. Grants and Scholarships:
   a. Federal Pell Grant - This is a federal grant awarded to eligible students. Students must demonstrate financial need.
   b. Federal Supplemental Educational Opportunity Grant (SEOG) - This is a federally funded grant administered by the college. Students must demonstrate high financial need. Awards are limited to funds available.
   c. Minnesota State Grant - This is for Minnesota residents attending a Minnesota college only based on eligibility.
   d. Post-Secondary Child Care Grant Program - Income-based grant for students who have children in daycare. Awards are limited to funds available.
   e. Alliss Grant - This grant pays for up to one 1-5 credit class for eligible students. A student may receive it once. Course fees and books are not covered by this grant.
   f. CLC Foundation Scholarships - CLC has an extensive scholarship program for a variety of scholarship applicants. A CLC Foundation Scholarship application is required. Certain deadlines apply. Check with the Foundation Office, Admissions, Financial Aid or the Counseling/Career Center for more information and application form.
   g. Outside scholarships - Announced in community newspapers and local high schools. Students may contact the Foundation Office.

2. Student Employment: Provides students with opportunities to earn money to help meet educational costs. Students must complete the FAFSA to demonstrate financial need in order to qualify. Student employment is viewed as a regular job with responsibilities and employer expectations. Students receive an hour's pay for an hour's work Jobs

are available both on campus or at designated off-campus sites. A listing of available jobs can be found on the college's website under Financial Aid.

3. Student Loans: Money that is borrowed and must be repaid. All borrowers must complete loan entrance and exit counseling, a Master Promissory Note and complete a separate online loan acceptance process. Central Lakes College requires a 30-day delay for students who are new borrowers to receive their loan proceeds. In addition, all Federal Direct loans are subject to multiple disbursement regulations.
    a. Federal Direct Student Loan programs (subsidized and unsubsidized) - Low-interest loans obtained via CLC, through the U.S. Department of Education. Interest will not exceed 8 1/4% with long-term payments beginning six months after enrollment drops below six credits.
    b. Federal Direct Parent Loan for Undergraduate Students (PLUS) - This loan has a variable interest rate, not to exceed 9%, with payments due within 60 days after the loan is fully disbursed.
    c. Federal Perkins Loan - A student must show high financial need for this low interest loan at 5%. Recipients are determined by CLC according to the amount of funds available. Priority is given to students who have their financial aid file completed prior to June 1.
    d. Alternative Loans - These loans should be used as a last resort, and are secured through a bank, savings and loan or credit union. Interest rates vary greatly and a creditworthy co-signer is usually required.

Steps for Receiving Student Financial Aid

1. The student must be accepted for admission and enrolled at Central Lakes College.
2. The student must file a Free Application for Federal Student Aid (FAFSA).
3. The U.S. Department of Education processor sends a Student Aid Report (SAR) to the student via email or U.S. mail.
4. The U.S. Department of Education processor automatically sends the college your information when you have entered the appropriate college code on the FAFSA. Central Lakes College code is 002339.
5. Paperwork such as Tax Transcripts (parent and/or student), Institutional Verification Forms (IVF), or Social Security card may be required.
6. Students transferring from one college to another in the middle of the academic year must inform both schools of their intent to transfer.
7. Estimated award information will be available to students via the E-Services portal after the financial aid file is completed. Students will be notified via e-mail that their award is ready. This award information will explain your grant, loan and work eligibility. Your financial aid award will be finalized at the time of disbursement.
8. Financial aid awards are based on the number of credits at time of disbursement. Students who add a class after their aid has been disbursed may not be eligible for additional financial aid. Students who withdraw from a class prior to their aid being disbursed do not receive aid for the withdrawn class.
9. If you or your family have unusual circumstances, (such as unusual medical or dental expenses not paid by insurance, loss of income or assets) please contact the Financial Aid office, or refer to the "Special Circumstances" paragraph at the end of your award letter.

Return of Federal Financial Aid

Any student considering totally withdrawing from the college should contact the Financial Aid office before making a decision to totally withdraw. CLC is not required to, and does not, record student attendance. Federal regulations mandate that the college have a procedure in place to ensure that students have attended, at a minimum, one class session in each course in which that student has registered, if that course was used to determine enrollment status for Federal funding. In addition, Federal regulations require that students who totally withdraw, whether officially or unofficially or have stopped attending all their classes on or before the 60% point in time of the completed term must be evaluated under the Federal Return to Title IV refund regulations. These regulations include a federal formula, which will determine if a repayment is owed to the financial aid programs for which the student was funded. Withdrawal on or before 60% of the completed term means that a student has not earned all of the financial aid he/she was paid. Federal regulations consider the student to have earned all of their aid if the student's attendance extends beyond the 60 percent point of the term.

The Return of Federal Financial Aid policy applies to the following federal aid programs and funds must be returned in this order: Federal Direct Loans, Perkins Loans, PLUS loans, Pell Grants, SEOG Grants. Refunds to Minnesota financial aid programs are calculated appropriately using CLC's Refund policy.

Impact of Total Withdrawals before the 60 percentage point of time

Students may receive financial aid either as a credit to an account or as a cash payment. If funds have been credited to the student account and the college has an obligation to return federal funds, the student will owe a balance to the

college. When a student owes a balance to the college for unpaid tuition/fees, repayment arrangements must be made within 3 weeks of the end of the term. If the student fails to make repayment arrangements, the college will turn the balance owed the college to the Minnesota Revenue Recapture Program. Examples of these calculations are available upon request in the CLC Financial Aid office. Refunds to Financial Aid Programs are conducted before the student would receive a withdrawal refund. For students receiving State financial aid funding, Minnesota Higher Education Services Offices policies will apply.

Unofficial Withdrawals
Any student who stops attending but does not officially withdraw will be considered an unofficial withdrawal. For unofficial withdrawals the last date of attendance is defined as the student's last date of recorded attendance or the midpoint of the semester. Every effort is made to identify students as soon as possible after their withdrawal. Unofficial withdrawals will not receive a refund of tuition or fees. CLC uses the MN State software to determine how much funding will be considered unearned and will need to be returned. Students must attend each class at least once to receive a portion of their financial aid.

Satisfactory Academic Progress
Federal law requires that a recipient of state or federal financial aid make satisfactory academic progress toward a degree, diploma or certificate. All students are required to maintain a 2.0 cumulative grade point 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 (Minnesota State) 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 institutions standards before the student would reach the end of the program, the student shall be suspended from financial aid". The complete Satisfactory Academic Progress Policy can be found on the CLC Policy and Procedure website: http://www.clcmn.edu/college-policies/.

Student Services

Your Success is Our Goal
Attending college is a time for developing your own life direction, learning about yourself and your interests and strengths. To this end, Central Lakes College offers counseling, advising, assessment, career planning, and placement services. And because your personal development is as important as your career decisions, Central Lakes College offers activities through organizations and clubs to meet individual needs. At CLC, the staff wishes to help you become a successful student who knows how to analyze, make decisions, solve problems and relate well with others. The staff is here to help you find and further develop these qualities in yourself.

Career Services
Career Services has a wide range of printed and computerized career materials, surveys, and assessments which can help focus a career search and begin making decisions about college choices and career opportunities. In addition, the Career Services features the Minnesota Career Information System, which is a computerized career information system that supplies up-to-date information on employment trends, working conditions, training required for specific jobs, and current salaries.

The Counseling Department offers structured career exploration classes as well as a variety of workshops to assist students in making informed career and educational decisions. Counselors Exploration/Planning courses provide participants with a more comprehensive look at their interests, abilities, personal 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, registration and more. Advisors are a vital resource for students.

Counseling
Counselors meet with students to discuss areas of concern that may interfere with college success. Counselors refer students to outside resources when needed and provide on-campus support for students receiving off-campus services. If you are in a crisis and need immediate help, please come to the Campus Information & Services window and ask to see a counselor right away. If a counselor is unavailable, call for help, 1-800-462-5525 crisis hotline.

Veterans Resource Center
The Veterans Resource Center (VRC) provides information and support to current or former military members, their families and community members. The VRC has, or can locate information about veterans' services, financial resources, scholarships, veteran and family support activities and other items of interest to veterans, family members or community members. The VRC's director also serves as a certifying official for CLC students receiving veterans' benefits. Students or prospective students, who are or were in the military, are encouraged to contact the Center to arrange for priority registration before the beginning of the term. To be eligible for priority registration, the student must visit with the VRC Director, develop a written educational plan, research available financial resources and agree to follow-up services if needed. The Center staff serve as an advocate for veterans as well as a college training and educational resource. Staff from the Center provide information and public speaking about veterans issues for the general public. Everyone is welcome to drop in and visit. For additional information call or e-mail the VRC.

English Language Learner Services
Limited English language skills should not be a barrier to admissions to Central Lakes College. Upon admissions, CLC supports ELL students to navigate the college process and overcome barriers by taking appropriate measures to assess each student's ability to participate and benefit through placement testing and one-on-one coaching.

Raider Connect Services
Raider Connect Coaches (RCCs) provide mentorship, support and connections to all CLC students.
RCCs are proactive mentors that can advocate for the student's personal, educational and career goals. A Raider Connect Coach checks on student progress by monitoring academic success and connects with students through personalized, early intervention that fosters problem solving, skill-building and access to resources.

Learning Commons
The Learning Commons at the Brainerd and Staples campuses help prepare students for achievement in college courses. The services coordinated through this area:
1. Computer Assisted Instruction: Interactive computer stations and programs are available to support classroom activities for students from various disciplines.
2. Study Group Facilitation: Study groups for students will be coordinated through the staff in this department.
3. Supplemental Instruction: Academic assistance program that supports classes by providing regularly scheduled, out-of-class, peer-facilitated study sessions.
4. Tutoring Services: Tutoring is offered 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. Peer tutors provide these services. (Peer tutors are students who are in the top 5% of the course they wish to tutor in, come highly recommended by faculty, and are trained/certified by the Learning Commons Coordinator.) All services are free of charge to CLC students.
5. Read, Write Gold (RWG) Computer Software: RWG Literacy Software is a tool available to all CLC students who would like some extra help with reading, writing, and research. RWG's friendly literacy features help English Language Learners, as well as people with dyslexia and other learning difficulties. Students may easily download this tool free, from the front page of D2L Brightspace.

Accessibility Services
Students with a documented disability may have access to reasonable accommodations through the Accessibility Services Office. Diagnosis include but not limited to learning disabilities, vision and hearing losses, physical and psychological diagnosis, traumatic brain injuries, Autism Spectrum Disorder/Asperger's and attention deficit disorders. Accommodations are determined on a case-by-case basis and may include alternative testing, note taking/lecture notes, interpreters, assistive technology, audio books and other reasonable accommodations. To start the process of getting connected with AS office students must first provide documentation of their diagnosis and then schedule an intake meeting with the Coordinator of Accessibility Services. For any questions please call 218-855-8175, email at accessibilityservices@clcmn.edu, or stop by our office at E138. 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 Equity and Inclusion
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 Equity and Inclusion.

TRIO 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 180 students each year. Federal regulations require that the participants must qualify as at least one of the following:

- First generation college student (neither parent has completed a bachelor's degree)
- Low to moderate-income student (according to the U.S. Government)
- Student with a documented disability.

A student must be enrolled in Central Lakes College (Brainerd or Staples campus), taking six or more credits and be a U.S. citizen.

During the academic year, students receive individual and group advising to foster positive study habits and academic success. Students can take advantage of a comfortable learning environment, leadership opportunities, cultural excursions, and academic workshops. Student Support Services is a federally funded program by the U.S. Department of Education. For more information, contact director Charles Black Lance at 218-855-8119.

TRIO Upward Bound
Upward Bound is a college access program federally funded by the U.S. Department of Education. Upward Bound provides fundamental 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.

All Upward Bound projects provide instruction in math, laboratory science, composition, literature, and foreign language.

Other services include:
- ∞ Instruction in reading writing, study skills, and other subjects necessary for success in education beyond high school.
- ∞ Academic, financial, or personal advisement.
- ∞ Exposure to academic programs and cultural events.
- ∞ Tutorial Services.

Student Conduct Policies and Procedures

3.6 Student Conduct Policy
Part 1. Student Conduct Policy
The Central Lakes College Student Code of Conduct serves two purposes: the first purpose is to serve as a guide for student behavior; the second purpose is to outline the procedures to be followed, both by students and college officials, should violations of the Code occur. It is expected that all students will read this code and will be responsible for knowing and abiding by its content.

In the eyes of the College, two authorities guide a student's conduct while on campus or while participating in off-campus, college-sponsored activities. First, as a citizen of the larger community, each student is expected to abide by the rules, regulations, and policies of the College as well as local, state, and federal laws.

Part 2. Off Campus Conduct Jurisdiction
The College Student Code shall apply to conduct that occurs on College premises, at College-sponsored activities, and to off-campus conduct, including Central Lakes College Foundation Student Housing, in the following circumstances:

1. Hazing is involved; or
2. The violation is committed while participating in a college sanctioned or sponsored activity; or
3. The victim of the violation is a member of the college community; or
4. The violation constitutes a felony under state or federal law; or
5. The violation adversely affects the educational, research, or service functions of the college.

As an institution dedicated to teaching and learning, Central Lakes College has a vested interest in maintaining an environment in which students are free to pursue their academic interests and responsibilities. Conduct that unreasonably restricts such freedom and interferes with the College mission of promoting student learning is subject to regulation and/or sanction by the College. The creation of such an environment is premised on the assumption that students have both rights and responsibilities. Therefore, a major function of the College is to guarantee student rights, yet to demand student responsibility.

Part 3. Appeals
Students found to be responsible for a conduct violation shall be provided an avenue of appeal within the institution. In addition, in cases involving sanctions of suspension for 10 days or longer, students shall be informed of their right to a contested case hearing under Minnesota State Statute 14. Student Code of Conduct Policy and Procedures are located on the CLC website:
Policy 3.6 www.clcmn.edu/wp-content/uploads/2015/06/3.6-Student-Conduct-Policy.pdf
Policy 3.6.1 www.clcmn.edu/wp-content/uploads/2015/06/3.6.1-Student-Conduct-Procedure.pdf

Drugs and Alcohol Policies, Prevention and Resources

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 Minnesota State Policy 5.18.1 to maintain a drug and alcohol-free environment. The college prohibits the illegal use of alcohol and drugs and complies fully with federal, state and local regulations regarding the sale, possession and consumption of alcoholic beverages and controlled substances. All members of the college community are held responsible for their behavior and for respecting the rights of others. The college is committed to providing the community with education regarding high-risk alcohol and drug use and to making health-enhancing experiences a priority.

Non-Discrimination:
The drug and alcohol policy in regards to learning or work substance abuse is non-discriminatory in intent and application. However, in accordance with Minnesota Statues, disability does not include any condition resulting from alcohol or other drug abuse, which prevents a person from performing essential functions of the classroom or the job or creates a direct threat to property or the safety of individuals.

Alcohol Policy:
The unlawful possession, use, production, distribution or sale of alcohol by any student or employee is prohibited on the college property (including buildings, grounds and vehicles) or as any part of a college activity in accordance with

Minnesota State Colleges and University guidelines (regardless of age), city, state and federal laws. To consistently ensure compliance with these regulations, alcohol beverage containers (both empty and full) are not allowed on campus. Examples include, but are not limited to: cans, bottles, kegs, party balls, crates, cases and wine or liquor bottles. Exemptions would include alcohol beverage containers that may be used within a course curriculum or theatrical production or a college function that has, on file, a Minnesota State Board permit on file. Any student, faculty or staff member found to be in violation of federal, state and/or local law, or who violates the college' alcohol and other drug policies, are subject to Central Lakes College disciplinary procedures and or referral to the appropriate authorities for legal prosecution. Campus disciplinary sanctions include, but are not limited to, written warnings, probation, suspension and/or dismissal. Sanctions may also apply to registered student organizations and to off-campus conduct involving activities sponsored or authorized the Central Lakes.

Legal Requirements:
The following general provisions apply to individual possession or use of alcoholic beverages on college property, on property owned or controlled by the college, and at college sponsored events:
• No person who is less than 21 years of age may purchase, sell, furnish, possess, or consume any type of alcoholic beverage.
• No person may be in a public area in an intoxicated condition.
• No person may possess an open container of alcohol in a public area, including, but not limited to, hallways, stairways, and other common areas of the facilities.
• No person may provide alcohol to any person who is less than 21 years of age.
• No person may misrepresent their age through false documents or to lend their identification to someone for the purpose of purchasing or using alcoholic beverages.
• No person, under the age of 21, may drive with any amount of alcohol in their system.

Policy Violations:
If a policy violation occurs, students are subject to appropriate discipline by the Dean of Students, Equity and Inclusion.

Policy 3.6 www.clcmn.edu/wp-content/uploads/2015/06/3.6.1-Student-Conduct- Procedure.pdf

Policy 1B.3.3 www.clcmn.edu/wp-content/uploads/2015/04/3.6.2-AddendumUniformAmnestyPolicyStudentConductDrugsAlcoholandSexualViolence-CLCWebsite.pdf

Sanctions, may include, but are not limited to, community service hours, loss of privileges or services within the college community, referral to counseling, suspension, dismissal or expulsion or may be referred to law enforcement.

Legal Sanctions:
The State of Minnesota may impose a wide range of sanctions for alcohol-related violations.

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.

Prosecution of drug possession and sale may include the following:
- ∞ Students may have drugs and/or paraphernalia confiscated by local law enforcement.
- ∞ Students will be referred to the Dean of Students, Equity & Inclusion, for disciplinary action.
- ∞ Students may have possible legal action taken against them by the State or Federal Government.
- ∞ Students may have a possible loss of Federal Financial Aid.

Policy Violations:
If a policy violation occurs, students are subject to appropriate discipline as noted in the student code of conduct:
Policy 3.6 www.clcmn.edu/wp-content/uploads/2015/06/3.6.1-Student-Conduct- Procedure.pdf
Policy 1B.3.3 www.clcmn.edu/wp-content/uploads/2015/04/3.6.2-AddendumUniformAmnestyPolicyStudentConductDrugsAlcoholandSexualViolence-CLCWebsite.pdf

Sanctions, may include, but are not limited to, community service hours, loss of privileges or services within the college community, referral to counseling, suspension, dismissal or expulsion 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.

Drug/Alcohol Policies:
Policy 3.6 www.clcmn.edu/wp-content/uploads/2015/06/3.6.1-Student-Conduct- Procedure.pdf

Policy 1B.3.3 www.clcmn.edu/wp-content/uploads/2015/04/3.6.2-AddendumUniformAmnestyPolicyStudentConductDrugsAlcoholandSexualViolence-CLCWebsite.pdf

Health Risks Associated with Alcohol and Drug Use and Abuse
Alcohol: Alcohol consumption causes a number of changes in behavior and physiology. Even low doses significantly impair judgment, coordination, and abstract mental functioning. Statistics show that alcohol use is involved in a majority of violent behaviors on college campuses, including acquaintance rape, vandalism, fights, and incidents of drinking and driving. Continued abuse may lead to dependency, which often causes permanent damage to vital organs and deterioration of a healthy lifestyle.

Amphetamines: Amphetamines can cause a rapid or irregular heartbeat, headaches, depression, damage to the brain and lungs, tremors, loss of coordination, collapse, and death. Heavy users are prone to irrational acts.

Cocaine/Crack: Cocaine users often have a stuffy, runny nose and may have a perforated nasal septum. The immediate effects of cocaine use include dilated pupils and elevated blood pressure, heart rate, respiratory rate, and body temperature, paranoia and depression. Cocaine is extremely addictive and can cause delirium, hallucinations, blurred vision, severe chest pain, muscle spasms, psychosis, convulsions, stroke and even death.

Hallucinogens: Lysergic Acid Diethylamide (LSD) causes illusions and hallucinations. The user may experience panic, confusion, suspicion, anxiety, and loss of control. Delayed effects, or flashbacks, can occur even when use has ceased. Phencyclidine (PCP) affects the section of the brain that controls the intellect and keeps instincts in check. Hallucinogens can cause liver damage, convulsion, coma and even death.

Marijuana: Marijuana may impair or reduce short-term memory and comprehension, alter sense of time, and reduce coordination and energy level. Users often have a lowered immune system and an increased risk of lung cancer. Users also experience interference with psychological maturation and temporary loss of fertility. The active ingredient in marijuana, THC, is stored in the fatty tissues of the brain and reproductive system for a minimum of 28 to 30 days.

Methamphetamine: Methamphetamines, known as speed, meth, ice, glass, etc., have a high potential for abuse and dependence. Taking even small amounts may produce irritability, insomnia, confusion, tremors, convulsions, anxiety,

paranoia, and aggressiveness. Over time, methamphetamine users may experience symptoms similar to Parkinson's disease, a severe movement disorder.

Narcotics: Narcotics such as codeine, heroin or other opiate drugs cause the body to have diminished pain reactions. The use of heroin can result in coma or death due to a reduction in heart rate.

Steroids: Steroid users experience a sudden increase in muscle and weight and an increase in aggression and combativeness. Steroids can cause high blood pressure, liver and kidney damage, heart disease, sterility and prostate cancer. Additional information can be found at: www.nida.nih.gov.

Resources
There are several local and national resources for alcohol and drug information, treatment, and support.

Information:
- National Institute on Alcohol Abuse and Alcoholism, www.niaaa.nih.gov
- National Institute on Drug Abuse, 800-729-6686, www.drugabuse.gov
- National Alliance on Mental Illness, 800-950-6264, www.nami.org

Treatment Programs:
- Crow Wing County Community Services, Chemical Health, 218-824-1140, 204 Laurel Street, Brainerd, MN 56401, www.crowwing.us/169/Chemical-Dependency
- Essentia Health-St. Joseph's Medical Center, 218-829-2861/800-277-8262, 523 North 3rd Street, Brainerd, MN 56401, www.essentiahealth.org
- Todd County Health and Human Services, 320-732-4500, 200 1st Street Northeast, Suite 1, Staples, MN 56479, www.co.todd.mn.us/divisions/health-human/health-services
- Meridian Behavioral Health, 877-367-1715, www.meridianprograms.com
- MN Adult & Teen Challenge, 218-833-8778/612-373-3366, 2424 Business 371, Brainerd, MN 56401, www.mntc.org

Support Services:
- Alcoholics Anonymous, 218-828-4811/218-825-3770, 302 4th Avenue Northeast, Brainerd, MN 56401 and 7829 State Highway 210, Baxter, MN 56425, www.aacentrallakes.org
- Alcoholics Anonymous, 218-631-3828, 421 4th Street Northwest, Wadena, MN 56482, www.al-anon.org/, or www.meetings.intherooms.com/meetings/search?latitude=46.358449&longitude=-94.783979&proximity=100
- Narcotics Anonymous, Brainerd, MN 56401, www.narcotics.com/na-meetings/minnesota/brainerd/
- Narcotics Anonymous, Staples, MN 56479, www.narcotics.com/na-meetings/Staples/
- Crisis Line (available 24 hours/day), 218-828-HELP/800-462-5525

Sexual Harassment and Sexual Violence

Sexual Harassment and Sexual Violence
Sexual harassment and sexual violence is prohibited at Central Lakes College and is an intolerable intrusion into the most personal and private rights of an individual. CLC is committed to eliminating sexual harassment and 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 Minnesota State Board Policies that may require separate proceedings. To further its commitment against sexual harassment and sexual violence, Central Lakes College provides reporting options, an investigative and disciplinary process, and prevention training or other related services as appropriate.

Sexual violence is a continuum of conduct that includes:
• Sexual harassment (verbal, physical and non-verbal)
• Sexual assault
• Sexual exploitation
• Domestic, dating, and intimate partner violence
• Stalking

Sexual violence is nonconsensual and happens through coercion or force.

What is Consent?
Consent is an affirmative, conscious, and voluntary agreement between participants to engage in sexual activity. It is saying 'yes' every step of the way. Silence or not saying 'no' is not consent. Consent cannot be given while under the influence of alcohol or drugs.

What is Coercion?
Coercion is a tactic-including subtle pressure, guilt, threats, and the use of alcohol and drugs-used to persuade, manipulate, intimidate, or force someone to engage in sexual activity against their will.

How Can I Prevent Sexual Violence?
There are many factors that perpetuate sexual violence. Current prevention strategies focus on victims, perpetrators, or bystanders and commonly include:

Risk reduction techniques
• Being aware of your surroundings
• Protecting your beverage
• Knowing your limits
• Going out in groups
• Having a safety plan

Increasing protective factors
• Raising knowledge and awareness of sexual violence
• Improving communication and conflict resolution skills
• Eliminating gender roles
• Taking a stand and taking action against sexual violence
• Educating others

Bystander Intervention
• Paying attention to situations that may easily escalate
• Creating a distraction or intervening
• Talking directly to the person who may be in trouble and asking if they need help
• Enlisting others to support you
• Referring to the authorities

How Do I Report 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 strives to create a safe campus and 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. Individuals are not expected to determine whether or not an incident constitutes an act of sexual violence in order to report it. CLC will investigate all reports made to our Title IX office.

If you have experienced or witnessed any type of sexual violence and choose to report, there are several options:
• Online at www.clcmn.edu/sexualviolenceprevention (can be reported anonymously)
• Free Campus Eye App, available at the App Store and Google Play, enter CLC sign-up code D7C6 (can be reported anonymously)
• Mary Sam, Title IX Coordinator, 218-855-8159, room E132 located in "The Bridge" on the Brainerd Campus
• CLC Counselor, Suzie Karsnia- 218-855-8015, room C164
• CLC Campus Security, 218-828-6050, room C125
• Sexual Assault Services (confidential reporting and support available 24 hours a day), 218-828-0494/888-458-0494
• Local Law Enforcement:
Brainerd Police Department, 225 East River Road, Brainerd, MN 56401, 218-829-2805
Baxter Police Department, 13190 Memorywood Drive, Baxter, MN 56425, 218-454-5090
Staples Police Department, 301 2nd Avenue NE, Staples, MN 56479, 218-894-1841
In case of emergency, call 911

CLC's Amnesty Policy
A witness or victim of an incident of sexual violence who reports the incident in good faith will not be sanctioned by the school for admitting to a violation of the student conduct policy on the personal use of alcohol or drugs. (MN Statute 135A.15 Sexual Harassment and Violence Policy)

Sexual Prevention and Support Resources
There are several local and national resources for sexual violence prevention and support.
• CLC Title IX office, 218-855-8159, room E132 located in The Bridge on the Brainerd Campus
• Sexual Assault Services (confidential reporting and support available 24 hours a day), 218-828-0494/888-458-0494, 211 South 4th
Street, Brainerd, MN 56401,
• Essentia Health-St. Joseph's Medical Center, 218-829-2861/800-277-8262 523 North 3rd Street, Brainerd, MN 56401, www.essentiahealth.org
• Minnesota Coalition Against Sexual Assault (MNCASA), 651-209-9993, www.mncasa.org
• Rape, Abuse, and Incest National Network (RAINN), 800-656-HOPE (4673), www.rainn.org, (available 24 hours a day)
• Know Your IX, Empowering Students to Stop Sexual Violence, www.knowyourix.org
• Circle of 6, www.circleof6app.com, a free personal safety app designed for college students.

Nondiscrimination, Sexual Harassment, Sexual Violence Policies
1B.1 Nondiscrimination Policy www.minnstate.edu/board/policy/1b01.html
1B.1.1 Nondiscrimination Procedure www.minnstate.edu/board/procedure/1b01p1.html
1B.3 Sexual Violence Policy www.minnstate.edu/board/policy/1b03.html
1B.3.1 Sexual Violence Procedure www.minnstate.edu/board/procedure/1b03p1.html
1B.3.3 Addendum to Uniform Amnesty Policy www.clcmn.edu/wp-content/uploads/2015/04/1B.3.3-AddendumUniformAmnestyPolicySexualViolence-CLCWebsite.pdf

1B.1 Policy on Harassment and Discrimination

Central Lakes College is committed to providing a safe learning environment free from discrimination and harassment.

1B.1 Equal Opportunity and Nondiscrimination in Employment and Education Policy:
Part 1. Policy Statement
Subpart A. Equal opportunity for students and employees. Minnesota State has an enduring commitment to enhancing Minnesota's quality of life by developing and fostering understanding and appreciation of a free and diverse society and providing equal opportunity for all its students and employees. To help effectuate these goals, Minnesota State Colleges and Universities is committed to a policy of equal opportunity and nondiscrimination in employment and education.

Subpart B. Nondiscrimination. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, or gender expression. In addition, discrimination in employment based on familial status or membership or activity in a local commission as defined by law is prohibited.

Harassment on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, gender expression, or familial status is prohibited. Harassment may occur in a variety of relationships, including faculty and student, supervisor and employee, student and student, staff and student, employee and employee, and other relationships with persons having business at, or visiting the educational or working environment.

This policy is directed at verbal or physical conduct that constitutes discrimination/ harassment under state and federal law and is not directed at the content of speech. In cases in which verbal statements and other forms of expression are involved, Minnesota State Colleges and Universities will give due consideration to an individual's constitutionally protected right to free speech and academic freedom. However, discrimination and harassment are not within the protections of

academic freedom or free speech. The system office, colleges, and universities shall maintain and encourage full freedom, within the law, of expression, inquiry, teaching and research. Academic freedom comes with a responsibility that all members of our education community benefit from it without intimidation, exploitation or coercion.

This policy shall apply to all individuals affiliated with Minnesota State Colleges and Universities, including but not limited to, its students, employees, applicants, volunteers, agents, and Board of Trustees, and is intended to protect the rights and privacy of both the complainant and respondent and other involved individuals, as well as to prevent retaliation or reprisal. Individuals who violate this policy shall be subject to disciplinary or other corrective action.

This policy supersedes all existing system, college, and university equal opportunity and nondiscrimination policies.

Part 2. Definitions.
Subpart A. Consensual Relationship. Consensual relationship means a sexual or romantic relationship between two persons who voluntarily enter into such a relationship. Employees who are members of the same household should also refer to Board Policy 4.10, Nepotism.

Subpart B. Discrimination. Discrimination means conduct that is directed at an individual because of his or her protected class and that subjects the individual to different treatment by agents or employees so as to interfere with or limit the ability of the individual to participate in, or benefit from, the services, activities, or privileges provided by the system or colleges and universities or otherwise adversely affects the individual's employment or education.

Subpart C. Discriminatory harassment. Discriminatory harassment means verbal or physical conduct that is directed at an individual because of his or her protected class, and that is sufficiently severe, pervasive, or persistent so as to have the purpose or effect of creating a hostile work or educational environment.

As required by law, Minnesota State Colleges and Universities further define sexual harassment as a form of sexual discrimination, which is prohibited by state and federal law. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, sexually motivated physical conduct, and other verbal or physical conduct of a sexual nature when:
1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education, evaluation of a student's academic performance, or term or condition of participation in student activities or in other events or activities sanctioned by the college or university; or
2. Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions or other decisions about participation in student activities or other events or activities sanctioned by the college or university; or
3. Such conduct has the purpose or effect of threatening an individual's employment; interfering with an individual's work or academic performance; or creating an intimidating, hostile, or offensive work or educational environment.

Subpart D. Employee. Employee means any individual employed by Minnesota State Colleges and Universities, including all faculty, staff, administrators, teaching assistants, graduate assistants, residence directors and student employees.

Subpart E. Protected Class. For purposes of this policy:
1. Protected class includes race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, gender identity, or gender expression. In addition, familial status and membership or activity in a local human rights commission are protected classes in employment.
2. This policy prohibits use of protected class status as a factor in decisions affecting education and employment where prohibited by federal of state law.

Subpart F. Retaliation. Retaliation includes, but is not limited to, intentionally engaging in any form of intimidation, reprisal or harassment against an individual because he or she:
a) made a complaint under this policy;
b) assisted or participated in any manner in an investigation, or process under this policy, regardless of whether a claim of discrimination or harassment is substantiated;
c) associated with a person or group of persons who are disabled or are of a different race, color, creed, religion, sexual orientation, gender identity, gender expression, or national origin; or
d) Made a complaint or assisted or participated in any manner in an investigation or process with the Equal Employment Opportunity Commission, the U.S. Department of Education Office for Civil Rights, the Minnesota Department of Human

Rights or other enforcement agencies, under any federal or stated 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 1B.3 Sexual Violence addresses sexual violence.

Subpart H. Student. For purposes of this policy, the term “student” includes all persons who:
1. Are enrolled in one or more courses, either credit or non-credit, through a college or university;
2. Withdraw, transfer or graduate, after an alleged violation of the student conduct code.;
3. Are not officially enrolled for a particular term but who have a continuing relationship with the college or university;
4. Have been notified of their acceptance for admission or have initiated the process of application for admission or financial aid; or
5. Are living in a college or university residence hall although not enrolled in, or employed by, the institution.

Part 3. Consensual Relationships. An employee of Minnesota State Colleges and Universities shall not enter into a consensual relationship with a student or an employee over whom he or she exercises direct or otherwise significant academic, administrative, supervisory, evaluative, counseling, or extracurricular authority or influence. In the event a relationship already exists, each college and university and system office shall develop a procedure to reassign evaluative authority as may be possible to avoid violations of this policy. This prohibition does not limit the right of an employee to make a recommendation on personnel matters concerning a family or household member where the right to make recommendations on such personnel matters is explicitly provided for in the applicable collective bargaining agreement or compensation plan.

Part 4. Retaliation. Retaliation as defined in this policy is prohibited in the system office, colleges and universities. Any individual subject to this policy who intentionally engages in retaliation shall be subject to disciplinary or other corrective action as appropriate.
Part 5. Policies and procedures. The chancellor shall establish procedures to implement this policy. The equal opportunity and nondiscrimination in employment and education policy and procedures of colleges and universities shall comply with Board Policy 1B.1 and Procedure 1B.1.1.

Complainants are strongly encouraged to report incidents of harassment and discrimination to campus authorities. Central Lakes Contacts include:
• Designated Title IX Officer/Affirmative Action, Dean of Students- Mary Sam (218-855-8159, Office E132).
• Campus Security- (218-828-6050, Office C125)
• Student Concern Process - www.clcmn.edu/concern/

1B.1 Nondiscrimination /Harassment Policy www.minnstate.edu/board/policy/1b01.html
1B.1.1 Report/Complaint Process and Procedure Policy www.minnstate.edu/board/procedure/1b01p1.html

Student Concern Process
Central Lakes Colleges strives to offer a student-centered learning environment. We are committed to resolving student concerns.

CLC encourages you to resolve issues of concern on your own; however if you cannot do so, please submit an electronic report on the CLC Student Concern link located at www.clcmn.edu/concern/

Student Concerns related to academic, service related, behavior or conduct, discrimination, harassment or sexual violence reporting can be accessed via the link above.

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 CLC provide access to thousands of online journals and over 140,000 eBooks. The Brainerd campus library, formally known as the Jon Hassler Library, also contains a special government section in the Heritage Center. It is dedicated to Minnesota Senator Gordon Rosenmeier. An additional collection of over 3,000 Native American-related titles is housed in the Humphrey Center for American Indians Studies, which is located in the library's Skone Family Conservatory. Central Lakes College students access the databases and borrow material using the 14-digit barcode located on the back of the "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 may be returned within 24 hours of purchase.
• Unopened software may be returned within 24 hours of purchase. Software is not returnable if opened.
• Computers (laptops, notebooks and tablets) may be returned within 72 hours of purchase.
• Nursing kits cannot be returned. Please check your nursing kit for supplies before you leave the store.
• Books may be returned through the 5th day of the semester. A receipt is required for all returns.
• After the fifth day of the semester, books may be returned with 3-days of purchase, with a store receipt.
• New books must be returned in original condition, with a receipt.
• Books with open shrink-wrap will be returned at used book price within the return period.
Buyback
• Students have the opportunity to sell their books back during finals week each semester.
• No receipt is required for buyback, but A STUDENT ID is required.

PSEO & Rental Returns
• Rental and PSEO books must be returned during finals week each semester.
• Rental and PSEO books should not be sold at buyback.

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 access codes, supplemental pamphlets, etc. must have all components to be bought back.

Foodservice
Brainerd Campus: breakfast and Lunch are available daily from 7:30-2:00
Staples Campus: breakfast and lunch are available daily from 7:30-1:00 from Monday-Thursday; 7:30-10:30 Friday

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 the 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 www.clcmn.edu/general-information/security-safety/ and submit it within 5 days of receipt of the citation. Appeals received after the 5th business day will NOT be considered.

Business and Industry Center parking is restricted to Business and Industry Center clients only. CLC parking lots are patrolled by local police and Campus Security.

Security Escort Service to the parking lots, is available during business hours on the Brainerd Campus by contacting the security department at 218-828-6050, or by pressing the red button on the emergency call boxes by the main exits or by contacting the Information Center (Brainerd: 218-855-8000, Staples: 218-894-5100). Contact maintenance personnel at Staples Campus.

Handicapped Parking
Parking for students with disabilities is provided in designated areas. Students and others parking in these areas must display a current State Handicapped Parking Permit on their vehicle.

CLC Permit Parking
Parking is provided for students with temporary disabilities in designated "permit parking" areas. Students must display a current CLC handicapped-parking permit. Permits expire at the end of each semester and are only available through Disability Services (Brainerd:
218.855.8218, Staples: 218.894.5182).

Overnight/Extended Parking
Students needing to park overnight or over an extended time period must obtain a permit through the Information Center at the CLC campus where the parking is being requested; and display the permit on the vehicle's dashboard, and park in the posted designated parking area.

Community Resources

Daycare Services/Early Education
Annie's Child Care and Learning Center -Central Lakes College, in partnership with the Annie's Child care and Learning Center, offers quality childcare and learning opportunities on the CLC Brainerd campus. Annie's Child Care and Learning Center provides full- Center telephone number: 218-855-8274 or Joann Ostrowski, Owner 218-829-9228 annieslearningcenter501@gmail.com Brainerd Daycare Providers- http://www.brainerd.com/service/serv.html#Day
Child Care Aware of Minnesota-1-888-291-9811
Early Childhood Family Education: 651-582-8399
Headstart- 218-728-1091
Staples Day Care Directory –www.childcarecenter.us/Minnesota_homecare/staples_mn_city

Food Shelves & Meal Sites
Second Harvest North Central Food Bank - www.secondharvestncfb.com/index.html
Mothers and Children (MAC) Free Food Program -1-800-365-0270 218-326-4420
WIC Nutrition Program- 218-824-1073
Sharing Bread Soup Kitchen -218-829-4203
Ruby's Pantry Food Distribution, 320-629-7400
Brainerd Food Shelf (Salvation Army)-218-829-1120
Crosslake Food Shelf-218-692-1004
Cuyuna Range Food Shelf- 218-546-7444 and 218-534-9264
Emily Food Shelf- 218-763-3097
Garrison Food Shelf- 320-692-5399
Lakes Area Food Shelf (Nisswa/Pequot/Breezy/Lakeshore)- 218-568-8474
Staples Area Food Shelf- 218-894-1041
Staples: SNAP (Supplemental Nutrition Assistance Program)- 218-894-6300

Housing
Information on area housing is located on the CLC Student Life webpage, under Campus Life: contact the Student Life Office or check the student life website: http://www.clcmn.edu/student-services/area-housing-list
Parkway Apartments, owned by the Central Lakes College Foundation, call: 218-824-8403 for more information
Brainerd Dispatch - www.brainerddispatch.com/
Brainerd Housing Authority -218-829-8634
Craig's List- brainerd.craigslist.org/apa/
Hope Housing (Lutheran Social Services)-218-824-1437 or toll free 1-866-970-1437
Housing Resource List- Bridges of Hope- bridgesofhopemn.org/resources/housing.html
Salvation Army Rental Assistance Program -218-829-1120
Staples Housing and Redevelopment Authority (HRA)- 218-894-2301

Emergency Housing/Shelter
Mid-Minnesota Women's Shelter and Center-218-828-1216
MN Complete List - www.hud.gov/local/mn/homeless/shelterslisting.cfm#crow
New Pathways -763-691-0121

Prenatal care
Essential Health St. Joseph's Good Beginnings OB Clinic (Brainerd) - 218-828-7688
Lakewood Health System (Staples): 218-894-1515
Lakes Area Pregnancy Support Center - 218-825-0793 and Facebook www.facebook.com/pages/Lakes-Area-Pregnancy-Support-Center/167959363214241
Todd County Public Health- 320-732-4440 or toll free 800-732-4440, WIC- 320-732-4456

Transportation
Brainerd Area Taxi -218-828-1111
Crow Wing County Public Transit -218-825-7433 or toll free 1-866-925-7433
Dial-A-Ride -218-825-7433
Transportation to a Doctor's Appointment/Hospital
bridgesofhopemn.org/resources/transportation.html
Minneapolis Airport to Brainerd-218-855-6973
Crow Wing County Veteran Services-218-824-1058
MN Department of Veterans Affairs - www.mdva.state.mn.us/
Care Cab (Medical)- 1-800-450-4227
Medivan (Medical)-1-800-422-0976
Staples area transportation: People's Express – 1-800-450-0123
Wadena County Friendly Rider (bus service), 218-631-5730/888-773-5500

College Polices
Central Lakes College polices are located on the CLC website: www.clcmn.edu/college-policies/
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 information is available in alternative format upon a 48-hour advance request by contacting Accessibility Services, accessibilityservices@clcmn.edu, office E138 at 218-855-8175. Consumers with hearing or speech impairments may contact us via their preferred Telecommunications Relay Service.

Telephone Directory

CLC Toll Free.....800-933-0346
General Information.....218-855-8000
Administration.....218-855-8051
Brainerd Bookstore & Cashier.....218-855-8248
Staples Bookstore & Cashier.....218-894-5118
Business & Industry Center.....218-855-8142
Business Office.....218-855-8230
Computer Commons Help Desk.....218-855-8200
Library.....218-855-8180
Student Service Center (Admissions, Advising, Counseling, Financial Aid, Registration).....218-855-8031

For up-to-date information check the CLC Website at www.clcmn.edu

Accountant AAS (A010)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	ACCT	2121*	Intermediate Accounting I	4	3	0
	ACCT	2123*	Intermediate Accounting II	4	3	2
	ACCT	2137*	Accounting for Governmental and Not-for-Profit Entities	3	2	2
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	ACCT	2161*	Cost Accounting I	3	3	0
	ACCT	2165*	Income Tax	4	4	0
	ACCT	2170*	Federal and State Tax Updates Using Software	1	1	0
	BUSN	1131	Business Math	3	3	0
	BUSN	1166	Business Communications	3	3	0
Students must select a minimum of three (3) credits from the following courses:						
	ACCT	2350*	Accounting Internship (1-9 cr)			
	BUSN	2541	Legal Environment of Business (3 cr)			
	COMP	1120	Introduction to Computer Applications (3 cr)			
	COMP	1121	Advanced Computer Applications (3 cr)			
	MGMT	1011	Management Principles (3 cr)			
	MGMT	1114	Human Resource Management (3 cr)	3		
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #	Title	Credits	Lec Hrs	Lab Hrs
	Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.
4. Accounting courses in the program must be completed within seven (7) years.

Accountant AAS (A010)
Program Course Requirements
2017-2018

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	BUSN	1131	Business Math	3	3	0
			General Education	4		
			Total Fall Semester – 1st Year	**14**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
			Additional Required Core Course	3	3	0
			General Education	3		
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2121*	Intermediate Accounting I	4	3	0
	ACCT	2161*	Cost Accounting I	3	3	0
	ACCT	2165*	Income Tax	4	4	0
			General Education	5		
			Total Fall Semester – 2nd Year	**16**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2123*	Intermediate Accounting II	4	3	2
	ACCT	2137*	Accounting for Governmental and Not-for-Profit Entities	3	2	2
	ACCT	2170*	Federal and State Tax Updates Using Software	1	1	0
	BUSN	1166	Business Communications	3	3	0
			General Education	3		
			Total Spring Semester – 2nd Year	**14**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Accountant Diploma (D013)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	BUSN	1131	Business Math	3	3	0
	BUSN	1166	Business Communications	3	3	0
	BUSN	2541	Legal Environment of Business	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
Students must select one of the following courses for a minimum of three (3) credits:						
	ACCT	2121*	Intermediate Accounting I	4	4	0
	ACCT	2123*	Intermediate Accounting II	4	4	0
	ACCT	2137*	Accounting for Governmental and Not-for-Profit Entities	3	2	2
	ACCT	2161*	Cost Accounting I	3	3	0
	ACCT	2165*	Income Tax	4	4	0
	ACCT	2350*	Accounting Internship	3-9		
			Total Required Core Credits	**32**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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.
4. Accounting courses in the program must be completed within seven (7) years.

Accountant Diploma (D013)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	BUSN	1131	Business Math	3	3	0
	BUSN	2541	Legal Environment of Business	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	BUSN	1166	Business Communications	3	3	0
	Additional three (3) required core course credits			3		
			Total Spring Semester – 1st Year	**16**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Bookkeeping Certificate (C010)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	BUSN	1131	Business Math	3	3	0
			Total Required Core Credits	**20**		

GRADUATION REQUIREMENT 20

**Denotes Prerequisite*

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: 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; and
4. Accounting courses in the program must be completed within seven (7) years.

Agricultural Science A.S. Degree (A231)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required General Education Courses

Students completing the general education courses listed below will satisfy all required credits for all 10 Minnesota Transfer Curriculum goals.

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1431	General Biology (Goal 3)	5	3	4
	CHEM CHEM PHYS	1414* 1407 1401*	Fundamentals of Chemistry (Goal 3) **OR** Life Science Chemistry (Goal 3) **OR** College Physics I (Goal 3)	4 4 4	3 3 3	3 2 2
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	COMM	2420	Intercultural Communication (Goals 1 and 7)	3	3	0
	ECON	2402	Microeconomics (Goal 5)	3	3	0
	ENGL ENGL	1410* 1420*	Composition I (Goal 1) **OR** Honors Composition I (Goal 1)	4	4	0
	ENGL ENGL	1411* 1421*	Composition II (Goal 1) **OR** Honors Composition II (Goal 1)	4	4	0
	MATH	1460*	Introduction to Statistics (Goal 4)**	4	4	0
	MATH	1470*	College Algebra (Goal 4)	3	3	0
	PHIL PHIL	1420 1421	Critical Thinking (Goal 2) **OR** Honors Critical Thinking (Goals 1 and 2)	3	3	0
Select one course that meets both MnTC Goals 5 and 8. One of the following courses is recommended:						
	GEOG GEOG GLST	1410 1459 1401	Maps and Places (Goals 5, 8) **OR** Cultural Geography (Goals 5, 8) **OR** Introduction to Global Studies (Goals 5, 8)	3	3	0
Select one course that meets both MnTC Goals 5 and 10. One of the following courses is recommended:						
	ENVR GEOG PSYC SOCL	1400 1400 1425 2422	Introduction to Environmental Studies (Goals 5, 10) **OR** Physical Geography (Goals 5, 10) **OR** Environmental Psychology (Goals 5, 10) **OR** Culture and Environment (Goals 5, 10)	3	3	0
Select one course that meets both MnTC Goals 6 and 9. One of the following courses is recommended:						
	PHIL PHIL PHIL	2420 2421 2430	Ethics (Goals 6, 9) **OR** Honors Ethics (Goals 6, 9) **OR** Contemporary Moral Problems (Goals 6, 9)	3	3	0
Select two (2) additional courses for a minimum of six (6) credits from MnTC Goal 6.						
			Additional MnTC Goal 6 courses	6		

***ACCT 2011 Principals of Accounting I (4 cr) may be substituted for MATH 1460 Intro to Statistics, for degree articulations requiring this course. Students should consult an advisor for specific programs.*

Total General Education Courses 51

Agricultural Science A.S. Degree (A231)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Technical Courses

Students will select from any of the following technical or internship courses for a total of 9 credits. Total internship credits may not exceed 4. Articulation agreements with the following institutions are available for students electing to pursue a bachelor's degree upon completion of the Agricultural Science A.S. Degree. Students pursuing articulated degrees should consult an advisor to determine which courses transfer into their chosen degree program.

Southwest Minnesota State University – Agricultural Education, Agronomy, Agricultural Communication and Leadership, Agribusiness Management, Agricultural Solutions

University of Minnesota, Crookston – Agricultural Education

Course #			Title	Credits	Lec Hrs	Lab Hrs
Agricultural Studies						
	AGRI	2150	Agricultural Studies Internship	1-4	0	0
Animal Science						
	ANSI	1100	Introduction to Animal Science	4	4	0
	ANSI	1110	Food Safety: From Farm to Fork	3	3	0
	ANSI	2150	Animal Science Internship	1-4	0	0
Horticulture						
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1345	Horticulture Internship	1-4	0	0
Natural Resources						
	NATR	1100	Introduction to Natural Resources	3	3	0
	NATR	1112	Land Measurement	3	2	2
	NATR	1115	Plant Taxonomy	2	1	2
	NATR	1280	Introduction to GPS and GIS	2	1	2
	NATR	1310	Natural Resources Internship	1-4	0	0
	NATR	2155	Soil Science	3	2	2
	NATR	2170*	Advanced GPS and GIS	2	1	2
			Total Technical Courses	**9**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.

Automotive Technology A.A.S. (A332)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	AUTM	1101	A1 Engine Repair**	4	1	6
	AUTM	1102*	A2 Automatic Transmission & Transaxle	4	1	6
	AUTM	1103	A3 Manual Drive Train & Axles	4	1	6
	AUTM	1104*	A4 Steering and Suspension	4	1	6
	AUTM	1105*	A5 Brakes	4	1	6
	AUTM	1106	A6 Electrical/Electronic Systems I**	4	1	6
	AUTM	1107*	A7 Heating and Air Conditioning	4	1	6
	AUTM	1108*	A8 Engine Performance I	4	1	6
	AUTM	1116*	A6 Electrical Electronics Systems II	4	1	6
	AUTM	1118*	A8 Engine Performance II	4	1	6
	AUTM	1120	Transportation Industry Skills I	1	1	0
	AUTM	1121	Transportation Industry Skills II	1	1	0
	AUTM	1122	Transportation Industry Skills III	1	1	0
	AUTM	1123	Transportation Industry Skills IV	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
			Total Required Core Credits	**45**		

Required General Education

An associate in applied science degree requires a minimum of 15 general education credits selected from **at least three of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Goal Area 1 – required	3		
			Goal Area 2 – required	3		
			Goal Area 3 – recommended	3		
			Goal Area 9 – recommended	3		
			General Education	3		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*
***High School Certifiable Course*

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.

Automotive Technology A.A.S. (A332)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
1st Half Semester						
	AUTM	1101	A1 Engine Repair**	4	1	6
	AUTM	1106	A6 Electrical/Electronic Systems I**	4	1	6
	AUTM	1120	Transportation Industry Skills I	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
2nd Half Semester						
	AUTM	1108*	A8 Engine Performance I	4	1	6
	AUTM	1116*	A6 Electrical Electronics Systems II	4	1	6
	AUTM	1121	Transportation Industry Skills II	1	1	0
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
1st Half Semester						
	AUTM	1102*	A2 Automatic Transmission & Transaxle	4	1	6
	AUTM	1118*	A8 Engine Performance II	4	1	6
	AUTM	1122	Transportation Industry Skills III	1	1	0
2nd Half Semester						
	AUTM	1104*	A4 Steering and Suspension	4	1	6
	AUTM	1105*	A5 Brakes	4	1	6
	AUTM	1123	Transportation Industry Skills IV	1	1	0
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	AUTM	1103	A3 Manual Drive Train and Axles	4	1	6
	AUTM	1107*	A7 Heating and Air Conditioning	4	1	6
			Total Spring Semester – 2nd Year	**8**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
			Goal Area 1 – required	3		
			Goal Area 2 – required	3		
			Goal Area 3 – recommended	3		
			Goal Area 9 – recommended	3		
			General Education	3		
			Total Fall Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*
***High School Certifiable Course*

Automotive Technology Diploma (D332)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	AUTM	1101	A1 Engine Repair	4	1	6
	AUTM	1102	A2 Automatic Transmission & Transaxle	4	1	6
	AUTM	1103	A3 Manual Drive Train & Axles	4	1	6
	AUTM	1104	A4 Steering and Suspension	4	1	6
	AUTM	1105	A5 Brakes	4	1	6
	AUTM	1106	A6 Electrical/Electronic Systems I	4	1	6
	AUTM	1107*	A7 Heating and Air Conditioning	4	1	6
	AUTM	1108	A8 Engine Performance I	4	1	6
	AUTM	1116*	A6 Electrical Electronics Systems II	4	1	6
	AUTM	1118*	A8 Engine Performance II	4	1	6
	AUTM	1120	Transportation Industry Skills I**	1	1	0
	AUTM	1121	Transportation Industry Skills II**	1	1	0
	AUTM	1122	Transportation Industry Skills III**	1	1	0
	AUTM	1123	Transportation Industry Skills IV**	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
			Total Required Core Credits	**45**		

GRADUATION REQUIREMENT 45

**Denotes Prerequisite*
***High School Certifiable Course*

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.

Automotive Technology Diploma (D332)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
1st Half Semester						
	AUTM	1101	A1 Engine Repair	4	1	6
	AUTM	1106	A6 Electrical/Electronic Systems I	4	1	6
	AUTM	1120	Transportation Industry Skills I**	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
2nd Half Semester						
	AUTM	1108	A8 Engine Performance I	4	1	6
	AUTM	1116*	A6 Electrical Electronics Systems II	4	1	6
	AUTM	1121	Transportation Industry Skills II**	1	1	0
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
1st Half Semester						
	AUTM	1102	A2 Automatic Transmission & Transaxle	4	1	6
	AUTM	1118*	A8 Engine Performance II	4	1	6
	AUTM	1122	Transportation Industry Skills III**	1	1	0
2nd Half Semester						
	AUTM	1104	A4 Steering and Suspension	4	1	6
	AUTM	1105	A5 Brakes	4	1	6
	AUTM	1123	Transportation Industry Skills IV**	1	1	0
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	AUTM	1103	A3 Manual Drive Train and Axles	4	1	6
	AUTM	1107*	A7 Heating and Air Conditioning	4	1	6
			Total Spring Semester – 2nd Year	**8**		

GRADUATION REQUIREMENT 45

**Denotes Prerequisite*

Business Management A.A.S. (A030)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1102	Accounting for Non-Accountants	3	3	0
	BUSN	1110	Marketing Principles	3	3	0
	BUSN	1131	Business Math	3	3	0
	BUSN	1162	Customer Relations	3	3	0
	BUSN	1164	International Business	3	3	0
	BUSN	1166	Business Communications	3	3	0
	BUSN	2541	Legal Environment of Business	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1121*	Advanced Computer Applications	3	3	0
	MGMT	1011	Management Principles	3	3	0
	MGMT	1101	Entrepreneurship	3	3	0
	MGMT	1108	Quality and Performance Management	3	3	0
	MGMT	1110	Frontline Leadership	3	3	0
	MGMT	1114	Human Resource Management	3	3	0
	MGMT	1126	Financial Management	3	3	0
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).				
	Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Entrepreneurship Certificate (C030)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1102	Accounting for Non-Accountants	3	3	0
	BUSN	1110	Marketing Principles	3	3	0
	BUSN	1166	Business Communications	3	3	0
	MGMT	1101	Entrepreneurship	3	3	0
	MGMT	1150*	Entrepreneurship Capstone	1	0	2
			Total Required Core Credits	**13**		

Elective Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must choose an additional three (3) credits from any courses with a BUSN, COMP, or MGMT prefix.						
			Total Elective Credits	**3**		

GRADUATION REQUIREMENT 16

**Denotes Prerequisite*

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.

Microsoft Office Professional Certificate (C080)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
			Total Required Core Credits	**19**		

GRADUATION REQUIREMENT 19

**Denotes Prerequisite*

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: 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.

Microsoft Office Professional Certificate (C080)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
			Total Fall Semester – 1st Year	**11**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
			Total Spring Semester – 1st Year	**8**		

GRADUATION REQUIREMENT 19

**Denotes Prerequisite*

Office Assistant Certificate (C092)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1102	Accounting for Non-Accountants	3	3	0
	BUSN	1162	Customer Relations	3	3	0
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1121	Advanced Computer Applications	3	3	0
	MGMT	1114	Human Resource Management	3	3	0
			Total Required Core Credits	**18**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

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

Global Studies Certificate (C440)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must complete all the following courses:						
	COMM	2420	Intercultural Communication	3	3	0
	GLST	1401	Introduction to Global Studies	3	3	0
	GLST	2401	Global Studies Capstone	1-3	1-3	0
	SPAN	1402*	Beginning Spanish II	4	4	0
Select a minimum of three (3) credits from the following History/Social Behavior Sciences courses:						
	ANTH	1457	Cultural Anthropology	3	3	0
	ESCI	1454	Earth Science and the Environment	4	4	0
	GEOG	1400	Physical Geography	3	3	0
	GEOG	1410	Maps and Places	3	3	0
	GEOG	1421	World Regional Geography	3	3	0
	GEOG	1459	Cultural Geography	3	3	0
	GLST	1491	Global Studies Experience – International Travel	1-4	1-4	0
	HIST	1413	World History II, 1500 to Present	3	3	0
	SOCL	2422	Culture and Environment	3	3	0
Select a minimum of three (3) credits from the following Fine Arts and Humanities courses:						
	MUSC	1450	Music in World Cultures	3	3	0
	PHIL	1411	World Religions	3	3	0
	SPAN	2420	Many Faces of Mexico	3	3	0
	SPAN	2425	Cultures of Latin America	3	3	0
			Total Required Core Credits	**18**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

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

Latin American Studies Certificate (C430)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	SPAN	1402	Beginning Spanish II	4	4	0
	SPAN	2401	Intermediate Spanish I	4	4	0
	SPAN	2404	Intermediate Spanish II	4	4	0
	SPAN	2420	Many Faces of Mexico	3	3	0
	SPAN	2425	Cultures of Latin America	3	3	0
			Total Required Core Credits	**18**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

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

CNC Technologies A.A.S. (A186)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MATH	1500	Applied Mathematics	3	3	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1130	Print Reading	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
	MTTS	2110	Geometric Dimensioning and Tolerancing	1	1	0
	MTTS	2112	Metallurgy	1	1	0
	MTTS	2116*	Introduction to EDM	2	0	4
	MTTS	2118*	Jigs and Fixtures	1	0	2
	MTTS	2130*	CNC Milling and Turning	4	0	8
	MTTS	2134*	CNC Operations Theory	2	2	0
	MTTS	2140*	CAD/CAM II	2	1	2
	MTTS	2155	Capstone Project	4	0	8
Or	MTTS	2190	Internship	4-6	0	
	RAST	1109	Computers in Industry	2	2	0
			Total Required Core Credits	**49**		

Required General Education Courses

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 (MnTC). Students must include within the General Education component the following courses:

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ENGL	1422	Practical Writing (Goal 1)	3	3	0
	PHYS	1407*	Principles of Physics (Goal 3)	3	2	2
			Additional MnTC credits	9		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

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.

CNC Technologies A.A.S. (A186)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MATH	1500	Applied Mathematics	3	3	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1130	Print Reading	2	1	2
	RAST	1109	Computers in Industry	2	2	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	2110	Geometric Dimensioning and Tolerancing	1	1	0
	MTTS	2112	Metallurgy	1	1	0
	MTTS	2116*	Introduction to EDM	2	0	4
	MTTS	2118*	Jigs and Fixtures	1	0	2
	MTTS	2130*	CNC Milling and Turning	4	0	8
	MTTS	2134*	CNC Operations Theory	2	2	0
	MTTS	2140*	CAD/CAM II	2	1	2
			General Education	3		
			Total Fall Semester – 2nd Year	**16**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ENGL	1422	Practical Writing (Goal 1)	3	3	0
	PHYS	1407*	Principles of Physics (Goal 3)	3	2	2
	MTTS	2155	Capstone Project	4	0	8
Or	MTTS	2190	Internship	4-6	0	
			Additional MnTC credits	6		
			Total Spring Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

CNC Technologies Diploma (D186)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1130	Print Reading	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
	MTTS	2110	Geometric Dimensioning and Tolerancing	1	1	0
	MTTS	2112	Metallurgy	1	1	0
	MTTS	2116*	Introduction to EDM	2	0	4
	MTTS	2118*	Jigs and Fixtures	1	0	2
	MTTS	2130*	CNC Milling and Turning	4	0	8
	MTTS	2134*	CNC Operations Theory	2	2	0
	MTTS	2140*	CAD/CAM II	2	1	2
	RAST	1109	Computers in Industry	2	2	0
			Total Required Core Credits	**42**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500	Applied Mathematics	3	3	0
	ENGL	1422	Practical Writing	3	3	0
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

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.

CNC Technologies Diploma (D186)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MATH	1500	Applied Mathematics	3	3	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1130	Print Reading	2	1	2
	RAST	1109	Computers in Industry	2	2	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	2110	Geometric Dimensioning and Tolerancing	1	1	0
	MTTS	2112	Metallurgy	1	1	0
	MTTS	2116*	Introduction to EDM	2	0	4
	MTTS	2118*	Jigs and Fixtures	1	0	2
	MTTS	2130*	CNC Milling and Turning	4	0	8
	MTTS	2134*	CNC Operations Theory	2	2	0
	MTTS	2140*	CAD/CAM II	2	1	2
			Additional General Education Credits	3		
			Total Fall Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

Computer Information Technology A.A.S. (A103)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2160*	Ethics in Information Technology	3	3	0
	COMP	2202*	Computer User Support	3	3	0
Students must also select a minimum of one (1) additional credit from any course with a COMP prefix. One of the following courses is recommended:						
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
	COMP	2213*	Computer Careers Internship	1-6		
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
	COMM COMM COMM COMM	1410 1420 1430 2420	Introduction to Communication (Goal 1) **OR** Interpersonal Communication (Goal 1) **OR** Public Speaking (Goals 1 and 2) **OR** Intercultural Communication (Goals 1 and 7)	3	3	0
			Additional courses from MnTC Goals 2-10	9		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.

Computer Information Technology A.A.S. (A103)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	1230*	Network Essentials	4	4	0
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2160*	Ethics in Information Technology	3	3	0
			General Education	12		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2202*	Computer User Support	3	3	0
			Additional COMP course	1		
			General Education	3		
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Computer Information Technology Diploma (D102)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2160*	Ethics in Information Technology	3	3	0
	COMP	2202*	Computer User Support	3	3	0
Students must also select a minimum of one (1) additional credit from any course with a COMP prefix. One of the following courses is recommended:						
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
	COMP	2213*	Computer Careers Internship	1-6		
			Total Required Core Credits	**45**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
			Total Required General Education Credits	**3**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

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: 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.

Computer Information Technology Diploma (D102)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
			Total Fall Semester – 1st Year	**12**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	1230*	Network Essentials	4	4	0
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2160*	Ethics in Information Technology	3	3	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	ENGL	1422	Practical Writing	3	3	0
			Additional COMP course	1		
			Total Fall Semester – 2nd Year	**10**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2202*	Computer User Support	3	3	0
			Total Spring Semester – 2nd Year	**11**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

Computer Network Administration A.A.S. (A101)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
	COMP	2151*	Windows Server Administration II	5	5	0
	COMP	2152*	Windows Server Administration III	5	5	0
Students must also select a minimum of one (1) additional credit from any course with a COMP prefix. One of the following courses is recommended:						
	COMP	1121*	Advanced Computer Applications	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	2160*	Ethics in IT	3	3	0
	COMP	2213*	Computer Careers Internship	1-6		
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
	COMM COMM COMM COMM	1410 1420 1430 2420	Introduction to Communication (Goal 1) **OR** Interpersonal Communication (Goal 1) **OR** Public Speaking (Goals 1 and 2) **OR** Intercultural Communication (Goals 1 and 7)	3	3	0
			Additional courses from MnTC Goals 2-10	9		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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: The cumulative GPA of credits in the technical core of the diploma or degree must be at least 2.0; and
3. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Computer Network Administration A.A.S. (A101)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
			General Education	5		
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
			General Education	4		
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
			Additional COMP course	1	1	0
			General Education	5		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2111*	Security Essentials	4	4	0
	COMP	2151*	Windows Server Administration II (1st 8 weeks)	5	5	0
	COMP	2152*	Windows Server Administration III (2nd 8 weeks)	5	5	0
			General Education	1		
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Computer Network Administration Diploma (D101)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	2111*	Security Essentials	4	4	0
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
	COMP	2151*	Windows Server Administration II	5	5	0
	COMP	2152*	Windows Server Administration III	5	5	0
Students must also select a minimum of one (1) additional credit from any course with a COMP prefix. One of the following courses is recommended:						
	COMP	1121*	Advanced Computer Applications	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	2160*	Ethics in IT	3	3	0
	COMP	2213*	Computer Careers Internship	1-6		
			Total Required Core Credits	**45**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
			Total Required General Education Credits	**3**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

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: 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.

Computer Network Administration Diploma (D101)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
			Additional COMP course	1	1	0
			Total Fall Semester – 1st Year	**11**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
			Total Spring Semester – 1st Year	**11**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2115*	Command Line and PowerShell Administration	4	4	0
	COMP	2150*	Windows Server Administration I	5	5	0
	ENGL	1422	Practical Writing	3	3	0
			Total Fall Semester – 2nd Year	**12**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2111*	Security Essentials	4	4	0
	COMP	2151*	Windows Server Administration II (1st 8 weeks)	5	5	0
	COMP	2152*	Windows Server Administration III (2nd 8 weeks)	5	5	0
			Total Spring Semester – 2nd Year	**11**		

GRADUATION REQUIREMENT 48

**Denotes Prerequisite*

Computer Support Specialist Diploma (D100)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1204*	Computer Repair I – A+ Hardware	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	2202*	Computer User Support	3	3	0
			Total Required Core Credits	**37**		

GRADUATION REQUIREMENT 37

**Denotes Prerequisite*

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: 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.

Computer Support Specialist Diploma (D100)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1109	Introduction to Operating Systems	3	3	0
	COMP	1131	Microsoft Word Comprehensive	4	4	0
	COMP	1204	Computer Repair I – A+ Hardware	4	4	0
			Total Fall Semester – 1st Year	**11**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	COMP	1132	Microsoft Access Comprehensive	4	4	0
	COMP	1206*	Computer Repair II –A+ Operating Systems	3	3	0
			Total Spring Semester – 1st Year	**11**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1133	Microsoft PowerPoint Comprehensive	3	3	0
	COMP	1134	Microsoft Outlook Comprehensive	1	1	0
			Total Fall Semester – 2nd Year	**4**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1253*	Client Operating Systems Administration	4	4	0
	COMP	1230*	Network Essentials	4	4	0
	COMP	2202*	Computer User Support	3	3	0
			Total Spring Semester – 2nd Year	**11**		

GRADUATION REQUIREMENT 37

**Denotes Prerequisite*

One year scheduling option:

All Fall Semester courses in Fall Semester 1st year - 15 credits
All Spring Semester courses in Spring Semester 1st year - 22 credits

CLC CENTRAL LAKES COLLEGE

Criminal Justice A.A.S. (A109)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CRJU	1101	Criminal Justice	3	3	0
	CRJU	1104	Juvenile Justice	3	3	0
	CRJU	2101**	Criminal Law	3	3	0
	CRJU	2102*	Criminal Procedures	4	4	0
	CRJU	2108	Criminal Investigations	3	3	0
	CRJU	2114**	Traffic Law	3	3	0
	CRJU	2124	General Evidence and Identification Prep	4	3	2
	CRJU	2140	Law Enforcement and Behavioral Science	3	3	0
			Total Credits	**26**		
Law Enforcement Pathway **Students must select a minimum of 30 credits from the courses listed below:**						
	CRJU	1106	Corrections & Probation	3	3	0
	CRJU	1109	Report Writing	3	3	0
	CRJU	1112	Police and the Community	3	3	0
	CRJU	2106**	Fitness for Law Enforcement	2	1	2
	CRJU	2116*	Science of Fingerprints	4	3	2
	CRJU	2118	Criminal Justice Photography	4	4	0
	CRJU	2135	Internship	4-8	0	0
	CRJU	2160	Use of Force	2	1	2
	CRJU	2162	Firearms	3	2	2
	CRJU	2164	Patrol Practicals	5	3	4
	CRJU	2166	Tactical Communications/Relations	2	2	0
	CRJU	2311	Basic Firearms	1	0	2
	CRJU	2315	Post Prep	1	1	0
			Total Law Enforcement Pathway Credits	**30**		
Criminal Justice Pathway **Students must select a minimum of 30 credits from the courses listed below:**						
	CRJU	1106	Corrections & Probation	3	3	0
	CRJU	1108	Community Corrections	3	3	0
	CRJU	1109	Report Writing	3	3	0
	CRJU	1112	Police and the Community	3	3	0
	CRJU	1125	Personal Protection Awareness	2	1	2
	CRJU	2106**	Fitness for Law Enforcement	2	1	2
	CRJU	2112	Ballistic and Firearms Identification	4	3	2
	CRJU	2116*	Science of Fingerprints	4	3	2
	CRJU	2118	Criminal Justice Photography	4	4	0
	CRJU	2135	Internship	4-8	0	0
	CRJU	2311	Basic Firearms	1	0	2
			Total Criminal Justice Pathway Credits	**30**		
			Total Required Core Credits	**56**		

(Graduation Requirements continued on next page)

Criminal Justice A.A.S. (A109)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required General Education

An associate in applied science degree requires a minimum of 15 general education credits selected from **at least three of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).						
Course #			**Title**	**Credits**	**Lec Hrs**	**Lab Hrs**
Students must include within the General Education component the following courses:						
	AMSL	2420	Deaf Culture (Goals 6 and 7) **OR**			
	SPAN	2420	Many Faces of Mexico (Goal 6 and 8)	3	3	0
	COMM	2420	Intercultural Communication (Goals 1 and 7)	3	3	0
	ENGL	1410	Composition I (Goal 1)	4	4	0
	SOCL	2405	Criminology (Goal 5)	3	3	0
	SOCL	2481	Race, Ethnicity and Oppression (Goals 5 and 7)	3	3	0
			Total Required General Education Credits	**16**		

GRADUATION REQUIREMENT 72

**Denotes Prerequisite*

*** These courses must be completed prior to SKILLS. (Criminal Law/Traffic Law/Fitness for Law Enforcement)*

ADDITIONAL PROGRAM REQUIREMENTS: (Please see the Criminal Justice Coordinator for information.)

- Background Check: Students must complete and pass a background check prior to being officially admitted into the program. This background check must be completed prior to the first day of classes.
- MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a Psychologist approved by the Program Coordinator prior to admission into the program.
- Students must have completed, or be concurrently enrolled in, an Associate in Arts, Bachelors, or Criminal Justice AAS Degree from an accredited institution for admission into this program.
- Courses required for Minnesota P.O.S.T. licensing must be completed within three (3) years of starting the certificate.
- Students must have a valid Emergency Medical Responder certification (or higher) at the time of the Post Board Exam.

In addition to the program requirements listed above, 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 above.
2. College Cumulative GPA Requirement: Cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
3. 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;
4. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Criminal Justice Certificate (C105)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CRJU	1101*	Criminal Justice	3	3	0
	CRJU	1104*	Juvenile Justice	3	3	0
	CRJU	1112	Police and the Community	3	3	0
	CRJU	2101**	Criminal Law	3	3	0
	CRJU	2102*	Criminal Procedures	4	4	0
	CRJU	2106**	Fitness for Law Enforcement	2	1	2
	CRJU	2108*	Criminal Investigations	3	3	0
	CRJU	2114**	Traffic Law	3	3	0
	CRJU	2140*	Law Enforcement & Behavioral Science	3	3	0
			Total Required Core Credits	**27**		

GRADUATION REQUIREMENT 27

**Denotes Prerequisite*

*** These courses must be completed prior to SKILLS. (Criminal Law/Traffic Law/Fitness for Law Enforcement)*

ADDITIONAL PROGRAM REQUIREMENTS: (Please see the Criminal Justice Coordinator for information.)

- Background Check: Students must complete and pass a background check prior to being officially admitted into the program. This background check must be completed prior to the first day of classes.
- MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a Psychologist approved by the Program Coordinator prior to admission into the program.
- Students must have completed, or be concurrently enrolled in, an Associate in Arts, Bachelors, or Criminal Justice AAS Degree from an accredited institution for admission into this program.
- Courses required for Minnesota P.O.S.T. licensing must be completed within three (3) years of starting the certificate.
- Students must have a valid Emergency Medical Responder certification (or higher) at the time of the Post Board Exam.

In addition to the program requirements listed above, 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 above.
2. College Cumulative GPA Requirement: Cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
3. 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;
4. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Law Enforcement Skills Certificate (C106)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CRJU	2160	Use of Force	2	1	2
	CRJU	2162	Firearms	3	2	2
	CRJU	2164	Patrol Practicals	5	3	4
	CRJU	2166	Tactical Communications/Relations	2	2	0
	CRJU	2124	General Evidence and Identification Preparation	4	4	0
			Total Required Core Credits	**16**		

GRADUATION REQUIREMENT 16

**Denotes Prerequisite*

ADDITIONAL PROGRAM REQUIREMENTS: (Please see the Criminal Justice Coordinator for information.)

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

In addition to the program requirements listed above, 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 above.
2. College Cumulative GPA Requirement: Cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
3. 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;
4. Residency Requirement: students must complete 25% of their credits at Central Lakes College;
5. Approval from CLC PPOE Coordinator to graduate.

Dental Assisting A.A.S. (A290)
Program Course Requirements
2019-2020

Revised 7/2/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1106	Dental Orientation and Anatomy	2	2	0
	DENT	1108**	General Anatomy	3	3	0
	DENT	1114	Pathology, Pharmacology, Law & Emergencies	3	3	0
	DENT	1116*	Dental Clinic I	8	0	16
	DENT	1118	Dental Radiology I	2	2	0
	DENT	1120	Preventive Dentistry	2	2	0
	DENT	1123*	Dental Clinic II	9	1	16
	DENT	1124	Biomaterials	2	1	2
	DENT	1129*	Dental Radiology II	2	2	0
	DENT	1132*	Dental Specialties	2	2	0
	DENT	1133*	Principles of Practice Management and Communication	2	1	2
	DENT	1150*	Dental Internship (336 Hours)	7	0	0
			Total Required Core Credits	**44**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following course:						
	ENGL	1410	Composition I (Goal 1)	4	4	0
Select twelve (12) additional MnTC credits from Goals 2-10. For students planning to pursue Dental Hygiene, we suggest you choose General Education courses that will meet prerequisite requirements for Dental Hygiene. See an advisor for assistance choosing courses for your targeted program/college. Typical Dental Hygiene course prerequisites may include:						
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	BIOL	2467*	Anatomy & Physiology I (Goal 3)	4	3	3
	BIOL	2468*	Anatomy & Physiology II (Goal 3)	4	3	3
	COMM	1420	Interpersonal Communication (Goal 1)	3	3	0
	PSYC	2421	General Psychology I (Goals 2 and 5)	4	4	0
	SOCL	1401	Introduction to Sociology (Goals 2 and 5)	3	3	0
			Total Required General Education Credits	**16**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

***BIOL 1404 Human Biology (3 credits), or BIOL 2467 Anatomy and Physiology I and BIOL 2468 Anatomy and Physiology II (4 credits each) may be substituted for DENT 1108 General Anatomy.*

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.
4. 8 hours of dental clinical observation must be completed by October 1st.
5. Per the Commission on Dental Accreditation, students must possess a High School Diploma or GED prior to the fall semester start of the Central Lakes College Dental Assisting Program.
6. Students who apply for the Dental Assisting Program who meet requirements for Admission will be accepted into the Dental Assisting Diploma for their first year with the option of pursuing their Associates in Applied Science (AAS) their second year.

Dental Assisting A.A.S. (A290)
Program Course Requirements
2019-2020

Revised 7/2/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1106	Dental Orientation & Anatomy	2	2	0
	DENT	1108**	General Anatomy	3	3	0
	DENT	1116*	Dental Clinic I	8	0	16
	DENT	1118	Dental Radiology I	2	2	0
	DENT	1120	Preventive Dentistry	2	2	0
	DENT	1124	Biomaterials	2	1	2
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1114	Pathology, Pharmacology, Law and Emergencies	3	3	0
	DENT	1123*	Dental Clinic II	9	1	16
	DENT	1129*	Dental Radiology II	2	2	0
	DENT	1132*	Dental Specialties	2	2	0
	DENT	1133*	Principles of Practice Management and Communication	2	1	2
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1150*	Dental Internship (336 Hours)	7	0	0
			Total Summer Semester – 1stYear	**7**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
			General Education	16		
			Total Fall Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

NOTES:

- The curriculum in the dental assisting program may expose students to hazardous materials, radiation and/or infectious diseases. Students will be provided with information through education and program policies to protect themselves and their patients from harm. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory and clinic. Program policies are available upon request.
- Minnesota Board of Dentistry will only accept American Heart Association Health Care Provider CPR or American Red Cross Professionals Rescuer CPR. The CPR requirement must be completed by October 1st. Students that have the required CPR must be current through August of the graduating year.
- Accuplacer Reading score of 56 or equivalent prerequisites are required for admission into the program.
- All applications to the Minnesota Board of Dentistry for initial license received on or after May 1, 2015 will require a criminal background check.

Dental Assisting Diploma (D290)
Program Course Requirements
2019-2020

Revised 7/2/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1106	Dental Orientation & Anatomy	2	2	0
	DENT	1108**	General Anatomy	3	3	0
	DENT	1114	Pathology, Pharmacology, Law and Emergencies	3	3	0
	DENT	1116*	Dental Clinic I	8	0	16
	DENT	1118	Dental Radiology I	2	2	0
	DENT	1120	Preventive Dentistry	2	2	0
	DENT	1123*	Dental Clinic II	9	1	16
	DENT	1124	Biomaterials	2	1	2
	DENT	1129*	Dental Radiology II	2	2	0
	DENT	1132*	Dental Specialties	2	2	0
	DENT	1133*	Principles of Practice Management and Communication	2	1	2
	DENT	1150*	Dental Internship (336 Hours)	7		
			Total Required Core Credits	**44**		

GRADUATION REQUIREMENT 44

**Denotes Prerequisite*

***BIOL 1404 Human Biology (3 credits), or BIOL 2467 Anatomy and Physiology I and BIOL 2468 Anatomy and Physiology II (4 credits each) may be substituted for DENT 1108 General Anatomy.*

NOTES:

- The curriculum in the dental assisting program may expose students to hazardous materials, radiation and/or infectious diseases. Students will be provided with information through education and program policies to protect themselves and their patients from harm. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory and clinic. Program policies are available upon request.
- Minnesota Board of Dentistry will only accept American Heart Association Health Care Provider CPR or American Red Cross Professionals Rescuer CPR. The CPR requirement must be completed by October 1st. Students that have the required CPR must be current through August of the graduating year.
- Accuplacer Reading score of 56 or equivalent prerequisites are required for admission into the program.
- All applications to the Minnesota Board of Dentistry for initial license received on or after May 1, 2015 will require a criminal background check.

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.
4. 8 hours of dental clinical observation must be completed by October 1st.
5. Per the Commission on Dental Accreditation, students must possess a High School Diploma or GED prior to the fall semester start of the Central Lakes College Dental Assisting Program.
6. Students who apply for the Dental Assisting Program who meet requirements for Admission will be accepted into the Dental Assisting Diploma for their first year with the option of pursuing their Associates in Applied Science (AAS) their second year

Dental Assisting Diploma (D290)
Program Course Requirements
2019-2020

Revised 7/2/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1106	Dental Orientation and Anatomy	2	2	0
	DENT	1108**	General Anatomy	3	3	0
	DENT	1116*	Dental Clinic I	8	0	16
	DENT	1118	Dental Radiology I	2	2	0
	DENT	1120	Preventive Dentistry	2	2	0
	DENT	1124	Biomaterials	2	1	2
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1114	Pathology, Pharmacology, Law & Emergencies	3	3	0
	DENT	1123*	Dental Clinic II	9	1	16
	DENT	1129*	Dental Radiology II	2	2	0
	DENT	1132*	Dental Specialties	2	2	0
	DENT	1133*	Principles of Practice Management and Communication	2	1	2
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DENT	1150*	Dental Internship (336 Hours)	7		
			Total Summer Semester – 1stYear	**7**		

GRADUATION REQUIREMENT 44

**Denotes Prerequisite*

Diesel Equipment Technician AAS (A340)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	DHET HEOM	1103 1200	Introduction to Construction Equipment **OR** Introduction to Operations	1	0	2
	DHET	1107	Electrical Theory	3	3	0
	DHET	1108	Electrical Lab	5	0	10
	DHET	1117	Engine Theory	3	3	0
	DHET	1118	Engine Lab	5	0	10
	DHET	1123	Customer Service/Service Management 1	1	1	0
	DHET	1125	Hydraulic Theory	3	3	0
	DHET	1126	Hydraulic Lab	5	0	10
	DHET	1128	Power Trains Theory	2	2	0
	DHET	1129	Power Trains Lab	5	0	10
	DHET	1132*	On Highway Vehicle Systems Theory	3	3	0
	DHET	1133*	On Highway Vehicle Systems Lab	4	0	8
	DHET	1130	Diesel Internship	2		
	DHET	1135	Welding for Diesel Equipment	1	0	2
	ENGL	1520	Language Fundamentals	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
	ENGL	1522	Writing Fundamentals for Diesel and Heavy Equipment Technicians	1	1	0
	HEOM	1165	CDL	3	3	0
	MATH	1500	Applied Math	3	3	0
			Total Required Core Credits	**52**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 67

**Denotes Prerequisite*

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: 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.

Diesel Equipment Technician AAS (A340)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET HEOM	1103 1200	Introduction to Construction Equipment **OR** Introduction to Operations	1	0	2
	MATH	1500	Applied Math	3	3	0
The following courses are offered in fall and spring semester:						
	DHET	1125	Hydraulic Theory	3	3	0
	DHET	1126	Hydraulic Lab	5	0	10
	DHET	1128	Power Trains Theory	2	2	0
	DHET	1129	Power Trains Lab	5	0	10
	DHET	1135	Welding for Diesel Equipment	1	0	2
			Total Fall Semester – 1st Year	**20**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET	1123	Customer Service/Service Management 1	1	1	0
	ENGL	1520	Language Fundamentals	1	1	0
	ENGL	1521	Technical Writing Fundamentals	1	1	0
	ENGL	1522	Writing Fundamentals for Diesel and Heavy Equipment Technicians	1	1	0
The following courses are offered in fall and spring semester:						
	DHET	1107	Electrical Theory	3	3	0
	DHET	1108	Electrical Lab	5	0	10
	DHET	1117	Engine Theory	3	3	0
	DHET	1118	Engine Lab	5	0	10
			Total Spring Semester – 1st Year	**20**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET	1130	Diesel Internship	2		
	DHET	1132*	On Highway Vehicle Systems Theory	3	3	0
	DHET	1133*	On Highway Vehicle Systems Lab	4	0	8
	HEOM	1165	CDL	3	3	0
			Total Summer Session – 1st Year	**12**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
			General Education	15		
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 67

**Denotes Prerequisite*

Diesel Equipment Technician Diploma (D341)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	DHET HEOM	1103 1200	Introduction to Construction Equipment **OR** Introduction to Operations	1	0	2
	DHET	1107	Electrical Theory	3	3	0
	DHET	1108	Electrical Lab	5	0	10
	DHET	1117	Engine Theory	3	3	0
	DHET	1118	Engine Lab	5	0	10
	DHET	1123	Customer Service/Service Management 1	1	1	0
	DHET	1125	Hydraulic Theory	3	3	0
	DHET	1126	Hydraulic Lab	5	0	10
	DHET	1128	Power Trains Theory	2	2	0
	DHET	1129	Power Trains Lab	5	0	10
	DHET	1132*	On Highway Vehicle Systems Theory	3	3	0
	DHET	1133*	On Highway Vehicle Systems Lab	4	0	8
	DHET	1135	Welding for Diesel Equipment	1	0	2
			Total Required Core Credits	**41**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ENGL	1520	Language Fundamentals	1	1	0
	ENGL	1521	Technical Writing Fundaments	1	1	0
	ENGL	1522	Writing Fundamentals for Diesel and Heavy Equipment Technicians	1	1	0
	MATH	1500	Applied Math	3	3	0
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 47

**Denotes Prerequisite*

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: 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.

Diesel Equipment Technician Diploma (D341)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET	1103	Introduction to Construction Equipment **OR**	1	0	2
	HEOM	1200	Introduction to Operations			
	MATH	1500	Applied Math	3	3	0
The following courses are offered in fall and spring semester:						
	DHET	1125	Hydraulic Theory	3	3	0
	DHET	1126	Hydraulic Lab	5	0	10
	DHET	1128	Power Trains Theory	2	2	0
	DHET	1129	Power Trains Lab	5	0	10
	DHET	1135	Welding for Diesel Equipment	1	0	2
			Total Fall Semester – 1st Year	**20**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET	1123	Customer Service/Service Management 1	1	1	0
	ENGL	1520	Language Fundamentals	1	1	0
	ENGL	1521	Technical Writing Fundaments	1	1	0
	ENGL	1522	Writing Fundamentals for Diesel and Heavy Equipment Technicians	1	1	0
The following courses are offered in fall and spring semester:						
	DHET	1107	Electrical Theory	3	3	0
	DHET	1108	Electrical Lab	5	0	10
	DHET	1117	Engine Theory	3	3	0
	DHET	1118	Engine Lab	5	0	10
			Total Spring Semester – 1st Year	**20**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	DHET	1132*	On Highway Vehicle Systems Theory	3	3	0
	DHET	1133*	On Highway Vehicle Systems Lab	4	0	8
			Total Summer Session – 1st Year	**7**		

GRADUATION REQUIREMENT 47

**Denotes Prerequisite*

Early Childhood Education A.A.S. (A281)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1102	Introduction to Early Childhood Education	3	3	0
	CDEV	1104	Child Growth and Development	3	2	2
	CDEV	1106	Child Health, Wellness, Safety, and Nutrition	3	3	0
	CDEV	1112*	Child Behavior and Guidance	3	2	2
	CDEV	1114*	Diverse Children and Family Relations	3	3	0
	CDEV	1116*	Integration of Play	3	2	2
	CDEV	2104*	Observation and Assessment	3	1	4
	CDEV	2106	Creative Activities and the Learning Environment	3	2	2
	CDEV	2108*	Introduction to Language and Literacy	3	3	0
	CDEV	2116	Infant and Toddler Development, Learning, and Responsive Relationships	3	3	0
	CDEV	2202*	Introduction to Special Education	3	3	0
	CDEV	2204*	Characteristics of Children with Autism, Learning Disabilities, and Emotional Behavioral Disorders	2	2	0
	CDEV	2206*	Careers and Business Strategies in Early Childhood	3	3	0
	CDEV	2208*	Understanding and Planning Curriculum	3	3	0
	CDEV	2210*	Internship	3 - 4	0	0
	ENGL	1410	Composition I (Goal 1) **OR**	4	4	0
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
			Total Required Core Credits	**48**		

Required General Education Courses

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 (MnTC). The following are recommended courses to fulfill the general education requirement.

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	COMM	2420	Intercultural Communication (Goals 1 and 7)	3	3	0
	MATH	1441	Concepts in Math (Goal 4) **OR**	3	3	0
	MATH	1470	College Algebra (Goal 4)	3	3	0
			Goal Area 3: Science Lab	3-4		
			Goal Area 2: Critical Thinking	3	3	0
			Goal Area 6: Humanities/Fine Arts			
			Goal Area 8: Global Perspective			
	PSYC	1423	Positive Psychology: The Science of Wellbeing (Goals 5 and 9) **OR**	3	3	0
	PSYC	2421	General Psychology (Goals 2 and 5) **OR**	4	4	0
	PSYC	2435*	Educational Psychology (Goals 5 and 7)	3	3	0
	SOCL	1401	Introduction to Sociology (Goals 2 and 5) **OR**	3	3	0
	SOCL	1472	Sociology of the Family (Goal 5) **OR**	3	3	0
	SOCL	2481	Race, Ethnicity, and Oppression (Goals 5 and 7)	3	3	0
			Total Required General Education Credits	**12**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Early Childhood Education A.A.S. (A281)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1102	Introduction to Early Childhood Education	3	3	0
	CDEV	1104	Child Growth and Development	3	2	2
	CDEV	1106	Child Health, Wellness, Safety, and Nutrition	3	3	0
			General Education	3	3	0
	ENGL	1410	Composition I **OR**	4	4	0
	ENGL	1422	Practical Writing	3	3	0
			Total Fall Semester – 1st Year	**15-16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1112*	Child Behavior and Guidance	3	2	2
	CDEV	1114*	Diverse Children and Family Relations	3	3	0
	CDEV	1116*	Integration of Play	3	2	2
	CDEV	2202*	Introduction to Special Education	3	3	0
			General Education	3	3	0
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	2104*	Observation and Assessment	3	1	4
	CDEV	2106	Creative Activities and the Learning Environment	3	2	2
	CDEV	2108*	Introduction to Language and Literacy	3	3	0
	CDEV	2116	Infant and Toddler Development, Learning, and Responsive Relationships	3	3	0
			General Education	3	3	0
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	2204*	Characteristics of Children with Autism, Learning Disabilities, and Emotional Behavioral Disorders	2	2	0
	CDEV	2206*	Careers and Business Strategies in Early Childhood	3	3	0
	CDEV	2208*	Understanding and Planning Curriculum	3	3	0
	CDEV	2210*	Internship	3-4	0	0
			General Education	3	3	0
			Total Spring Semester – 2nd Year	**14-15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Early Childhood Education Diploma (D280)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1102	Introduction to Early Childhood Education	3	3	0
	CDEV	1104	Child Growth and Development	3	2	2
	CDEV	1106	Child Health, Wellness, Safety, and Nutrition	3	3	0
	CDEV	1112*	Child Behavior and Guidance	3	2	2
	CDEV	1114*	Diverse Children and Family Relations	3	3	0
	CDEV	1116*	Integration of Play	3	2	2
	CDEV	2106	Creative Activities and the Learning Environment **OR**	3	2	2
	CDEV	2116	Infant and Toddler Development, Learning, and Responsive Relationships	3	3	0
	CDEV	2206*	Careers and Business Strategies in Early Childhood	3	3	0
	CDEV	2210*	Internship	3-4	0	0
	ENGL	1410	Composition I **OR**	4	4	0
	ENGL	1422	Practical Writing	3	3	0
			Total Required Core Credits	**31**		

GRADUATION REQUIREMENT 31

**Denotes Prerequisite*

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

Early Childhood Education Diploma (D280)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1102	Introduction to Early Childhood Education	3	3	0
	CDEV	1104	Child Growth and Development	3	2	2
	CDEV	1106	Child Health, Wellness, Safety, and Nutrition	3	3	0
	CDEV CDEV	2106 2116	Creative Activities and the Learning Environment **OR** Infant and Toddler Development, Learning, and Responsive Relationships	3 3	2 3	2 3
	ENGL ENGL	1410 1422	Composition I **OR** Practical Writing	4 3	4 3	0 0
			Total Fall Semester – 1st Year	**15 - 16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CDEV	1112*	Child Behavior and Guidance	3	2	2
	CDEV	1114*	Diverse Children and Family Relations	3	3	0
	CDEV	1116*	Integration of Play	3	2	2
	CDEV	2206*	Careers and Business Strategies in Early Childhood	3	3	0
	CDEV	2210*	Internship	3-4	0	0
			Total Spring Semester – 1st Year	**15 - 16**		

GRADUATION REQUIREMENT 31

**Denotes Prerequisite*

Advanced Farm Business Management Certificate (C145)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	FBMA	2930*	Fundamentals of Financial Management Relates Risk Management	3		
	FBMA	2931*	Applied Financial Management Relates Risk Management	3		
	FBMA	2932*	Fundamentals of Financial Management/Strategic Plan Emphasis	3		
	FBMA	2933*	Applied Financial Management/Strategic Plan Emphasis	3		
	FBMA	2934*	Fundamentals of Financial Management/Business Plan Emphasis	3		
	FBMA	2935*	Applied Financial Management/Business Plan Emphasis	3		
			Total Required Core Credits	**18**		

Required Elective Courses

Students must choose twelve (12) additional credits from the Farm Business Management Master Course Listing.

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required Elective Credits	**12**		

GRADUATION REQUIREMENT 30

**Denotes Prerequisite*

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

Agricultural Commodities Marketing Certificate (C141)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	FBMT	1170	Introduction to Farm Commodities Marketing	3		
	FBMT	1173	Directed Study – Introduction to Farm Commodity Marketing	2		
	FBMT	1180	Applying Commodity Marketing Fundamentals	3		
	FBMT	1183	Directed Study – Applying Commodity Marketing Fundamentals	2		
	FBMT	1190	Evaluating Farm Commodity Marketing Tools	3		
	FBMT	1193	Directed Study - Evaluating Farm Commodity Marketing Tools	2		
	FBMT	2170	Monitoring Farm Commodity Marketing Plans	3		
	FBMT	2173	Directed Study - Monitoring Farm Commodity Marketing Plans	2		
	FBMT	2180	Strategies in Farm Commodity Marketing	3		
	FBMT	2183	Directed Study- Strategies in Farm Commodity Marketing	2		
			Total Required Core Credits	**25**		

GRADUATION REQUIREMENT 25

**Denotes Prerequisite*

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

Applications in Farm Business Management Certificate (C142) Program Course Requirements 2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	FBMT	2141	Interpreting and Evaluating Financial Data	4		
	FBMT	2142	Interpreting Trends in Business Planning	4		
	FBMT	2151	Strategies in Farm System Data Management	4		
	FBMT	2152	Integrating System Information for Financial Planning	4		
	FBMT	2161	Examination of the Context of Farm System Management	4		
	FBMT	2162	Refining Farm System Management	4		
			Total Required Core Credits	**24**		

Required Elective Courses

Student must choose an additional 6 credits from the Farm Business Management Master Course Listing. Electives can be identified when the second numerical placeholder is a "2". (i.e. FBMT 1**2**11).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required Elective Credits	**6**		

GRADUATION REQUIREMENT 30

**Denotes Prerequisite*

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

Current Issues in Farm Business Management Certificate (C144) Program Course Requirements 2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	FBMT	2210	Current Issues in Farm Business Management	1-5		
	FBMT	2211	Current Issues in Farm Business Management	1-5		
	FBMT	2212	Current Issues in Farm Business Management	1-5		
	FBMT	2220	Directed Studies – Current Issues in Farm Business Management	1-5		
	FBMT	2121	Directed Studies – Current Issues in Farm Business Management	1-5		
	FBMT	2122	Directed Studies – Current Issues in Farm Business Management	1-5		
			Total Required Core Credits	**18-30**		

Required Electives

Course #	Title	Credits	Lec Hrs	Lab Hrs
Students must choose up to 12 additional credits (to equal a total of 30 credits) of Farm Business Management (FBMA) courses. Electives can be identified when the second numerical placeholder is a "2"; i.e., FBMA 2**2**23.				
	Total Required Elective Credits	**0-12**		

GRADUATION REQUIREMENT 30

**Denotes Prerequisite*

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

Essentials of Farm Business Management Certificate (C143) Program Course Requirements 2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	FBMT	1112	Foundations for Farm Business Management	4		
	FBMT	1121	Preparation for Farm Business Analysis	4		
	FBMT	1122	Implementing the System Management Plan	4		
	FBMT	1131	Management and Modifying Farm System Data	4		
	FBMT	1132	Interpreting and Using Farm System Data	4		
			Total Required Core Credits	**20**		

Required Electives

Course #	Title	Credits	Lec Hrs	Lab Hrs
Students must choose 10 additional credits of Farm Business Management courses. Electives can be identified when the second numerical placeholder is a "2"; i.e., FBMT 1**211**.				
	Total Required Elective Credits	**10**		

GRADUATION REQUIREMENT 30

**Denotes Prerequisite*

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

Specialty Crops Management Diploma (D141)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	SCMT	1110	System Goal Setting	1	1	0
	SCMT	1111	Introduction to Specialty Crops	2	2	0
	SCMT	1112	Introduction to Financial Planning and Analysis	2	2	0
	SCMT	1114	Marketing of Specialty Crops	2	2	0
	SCMT	1116	Introduction to Soils and Plant Growth	2	2	0
	SCMT	1117	Pest Identification and Control	2	2	0
	SCMT	1119	Pesticide Safety and Handling	2	2	0
	SCMT	1121	Fertilizer Selection, Handling and Application	2	2	0
	SCMT	1124	Irrigation Planning and Management	2	2	0
	SCMT	1135	Labor, Risk and Tax Management	2	2	0
	SCMT	2125	Advertising and Customer Relations	2	2	0
	SCMT	2127	Advanced Financial Planning and Analysis	2	2	0
	SCMT	2131	Advanced Soils and Plant Nutrition	2	2	0
	SCMT	2132	Advanced Marketing Strategies	2	2	0
	SCMT	2136	Advanced Pest Identification and Control	2	2	0
	SCMT	2000	Special Topics – Soil Management	1	1	0
	SCMT	2200	Current Issues in Specialty Crop Marketing	1	1	0
	SCMT	2334	Value Added Opportunities for Specialty Crops	2	2	0
			Total Required Core Credits	**33**		

Required Elective Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must select an additional 11 credits from SCMT courses.						
			Elective Courses	11		
			Total Required Elective Credits	**11**		

GRADUATION REQUIREMENT 44

**Denotes Prerequisite*

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

Enology A.A.S. (A277)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Intro to Computer Applications	3	3	0
	MATH	1506	Beginning College Algebra	4	4	0
	VITI	1105	Molecular Principles of Grape and Wine	4	4	0
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1148*	Winery Sanitation	3	3	0
	VITI	1160*	Winery Equipment Operation	2	2	0
	VITI	1110	Introduction to Wine Microorganisms	3	3	0
	VITI	1246*	Intermediate Enology – Harvest/Crush	2	2	0
	VITI	1247*	Intermediate Enology – Post Harvest	2	2	0
	VITI	1257*	Fall Wine Production Internship	3	0	6
	VITI	1259*	Cellar Operations Technology	2	0	4
	VITI	1266*	Sensory Evaluation	3	2	2
	VITI	1268*	Wine and Must Analysis	3	2	2
			Total Required Core Credits	**40**		

Required Elective

Students must chose a minimum of two (2) credits from the following courses:						
Course #			**Title**	**Credits**	**Lec Hrs**	**Lab Hrs**
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	2	2
	VITI	1147*	Introduction to Fruit Wine Production	2	2	0
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1293	Soils for Viticulture	3	3	0
			Total Required Elective Credits	**2**		

Required General Education Courses

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 (MnTC).						
Course #			**Title**	**Credits**	**Lec Hrs**	**Lab Hrs**
Students must include within the General Education component the following courses:						
	BIOL	1431	General Biology I (Goal 3)	5	3	4
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	ENGL	1422	Practical Writing (Goal 1)	3	3	0
	POLS	1435	American Government and Politics (Goals 5 and 9)	3	3	0
			Total Required General Education Credits	**18**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Enology A.A.S. (A277)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1431	General Biology I (Goal 3)	5	3	4
	COMP	1120	Intro to Computer Applications	3	3	0
	MATH	1506	Beginning College Algebra	4	4	0
	VITI	1146*	Introduction to Enology	3	3	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	VITI	1105	Molecular Principals of Grape & Wine	4	4	0
	VITI	1148*	Winery Sanitation	3	3	0
	VITI	1160*	Winery Equipment Operation	2	2	0
	VITI	1110	Introduction to Wine Microorganisms	3	3	0
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	ENGL	1422	Practical Writing (Goal 1)	3	3	0
	POLS	1435	American Government and Politics (Goals 5 and 9)	3	3	0
	VITI	1246*	Intermediate Enology – Harvest/Crush	2	2	0
			Total Fall Semester – 2nd Year	**12**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	VITI	1247*	Intermediate Enology – Post Harvest	2	2	0
	VITI	1259*	Cellar Operations Technology	2	0	4
	VITI	1266*	Sensory Evaluation	3	2	2
	VITI	1268*	Wine and Must Analysis	3	2	2
			Elective	2		
			Total Spring Semester – 2nd Year	**15**		

Fall Semester – 3rd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1257*	Fall Wine Production Internship	3	0	6
			Total Fall Semester – 3rd Year	**3**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Enology Diploma (D277)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1105	Molecular Principals of Grape and Wine	4	4	0
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1148*	Winery Sanitation	3	3	0
	VITI	1160*	Winery Equipment Operation	2	2	0
	VITI	1110	Introduction to Wine Microorganisms	3	3	0
	VITI	1246*	Intermediate Enology – Harvest/Crush	2	2	0
	VITI	1247*	Intermediate Enology – Post Harvest	2	2	0
	VITI	1257*	Fall Wine Production Internship	3	0	6
	VITI	1259*	Cellar Operations Technology	2	0	4
	VITI	1266*	Sensory Evaluation	3	2	2
	VITI	1268*	Wine and Must Analysis	3	2	2
			Total Required Core Credits	**30**		

Required Elective Courses

Students must chose a minimum of two (2) credits from the following courses:

Course #			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	3	0
	VITI	1147	Introduction to Fruit Wine Production	2	2	0
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1293	Soils for Viticulture	3	3	0
			Total Required Elective Credits	**2**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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

Enology Diploma (D277)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1105	Molecular Principals of Grape and Wine	4	4	0
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1110	Introduction to Wine Microorganisms	3	3	0
			Elective	2	2	0
			Total Fall Semester – 1st Year	**12**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1148*	Winery Sanitation	3	3	0
	VITI	1160*	Winery Equipment Operation	2	2	0
	VITI	1246*	Intermediate Enology – Harvest/Crush	2	2	0
	VITI	1247*	Intermediate Enology – Post Harvest	2	2	0
	VITI	1259*	Cellar Operations Technology	2	0	4
	VITI	1266*	Sensory Evaluation	3	2	2
	VITI	1268*	Wine and Must Analysis	3	2	2
			Total Spring Semester – 1st Year	**17**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1257*	Fall Wine Production Internship	3	0	6
			Total Fall Semester – 2nd Year	**3**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Viticulture A.A.S. (A275)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Intro to Computer Applications	3	3	0
	MATH	1506	Beginning College Algebra	4	4	0
	VITI	1105	Molecular Principals of Grape and Wine	4	4	0
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	3	0
	VITI	1112	Botanical Viticulture	4	4	0
	VITI	1117	Cold Climate Viticulture	1	1	0
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1212*	Winter Viticulture Technology	2	1	2
	VITI	1214*	Spring Viticulture Technology	2	1	2
	VITI	1215*	Summer/Fall Viticulture Technology	2	1	2
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1213*	Regional Vineyard Management	2	2	0
	VITI	1266*	Sensory Evaluation	3	2	2
	VITI	1293	Soils for Viticulture	3	3	0
			Total Required Core Credits	**41**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses: Students must include within the General Education component X credits selected from the following courses:						
	BIOL	1431	General Biology I (Goal 3)	5	3	4
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	ENGL	1410	Composition I (Goal 1)	4	4	0
	MATH	1460	Introduction to Statistics (Goal 4)	4	2	4
	POLS	1435	American Government and Politics (Goals 5 and 9)	3	3	0
			Total Required General Education Credits	**19**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Viticulture A.A.S. (A275)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1431	General Biology I (Goal 3)	5	3	4
	COMP	1120	Intro to Computer Applications	3	3	0
	MATH	1506	Beginning College Algebra	4	4	0
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	3	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	ENGL	1410	Composition I (Goal 1)	4	4	0
	VITI	1105	Molecular Principles of Grape and Wine	4	4	0
	VITI	1212*	Winter Viticulture Technology	2	1	2
	VITI	1293	Soils for Viticulture	3	3	0
			Total Spring Semester – 1st Year	**16**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1215*	Summer/Fall Viticulture Technology	2	1	2
			Total Summer Session – 1st Year	**2**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1460	Introduction to Statistics (Goal 4)	4	2	4
	VITI	1112	Botanical Viticulture	4	4	0
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1213*	Regional Vineyard Management	2	2	0
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	POLS	1435	American Government and Politics (Goals 5 and 9)	3	3	0
	VITI	1117	Cold Climate Viticulture	1	1	0
	VITI	1214*	Spring Viticulture Technology	2	1	2
	VITI	1266*	Sensory Evaluation	3	3	0
			Total Spring Semester – 2nd Year	**12**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Viticulture Diploma (D275)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1120	Intro to Computer Applications	3	3	0
	VITI	1105	Molecular Principals of Grape and Wine	4	4	0
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	3	0
	VITI	1112	Botanical Viticulture	4	4	0
	VITI	1117	Cold Climate Viticulture	1	1	0
	VITI	1212*	Winter Viticulture Technology	2	1	2
	VITI	1214*	Spring Viticulture Technology	2	1	2
	VITI	1215*	Summer/Fall Viticulture Technology	2	1	2
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1213*	Regional Vineyard Management	2	0	0
	VITI	1293	Soils for Viticulture	3	3	0
			Total Required Core Credits	**28**		

Required Elective Courses

Students must chose a minimum of three (3) credits from the following courses:

Course #			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1146*	Introduction to Enology	3	3	0
	VITI	1266*	Sensory Evaluation	3	3	0
			Total Required Elective Credits	**3**		

GRADUATION REQUIREMENT 31

**Denotes Prerequisite*

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

Viticulture Diploma (D275)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1111	Introduction to Viticulture and Vineyard Establishment	3	3	0
	VITI	1112	Botanical Viticulture	4	4	0
	VITI	1211	Integrated Pest Management	2	2	0
	VITI	1293	Soils for Viticulture	3	3	0
	VITI VITI	1146* 1266*	Introduction to Enology **OR** Sensory Evaluation	3	3	0

**VITI 1146 or 1266 may be taken either Fall or Spring Semester*

Total Fall Semester – 1st Year **12-15**

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1120	Intro to Computer Applications	3	3	0
	VITI	1105	Molecular Principals of Grape & Wine	4	4	0
	VITI	1117	Cold Climate Viticulture	1	1	0
	VITI	1212*	Winter Viticulture Technology	2	2	0
	VITI	1214*	Spring Viticulture Technology	2	2	0
	VITI	1213*	Regional Vineyard Management	2	0	0
	VITI VITI	1146* 1266*	Introduction to Enology **OR** Sensory Evaluation	3	3	0

**VITI 1146 or 1266 may be taken either Fall or Spring Semester*

Total Spring Semester – 1st Year **14-17**

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	VITI	1215*	Summer/Fall Viticulture Technology	2	2	2

Total Summer Session – 1st Year **2**

GRADUATION REQUIREMENT 31

**Denotes Prerequisite*

Graphic Design A.A.S. (A221)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1120	Publication Design	3	2	2
	GDES	1122*	Graphic Design Production	3	2	2
	GDES	1124	Corporate ID	3	3	0
	GDES	1134	Typography	3	3	0
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
	GDES	2100*	Graphic Design I	3	2	2
	GDES	2102*	Graphic Design II	3	2	2
	GDES	2113*	Art Direction	3	2	2
	GDES	2120*	Packaging	3	3	0
	GDES	2124	Portfolio Production	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Designs in Social Media	3	2	2
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC). Students are encouraged to select courses from the following list:

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ARTS	1401	Black and White Photography I (Goal 6)	3	2	2
	ARTS	1403	Color Photo I (Goal 6)	3	2	2
	ARTS	1425	Introduction to Graphic Design (Goal 6)	3	2	2
	ARTS	1458	Drawing (Goal 6)	3	2	2
	ARTS	1468	Painting (Goal 6)	3	2	2
	ARTS	2410	Introduction to Photo/Video Art (Goal 6)	3	2	2
	COMM	1420	Interpersonal Communication (Goal 1)	3	3	0
	COMM	1450	Introduction to Mass Communication (Goals 2 and 9)	3	3	0
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1422	Practical Writing (Goal 1)	3	3	0
	MATH	1441	Concepts in Mathematics (Goal 4)	3	3	0
	PHIL	1421	Critical Thinking (Goals 2 and 9)	3	3	0
	PHIL	2420	Ethics (Goals 6 and 9)	3	3	0
	SOCL	1401	Introduction to Sociology (Goals 2 and 5)	3	3	0
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.
4. Graphic Design students are required to purchase an Apple Macintosh laptop with the Adobe Creative Cloud software. See latest requirement through bookstore website.

Graphic Design A.A.S. (A221)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1134	Typography	3	3	0
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1120	Publication Design	3	2	2
	GDES	1122*	Graphic Design Production	3	2	2
	GDES	1124	Corporate ID	3	3	0
			General Education	6		
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	2100*	Graphic Design I	3	2	2
	GDES	2120*	Packaging	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Design in Social Media	3	2	2
			General Education	3		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	2102*	Graphic Design II	3	2	2
	GDES	2113*	Art Direction	3	2	2
	GDES	2124	Portfolio Production	3	3	0
			General Education	6		
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Graphic Design Diploma (D230)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1120	Publication Design	3	2	2
	GDES	1122*	Graphic Design Production	3	2	2
	GDES	1124	Corporate ID	3	3	0
	GDES	1134	Typography	3	3	0
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
	GDES	2100*	Graphic Design I	3	2	2
	GDES	2102*	Graphic Design II	3	2	2
	GDES	2113*	Art Direction	3	2	2
	GDES	2120*	Packaging	3	3	0
	GDES	2124	Portfolio Production	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Designs in Social Media	3	2	2
			Choose 3 credits from GDES or VPRO courses	3		
			Total Required Core Credits	**48**		

Required General Education Courses

Students must complete six (6) credits of General Education classes. The following courses are recommended:

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ARTS	1401	Black and White Photography (Goal 6)	3	2	2
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1422	Practical Writing Goals 1 and 2)	3	3	0
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 54

**Denotes Prerequisite*

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.

Graphic Design Diploma (D230)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1134	Typography	3	3	0
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1120	Publication Design	3	2	2
	GDES	1122*	Graphic Design Production	3	2	2
	GDES	1124	Corporate ID	3	3	0
			General Education	6		
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	2100*	Graphic Design I	3	2	2
	GDES	2120*	Packaging	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Design in Social Media	3	2	2
			Total Fall Semester – 2nd Year	**12**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	2102*	Graphic Design II	3	2	2
	GDES	2113*	Art Direction	3	2	2
	GDES	2124	Portfolio Production	3	3	0
			Choose 3 credits from GDES or VPRO Courses	3		
			Total Spring Semester – 2nd Year	**12**		

GRADUATION REQUIREMENT 54

**Denotes Prerequisite*

Graphic Design Media Technologies Diploma (D222)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1122*	Graphic Design Production	3	2	2
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Design in Social Media	3	2	2
	GDES	2352	Shop Internship	12		
			Choose ten (10) credits from GDES or VPRO courses	10		
			Total Required Core Credits	**43**		

GRADUATION REQUIREMENT 43

**Denotes Prerequisite*

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.
4. Graphic Design students are required to purchase an Apple Macintosh laptop with the Adobe Creative Cloud software. See latest requirement through bookstore website.

Graphic Design Media Technology Diploma (D222)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1105	Concepts of Design	3	3	0
	GDES	1140	Adobe Photoshop	3	3	0
	GDES	1142	Adobe Illustrator	3	3	0
	GDES	1144	Adobe InDesign	3	3	0
	GDES	2130	Motion Graphics I	3	2	2
	GDES	2132	Design in Social Media	3	2	2
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	1122*	Graphic Design Production	3	2	2
			Choose ten (10) credits from GDES or VPRO courses	10		
			Total Spring Semester – 1st Year	**13**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	GDES	2352	Shop Internship	12		
			Total Fall Semester – 2nd Year	**12**		

GRADUATION REQUIREMENT 43

**Denotes Prerequisite*

Healthcare Administrative Specialist A.A.S. (A071)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy **OR**	3	3	0
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1142	Healthcare Information Systems	3	3	0
	HINS	1144*	Pharmacology for Healthcare Admin.	1	1	0
	HINS	1150*	Introduction to DX and Procedure Coding	3	3	0
	HINS	1152	Medical Insurance and Billing	2	2	0
	HINS	1154	Introduction to Health Data Analysis	3	3	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1165	Medical Records Management	3	3	0
	HINS	1360	Medical Terminology	3	3	0
	HINS	2144*	Legal Aspects of Healthcare	2	2	0
	HINS	2148*	Healthcare Management and Organization	3	3	0
	HINS	2172*	Reimbursement Methodologies	2	2	0
			Total	**39**		

Students must select a minimum of six (6) credits from the following courses:						
	BUSN	1110	Marketing Principles	3	3	0
	COMP	1121	Advanced Computer Applications	3	3	0
	COMP	1135	Microsoft Excel Comprehensive	4	4	0
	HINS	2140	Advanced Medical Coding	4	4	0
	HINS	2142	Medical Certification Prep	3	3	0
	HINS	2190	Professional Practicum	2	1	2
			Total	**6**		
			Total Required Core Credits	**45**		

Required General Education

An associate in applied science degree requires a minimum of 15 general education credits selected from **at least three of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	COMM	1420	Interpersonal Communication (Goal 1)	3	3	0
Or	COMM	1422	Honors Interpersonal Communications	3	3	0
	BIOL	1404	Human Biology (Goal 3) (If not taken in core class)	3	2	2
	Choose 9-12 additional credits from at least two different goal areas (2-10) of the Minnesota Transfer Curriculum			12		
			Total Required General Education Credits	**12-15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.

Healthcare Administrative Specialist A.A.S. (A071)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy **OR**	3	3	0
	BIOL	1404	Human Biology	3	2	2
1st Half Semester						
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1360	Medical Terminology	3	3	0
2nd Half Semester						
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1152	Medical Insurance & Billing	2	2	0
	HINS	1154	Introduction to Health Data Analysis	3	3	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
1st Half Semester						
	HINS	1144*	Pharmacology for Healthcare Admin	1	1	0
	HINS	1165	Medical Records Management	3	3	0
2nd Half Semester						
	HINS	1142	Healthcare Information Systems	3	3	0
	HINS	1150*	Introduction to DX and Procedure Coding	3	3	0
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

	HINS	2142	Medical Certification Prep (optional – Additional Required Core Course) **OR** Additional Required Course	3	3	0
	General Education			12		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

1st Half Semester						
	HINS	2148	Healthcare Management and Organization	3	3	0
	HINS	2144	Legal Aspects of Healthcare	2	2	0
2nd Half Semester						
	HINS	2172*	Reimbursement Methodologies	2	2	0
	Additional required core course			3		
	General Education			3		
			Total Spring Semester – 2nd Year	**13**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Healthcare Administrative Specialist Certificate (C071)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy **OR**	3	3	0
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	BUSN	1166	Business Communications	3	3	0
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1165	Medical Records Management	3	3	0
	HINS	1360	Medical Terminology	3	3	0
	HINS	2190	Professional Practicum	2	1	2
			Total Required Core Credits	**19**		

GRADUATION REQUIREMENT 19

**Denotes Prerequisite*

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.

Healthcare Administrative Specialist Certificate (C071)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy OR	3	3	0
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1360	Medical Terminology	3	3	0
			Total Fall Semester – 1st Year	**11**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	HINS	1165	Medical Records Management	3	3	0
	HINS	2190	Professional Practicum	2	1	2
			Total Spring Semester – 1st Year	**8**		

GRADUATION REQUIREMENT 19

**Denotes Prerequisite*

Healthcare Administrative Diploma (D070)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy (Goal 3) **OR**	3	3	0
	BIOL	1404	Human Biology	3	2	2
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1142	Healthcare Information Systems	3	3	0
	HINS	1144*	Pharmacology for Healthcare Admin	1	1	0
	HINS	1150*	Introduction to DX and Procedure Coding	3	3	0
	HINS	1152	Medical Insurance and Billing	2	2	0
	HINS	1154	Introduction to Health Data Analysis	3	3	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1165	Medical Records Management	3	3	0
	HINS	1360	Medical Terminology	3	3	0
			Total Required Core Credits	**32**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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.

Healthcare Administrative Diploma (D070)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1510	Essentials of Human Anatomy **OR**	3	3	0
	BIOL	1404	Human Biology	3	2	2
1st Half Semester						
	ENGL	1501	Writing Fundamentals for Healthcare Professionals	1	1	0
	HINS	1163	Medical Office Procedures	2	2	0
	HINS	1360	Medical Terminology	3	3	0
2nd Half Semester						
	HINS	1120	Introduction to Health Information Privacy and Security	1	1	0
	HINS	1152	Medical Insurance & Billing	2	2	0
	HINS	1154	Introduction to Health Data Analysis	3	3	0
	HINS	1156	Interpersonal Skills for Healthcare Professionals	1	1	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BUSN	1166	Business Communications	3	3	0
	COMP	1120	Introduction to Computer Applications	3	3	0
1st Half Semester						
	HINS	1144*	Pharmacology for Healthcare Admin	1	1	0
	HINS	1165	Medical Records Management	3	3	0
2nd Half Semester						
	HINS	1142	Healthcare Information Systems	3	3	0
	HINS	1150*	Introduction to DX and Procedure Coding	3	3	0
			Total Spring Semester – 1st Year	**16**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Healthcare Accounting AAS (A011)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	ACCT	2121*	Intermediate Accounting I	4	4	0
	ACCT	2123*	Intermediate Accounting II	4	4	0
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	ACCT	2161*	Cost Accounting I	3	3	0
	BUSN	1166	Business Communications	3	3	0
	HINS	1120	Introduction to Health Information and Security	1	1	0
	HINS	1150*	Intro to DX and Procedure Coding	3	3	0
	HINS	1163	Medical Office Procedures	3	3	0
	HINS	1360	Medical Terminology	3	3	0
	HINS	2144	Legal Aspects of Healthcare	2	2	0
	HINS	2172*	Reimbursement Methodologies	2	2	0
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	MATH MATH	1441 1470	Concepts in Math (Goal 4) **OR** College Algebra (Goal 4)	3	3	0
			Additional MnTC credits	9		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.
4. Accounting courses in the program must be completed within seven (7) years.

Healthcare Accounting AAS (A011)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2011	Accounting Principles I	4	3	2
	ACCT	2114	Payroll Accounting	3	3	0
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	HINS	1163	Medical Office Procedures	3	3	0
			Total Fall Semester – 1st Year	**13**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2012*	Accounting Principles II	4	3	2
	ACCT	2138*	Computerized Accounting Software	3	3	0
	ACCT	2140	Accounting Applications	3	3	0
	HINS	1150*	Intro to DX and Procedure Coding	3	3	0
	HINS	1360	Medical Terminology	3	3	0
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2121*	Intermediate Accounting I	4	4	0
	ACCT	2161*	Cost Accounting I	3	3	0
	BUSN	1166	Business Communications	3	3	0
	HINS	2144	Legal Aspects of Healthcare	2	2	0
	MATH MATH	1441 1470	Concepts in Math (Goal 4) **OR** College Algebra (Goal 4)	3	3	0
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	ACCT	2123*	Intermediate Accounting II	4	4	0
	HINS	1120	Introduction to Health Information and Security	1	1	0
	HINS	2172*	Reimbursement Methodologies	2	2	0
			MnTC General Education credits	9		
			Total Spring Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Heavy Equipment Operation and Maintenance Diploma (D360)
Program Course Requirements (August Start)
2019-2020

Revised 2/22/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HEOM	1101	Construction Safety and First Aid	1	1	0
	HEOM	1102	Mechanical Theory	1	1	0
	HEOM	1107	Tools, Fasteners, Shop Practices	1	0	2
	HEOM	1108	Heavy Equipment Math/Estimating	2	2	0
	HEOM	1110*	Preventative Maintenance	5	1	8
	HEOM	1151	Heavy Equipment Welding	1	0	2
	HEOM	1165*	Commercial Driver's License	3	0	6
	HEOM	1200	Intro to Operations	1	0	2
	HEOM	1211	Servicing I	3	0	6
	HEOM	1212*	Servicing II	2	0	4
	HEOM	1261*	General Lab	5	0	10
	HEOM	2102*	Construction Survey/Blueprints	5	5	0
	HEOM	2103*	Soils and Compaction	4	3	2
	HEOM	2110*	Backhoe/Excavator Theory	1	1	0
	HEOM	2111*	Loader Theory	1	1	0
	HEOM	2134*	Operations Theory	1	1	0
	HEOM	2135*	Construction Theory	1	1	0
	HEOM	2136*	Grading Lab I	5	0	10
	HEOM	2138*	Grading Lab II	4	0	8
	HEOM	2140*	Excavation Lab I	3	0	6
	HEOM	2141*	Excavation Lab II	3	0	6
	HEOM	2142*	Excavation Lab III	3	0	6
	HEOM	2150	Competent Person	2	2	0
			Total Required Core Credits	**58**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	COMP	1101	Computer Fundamentals	3	3	0
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

Recommended Elective Course

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HEOM	1365	Class A CDL Permit	1	1	0

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.

Heavy Equipment Operation and Maintenance Diploma (D360)
Program Course Requirements (August Start)
2019-2020

Revised 2/22/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1101	Computer Fundamentals	3	3	0
	HEOM	1101	Construction Safety and First Aid	1	1	0
	HEOM	1102	Mechanical Theory	1	1	0
	HEOM	1107	Tools, Fasteners, Shop Practices	1	0	2
	HEOM	1108	Heavy Equipment Math/Estimating	2	2	0
	HEOM	1165*	Commercial Driver's License	3	0	6
	HEOM	1200	Intro to Operations	1	0	2
	HEOM	1211	Servicing I	3	0	6
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HEOM	1110*	Preventative Maintenance	5	1	8
	HEOM	1151	Heavy Equipment Welding	1	0	2
	HEOM	1212*	Servicing II	2	0	4
	HEOM	2102*	Construction Survey/Blueprints	5	5	0
	HEOM	2150	Competent Person	2	2	0
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	HEOM	2103*	Soils and Compaction	4	3	2
	HEOM	2134*	Operations Theory	1	1	0
	HEOM	2135*	Construction Theory	1	1	0
	HEOM	2136*	Grading Lab I	5	0	10
	HEOM	2138*	Grading Lab II	4	0	8
			Total Fall Semester – 2nd Year	**18**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HEOM	1261*	General Lab	5	0	10
	HEOM	2110*	Backhoe/Excavator Theory	1	1	0
	HEOM	2111*	Loader Theory	1	1	0
	HEOM	2140*	Excavation Lab I	3	0	6
	HEOM	2141*	Excavation Lab II	3	0	6
	HEOM	2142*	Excavation Lab III	3	0	6
			Total Spring Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

NOTES:

- Students entering the HEOM program must possess a valid Class D driver's license and have the ability to obtain a Class A (CDL) in accordance with the timelines set forth in the HEOM program planning form. Once a student has passed the Class A (CDL), they must maintain the license in a valid status throughout the remainder of the HEOM program.
- Courses must be taken in the semester indicated in the program planning form specific to month student began the program. Any deviation from this order requires approval by the HEOM department with full time program students having priority for classes. Students participating in the internship option must maintain a 3.0 cumulative GPA throughout the program.

Help Desk Specialist Certificate (C060)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	2214*	Help Desk Internship I	5		
	COMP	2216*	Help Desk Internship II	5		
			Total Required Core Credits	**10**		

GRADUATION REQUIREMENT 10

**Denotes Prerequisite*

Special Program Information:

This program is an advanced internship designed as an add-on to the Computer Support Specialist Diploma. Students must complete at least 540 hours of internship in a work environment comprised of software support, PC repair, training, and general networking support.

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: 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.

Webmaster Certificate (C441)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	APPD	1113	Programming in HTML5/CSS with JavaScript	3	3	0
	APPD	1115	Database Design Fundamentals	3	3	0
	APPD	2116	Web Development using HTML5/CSS with JavaScript	3	3	0
	APPD	2126*	Security in Application Development Using HTML5/CSS with JavaScript	3	3	0
	APPD	2132	Cross-Platform Android/iOS/Windows Development	3	3	0
	APPD APPD	2150 2155	Internship **OR** Special Project	3	3	0
	GDES	1105	Concepts of Design	3	3	0
	GDES	1146	Video Graphics	3	3	0
			Total Required Core Credits	**24**		

GRADUATION REQUIREMENT 24

**Denotes Prerequisite*

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.
4. Webmaster Certificate students are required to purchase an Apple Macintosh laptop with the Adobe Creative Cloud software. See latest requirement through bookstore website.

Webmaster Certificate (C441)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	APPD	1115	Database Design Fundamentals	3	3	0
	APPD	2116	Web Development using HTML5/CSS with JavaScript	3	3	0
	APPD APPD	2150 2155	Internship **OR** Special Project	3	3	0
	GDES	1146	Video Graphics	3	3	0
			Total Fall Semester – 1st Year	**12**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	APPD	1113	Programming in HTML5/CSS with JavaScript	3	3	0
	APPD	2126*	Security in Application Development Using HTML5/CSS with JavaScript	3	3	0
	APPD	2132	Cross-Platform Android/iOS/Windows Development	3	3	0
	GDES	1105	Concepts of Design	3	3	0
	GDES	1146	Video Graphics	3	3	0
			Total Spring Semester – 1st Year	**12**		

GRADUATION REQUIREMENT 24

**Denotes Prerequisite*

Horticulture A.A.S. (A250)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1108	Fundamentals of Floral Design	4	2	4
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	1118	Indoor Flowering & Foliage Plants	4	3	2
	HORT	1122	Local Food Production	3	3	0
	HORT	1180	Sustainable Landscaping	3	2	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	2112	Aquaponics and Hydroponics	5	4	2
	HORT	2116	Integrated Pest Management	4	2	4
	HORT	2140	Arboriculture	4	3	2
	HORT	2165	Landscape Design	4	2	4
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Horticulture A.A.S. (A250)
Program Course Requirements
2019-2020

Revised 2/19/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1108	Fundamentals of Floral Design	4	2	4
	HORT	2112	Aquaponics and Hydroponics	5	4	2
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1122	Local Food Production	3	3	0
	HORT	1180	Sustainable Landscaping	3	2	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
			General Education	6		
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	2140	Arboriculture	4	3	2
	HORT	2165	Landscape Design	4	2	4
			General Education	3		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1118	Indoor Flowering & Foliage Plants	4	3	2
	HORT	2116	Integrated Pest Management	4	2	4
			General Education	6		
			Total Spring Semester – 2nd Year	**14**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Sustainable Greenhouse Production Diploma (D251)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	1118	Indoor Flowering & Foliage Plants	4	3	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	1122	Local Food Production	3	3	0
	HORT	1345	Internship	2	0	4
	HORT	2112	Aquaponics and Hydroponics	5	4	2
	HORT	2116	Integrated Pest Management	4	2	4
			Total Required Core Credits	**32**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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

Sustainable Greenhouse Production Diploma (D251)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	1345	Internship	1-2		
	HORT	2112	Aquaponics and Hydroponics	5	4	2
			Total Fall Semester – 1st Year	**16-17**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1118	Indoor Flowering & Foliage Plants	4	3	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	1122	Local Food Production	3	3	0
	HORT	1345	Internship	1-2		
	HORT	2116	Integrated Pest Management	4	2	4
			Total Spring Semester – 1st Year	**15-16**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Sustainable Landscaping Diploma (D252)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1103	Ornamental Trees and Shrubs	4	1	6
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	1122	Local Food Production	3	3	0
	HORT	1150	Turf Management	3	2	2
	HORT	1180	Sustainable Landscaping	3	2	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	2116	Integrated Pest Management	4	2	4
	HORT	2140	Arboriculture	4	3	2
	HORT	2150	Retaining Wall Construction	4	1	6
	HORT	2155	Deck, Patio, and Pond Construction	4	2	4
	HORT	2165	Landscape Design	4	2	4
	HORT	2170*	Advanced Landscape Design	4	2	4
	HORT	2180	Computer Assisted Landscape Design	4	2	4
	HORT	1345	Internship	1	0	2
			Total Required Core Credits	**56**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
			General Education	6		
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 62

**Denotes Prerequisite*

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

Sustainable Landscaping Diploma (D252)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	2165	Landscape Design	4	2	4
	HORT	2150	Retaining Wall Construction **OR**	4	1	6
	HORT	2155	Deck, Patio, and Pond Construction	4	2	4
			General Education	3	0	0
			Total Fall Semester – 1st Year	**17**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1103	Ornamental Trees and Shrubs	4	1	6
	HORT	1180	Sustainable Landscaping	3	2	2
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	2180	Computer Assisted Landscape Design **OR**	4	2	4
	HORT	2170	Advanced Landscape Design	4	2	4
			Total Spring Semester – 1st Year	**15**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1113	Annuals and Perennials	4	3	2
	HORT	2140	Arboriculture	4	3	2
	HORT	2150	Retaining Wall Construction **OR**	4	1	6
	HORT	2155	Deck, Patio, and Pond Construction	4	2	4
			General Education	3		
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1150	Turf Management	3	2	2
	HORT	2116	Integrated Pest Management	4	2	4
	HORT	2170*	Advanced Landscape Design **OR**	4	2	4
	HORT	2180	Computer Assisted Landscape Design	4	2	4
	HORT	1345	Internship	1	0	2
	HORT	1122	Local Food Production	3	3	0
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 62

**Denotes Prerequisite*

Sustainable Local Food - Certificate (C259)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	1122	Local Food Production	3	3	0
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	2112	Aquaponics and Hydroponics	5	4	2
	HORT	2116	Integrated Pest Management	4	2	4
			Total Required Core Credits	**22**		

GRADUATION REQUIREMENT 22

**Denotes Prerequisite*

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

Sustainable Local Food - Certificate (C259)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1104	Plant Science	4	4	0
	HORT	1106	Applied Plant Science Lab	2	0	4
	HORT	2112	Aquaponics and Hydroponics	5	4	2
			Total Fall Semester – 1st Year	**11**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HORT	1122	Local Food Production	3	3	0
	HORT	1196	Sustainable Greenhouse Management	4	2	4
	HORT	2116	Integrated Pest Management	4	2	4
			Total Spring Semester – 1st Year	**11**		

GRADUATION REQUIREMENT 22

**Denotes Prerequisite*

Individualized Studies A.A.S. (A800)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1520	Career Planning	2	2	0
	COMM	1410	Introduction to Communication (Goal 1) **OR**			
	COMM	1420	Interpersonal Communication (Goal 1) **OR**			
	COMM	1430	Public Speaking (Goals 1 and 2)	3	3	0
	COMP	1101	Introduction to Computer Fundamentals	3	3	0
	ENGL	1410	Composition (Goal 1) **OR**	4	4	0
	ENGL	1422	Practical Writing (Goals 1 and 2)	3	3	0
			Total Required Core Credits	**9-12**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			General Education	9		
			Total Required General Education Credits	**9**		

Required Elective Courses

Students must work with a counselor to identify 39-42 additional credits from technical or liberal arts disciplines.

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Required Electives	39-42		
			Total Required Elective Credits	**39-42**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Individualized Studies Diploma (D800)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1520	Career Planning **OR**	2	2	0
	CCST	1558	Introduction to E-Learning **OR**	1	1	0
	COMP	1101	Introduction to Computer Fundamentals	3	3	0
			Total Required Core Credits	**1-3**		

Required General Education Courses

Course #	Title	Credits	Lec Hrs	Lab Hrs
Students must complete a minimum of one class from MnTC Goal 1				
	Total Required General Education Credits	**3-4**		

Required Elective Courses

Course #	Title	Credits	Lec Hrs	Lab Hrs
Student must work with a counselor to identify and complete 24-27 additional credits from technical or liberal arts disciplines.				
	Total Required Elective Credits	**24-27**		

GRADUATION REQUIREMENT 31

**Denotes Prerequisite*

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

Machine Operations Diploma (D184)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MATH	1500	Applied Mathematics	3	3	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1130	Print Reading	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
	RAST	1109	Computers in Industry	2	2	0
			Total Required Core Credits	**32**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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.

Machine Operations Diploma (D184)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CMAE	1528	Career Success Skills **OR**			
	CMAE	1529	Career Success Skills	1	1	0
	MATH	1500	Applied Mathematics	3	3	0
	MTTS	1110	Principles of Machine Operations I	2	2	0
	MTTS	1120	Machine Operations I	3	0	6
	MTTS	1121	Machine Operations II	3	0	6
	MTTS	1130	Print Reading	2	1	2
	RAST	1109	Computers in Industry	2	2	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1111*	Principles of Machine Operations II	2	2	0
	MTTS	1122*	Machine Operations III	3	0	6
	MTTS	1124	Introduction to Engineering Graphics	2	1	2
	MTTS	1131*	Print Applications	2	0	4
	MTTS	1134*	CNC Operations	3	0	6
	MTTS	1135	CNC Programming and Process Planning	2	1	2
	MTTS	1140	CAD/CAM I	2	1	2
			Total Spring Semester – 1st Year	**16**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Marine and Powersports Technology A.A.S. (A371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Intro to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1136	Industry Certifications I	2	2	0
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
	MAPS	2133*	Advance Marine	3	1	4
	MAPS	2134*	Advance Marine and Personal Water	3	1	4
	MAPS	2135*	Machine Shop	2	0	4
	MAPS	2136*	Industry Certifications II	2	2	0
	MAPS	2143*	Diagnostic Troubleshooting	3	1	4
	MAPS	2162*	ATV Motorcycle Systems I	4	2	4
	MAPS	2164*	ATV Motorcycle Systems II	4	1	6
	MAPS	2169*	MAPS Tune Up	3	0	6
	MAPS	1370	Open Lab	1	0	2
			Total Required Core Credits	**54**		

Required General Education

An associate in applied science degree requires a minimum of 15 general education credits selected from **at least three of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 69

**Denotes Prerequisite*

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.

Marine and Powersports Technology A.A.S. (A371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1136	Industry Certifications I	2	2	0
	General Education			5		
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
	General Education			2		
			Total Spring Semester – 1st Year	**18**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	2133*	Advance Marine	3	1	4
	MAPS	2134*	Advance Marine and Personal Water	3	1	4
	MAPS	2135*	Machine Shop	2	0	4
	MAPS	2136*	Industry Certifications II	2	2	0
	MAPS	2169*	MAPS Tune Up	3	0	6
	General Education			5		
			Total Fall Semester – 2nd Year	**18**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	2143*	Diagnostic Troubleshooting	3	1	4
	MAPS	2162*	ATV Motorcycle Systems I	4	2	4
	MAPS	2164*	ATV Motorcycle Systems II	4	1	6
	MAPS	1370	Open Lab	1	0	2
	General Education			3		
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 69

**Denotes Prerequisite*

Marine and Powersports Technology Diploma (D371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1136	Industry Certifications I	2	2	0
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
	MAPS	2133*	Advance Marine	3	1	4
	MAPS	2134*	Advance Marine and Personal Water	3	1	4
	MAPS	2135*	Machine Shop	2	0	4
	MAPS	2136*	Industry Certifications II	2	2	0
	MAPS	2143*	Diagnostic Troubleshooting	3	1	4
	MAPS	2162*	ATV Motorcycle Systems I	4	2	4
	MAPS	2164*	ATV Motorcycle Systems II	4	1	6
	MAPS	2169*	MAPS Tune Up	3	0	6
			Total Required Core Credits	**53**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500*	Applied Mathematics	3	3	0
Department recommendation – students are strongly encouraged to select one of the following courses:						
	CCST COMP	1530 1101	Employment Strategies **OR** Computer Fundamentals	3	3	0
			Total Required General Education Credits	**6**		

Required Elective Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Elective Credits	**5**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

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.

Marine and Powersports Technology Diploma (D371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1136	Industry Certifications I	2	2	0
	MATH	1500	Applied Mathematics	3	3	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
			Total Spring Semester – 1st Year	**16**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	2133*	Advance Marine	3	1	4
	MAPS	2134*	Advance Marine & Personal Water	3	1	4
	MAPS	2135*	Machine Shop	2	0	4
	MAPS	2136*	Industry Certifications II	2	2	0
	MAPS	2169*	MAPS Tune Up	3	0	6
			Electives	3		
			Total Fall Semester – 2nd Year	**16**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CCST COMP	1530 1101	Employment Strategies **OR** Computer Fundamentals	3	3	0
	MAPS	2143*	Diagnostic Troubleshooting	3	1	4
	MAPS	2162*	ATV Motorcycle Systems I	4	2	4
	MAPS	2164*	ATV Motorcycle Systems II	4	1	6
			Electives	2		
			Total Spring Semester – 2nd Year	**16**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

Lawn & Garden Technician Certificate (C371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1136	Industry Certifications I	2	2	0
			Total Required Core Credits	**13**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500*	Applied Mathematics	3	3	0
			Total Required General Education Credits	**3**		

GRADUATION REQUIREMENT 16

**Denotes Prerequisite*

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.

Lawn & Garden Technician Certificate (C371)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1136	Industry Certifications I	2	2	0
	MATH	1500	Applied Mathematics	3	3	0
			Total Fall Semester – 1st Year	**16**		

GRADUATION REQUIREMENT 16

**Denotes Prerequisite*

Small Outboard Motor Technician Diploma (D372)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1136	Industry Certifications I	2	2	0
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
			Total Required Core Credits	**29**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500*	Applied Mathematics	3	3	0
			Total Required General Education Credits	**3**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

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.

Small Outboard Motor Technician Diploma (D372)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1101	Basic Engines	3	3	0
	MAPS	1103	Basic Engines Lab	4	0	8
	MAPS	1106	Introduction to Electronics	2	1	2
	MAPS	1120	Lawn and Garden	2	1	2
	MAPS	1136	Industry Certifications I	2	2	0
	MATH	1500	Applied Mathematics	3	3	0
			Total Fall Semester – 1st Year	**16**		

Spring Semester

Course			Title	Credits	Lec Hrs	Lab Hrs
	MAPS	1130	Marine Outboard I	4	4	0
	MAPS	1132*	Marine Outboard II	4	1	6
	MAPS	1134	Marine Lower Unit	4	2	4
	MAPS	1140	Snowmobile Systems and Lab	4	2	4
			Total Spring Semester – 1st Year	**16**		

GRADUATION REQUIREMENT 32

**Denotes Prerequisite*

Mechatronics Diploma (D241)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500	Applied Mathematics (or higher)	3	3	0
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Intro to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1113*	Motors and Drives Lab	3	0	6
	RAST	1120	Introduction to Engineering Graphics	2	1	2
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
	RAST	2105*	Transducers	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
	RAST	2165*	Fluid Power	2	1	2
			Total Required Core Credits	**40**		

GRADUATION REQUIREMENT 40

**Denotes Prerequisite*

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.

Mechatronics Diploma (D241)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Intro to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1120	Introduction to Engineering Graphics	2	1	2
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1113*	Motors & Drives Lab	3	0	6
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
	MATH	1500	Applied Mathematics (or higher)	3	3	0
			Total Spring Semester – 1st Year	**17**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2105*	Transducers	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
	RAST	2165*	Fluid Power	2	1	2
			Total Summer Session – 1st Year	**8**		

GRADUATION REQUIREMENT 40

**Denotes Prerequisite*

Medical Assistant A.A.S. (A295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	HINS	1150	Introduction to Diagnosis and Procedure Coding	3	3	0
	MEDA	1110*	Clinical Procedure I	3	1	4
	MEDA	1115*	Clinical Procedures II	3	1	4
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA	1125*	Laboratory Techniques II	3	2	2
	MEDA PNUR	1128 1138	Medical Terminology **OR** Medical Terminology	1	1	0
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	MEDA	1135	Administrative Procedures I	3	2	2
	MEDA	1137*	Administrative Procedures II	2	1	2
	MEDA	1141	Disease Conditions	2	2	0
	MEDA	1142	Pharmacology	2	2	0
	MEDA	2150*	Medical Assistant Internship	5		
	PNUR PSYC	1130 2431	Life Span **OR** Human Development	1 3	1 3	0 0
	PNUR	1140	Medication Calculations	1	1	0
			Total Required Core Credits	**36**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	AMSL SPAN	1410 1401	American Sign Language (Goal 8) **OR** Beginning Spanish (Goal 8)	4	4	4
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	COMM	2420	Intercultural Communication (Goals 1 and 7)	3	3	0
	ENGL ENGL	1410 1422	Composition I (Goal 1) **OR** Practical Writing (Goals 1 and 2)	4 3	4 3	0 0
	Additional 1-2 credits from the Minnesota Transfer Curriculum			1-2		
			Total Required General Education Credits	**15**		

Required Elective Courses

	Select nine (9) additional elective credits	9		
	Total Electives	**9**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

***NOTE: American Heart Association Health Care Provider (CPR) certification is required before working with patients.*

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.

Medical Assistant A.A.S. (A295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	MEDA	1110*	Clinical Procedure I	3	1	4
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA PNUR	1128 1138	Medical Terminology **OR** Medical Terminology	1	1	0
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	MEDA	1135	Administrative Procedures I	3	2	2
	PNUR PSYC	1130 2431	Life Span **OR** Human Development	1 3	1 3	0 0
	PNUR	1140	Medication Calculations	1	1	0
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HINS	1150	Introduction to Diagnosis and Procedure Coding	3	3	0
	MEDA	1115*	Clinical Procedures II	3	1	4
	MEDA	1125*	Laboratory Techniques II	3	2	2
	MEDA	1137*	Administrative Procedures II	2	1	2
	MEDA	1141	Disease Conditions	2	2	0
	MEDA	1142	Pharmacology	2	2	0
			Total Spring Semester – 1st Year	**15**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MEDA	2150*	Medical Assistant Internship	5		
			Total Summer Semester – 1st Year	**5**		

Fall Semester – 2nd Year

Course		Title	Credits	Lec Hrs	Lab Hrs
	General Education and Electives		10		
		Total Fall Semester – 2nd Year	**10**		

Spring Semester – 2nd Year

Course		Title	Credits	Lec Hrs	Lab Hrs
	General Education and Electives		11		
		Total Spring Semester – 2nd Year	**11**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Medical Assistant Diploma (D295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	HINS	1150	Introduction to Diagnosis and Procedure Coding	3	3	0
	MEDA	1110*	Clinical Procedure I	3	1	4
	MEDA	1115*	Clinical Procedures II	3	1	4
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA	1125*	Laboratory Techniques II	3	2	2
	MEDA PNUR	1128 1138	Medical Terminology **OR** Medical Terminology	1	1	0
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	MEDA	1135	Administrative Procedures I	3	2	2
	MEDA	1137*	Administrative Procedures II	2	1	2
	MEDA	1141	Disease Conditions	2	2	0
	MEDA	1142	Pharmacology	2	2	0
	MEDA	2150*	Medical Assistant Internship	5		
	PNUR PSYC	1130 2431	Life Span **OR** Human Development	1 3	1 3	0 0
	PNUR	1140	Medication Calculations	1	1	0
			Total Required Core Credits	**39**		

GRADUATION REQUIREMENT 39

**Denotes Prerequisite*

***NOTE: American Heart Association Health Care Provider (CPR) certification is required before working with patients.*

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.

Medical Assistant Diploma (D295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	MEDA	1110*	Clinical Procedure I	3	1	4
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA PNUR	1128 1138	Medical Terminology **OR** Medical Terminology	1	1	0
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	MEDA	1135	Administrative Procedures I	3	2	2
	PNUR PSYC	1130 2431	Life Span **OR** Human Development	1 3	1 3	0 0
	PNUR	1140	Medication Calculations	1	1	0
			Total Fall Semester – 1st Year	**19**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	HINS	1150	Introduction to Diagnosis and Procedure Coding	3	3	0
	MEDA	1115*	Clinical Procedures II	3	1	4
	MEDA	1125*	Laboratory Techniques II	3	2	2
	MEDA	1137*	Administrative Procedures II	2	1	2
	MEDA	1141	Disease Conditions	2	2	0
	MEDA	1142	Pharmacology	2	2	0
			Total Spring Semester – 1st Year	**15**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MEDA	2150*	Medical Assistant Internship	5		
			Total Summer Semester – 1st Year	**5**		

GRADUATION REQUIREMENT 39

**Denotes Prerequisite*

Phlebotomy Technician Certificate (C295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	ENGL	1422	Practical Writing (Goals 1 and 2) **OR**	3	3	0
	ENGL	1410	Composition I	4	4	0
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA	1128	Medical Terminology **OR**	1	1	0
	PNUR	1138	Medical Terminology			
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	MEDA	1134	Phlebotomy Technician Internship	3		
	PNUR	1130	Life Span **OR**	1	1	0
	PSYC	2431	Human Development	3	3	0
			Total Required Core Credits	**18**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

***NOTE: American Heart Association Health Care Provider (CPR) certification is required before working with patients.*

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.

Phlebotomy Technician Certificate (C295)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1404	Human Biology (Goal 3)	3	2	2
	ENGL	1422	Practical Writing (Goals 1 and 2) **OR**	3	3	0
	ENGL	1410	Composition I	4	4	0
	MEDA	1120	Laboratory Techniques I	3	2	2
	MEDA	1128	Medical Terminology **OR**	1	1	0
	PNUR	1138	Medical Terminology			
	MEDA	1130	Ethics and Issues	2	2	0
	MEDA	1132*	Phlebotomy	2	1	2
	PNUR	1130	Life Span **OR**	1	1	0
	PSYC	2431	Human Development	3	3	0
			Total Fall Semester – 1st Year	**15**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MEDA	1134	Phlebotomy Technician Internship	3		
			Total Spring Semester – 1st Year	**3**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

Natural Resource Law Enforcement A.A.S. (A261)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CRJU	1101	Criminal Justice	3	3	0
	CRJU	1104	Juvenile Justice	3	3	0
	CRJU	2101**	Criminal Law	3	3	0
	CRJU	2102	Criminal Procedures	4	4	0
	CRJU	2108	Criminal Investigations	3	3	0
	CRJU	2140	Law Enforcement and Behavioral Science	3	3	0
	NATR	1106	Introduction to Natural Resources Law Enforcement	2	2	0
	NATR	1125	Ichthyology	3	2	2
	NATR	1130	Mammalogy	3	2	2
	NATR	1135	Ornithology	3	2	2
	NATR	1360	Animal Behavior	3	3	0
	NATR	2110	Herpetology	2	2	0
			Total Credits	**35**		

Students must select one of the following pathways:
Professional Peace Officer License Pathway

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CRJU	1112	Police and the Community	3	3	0
	CRJU	2106**	Fitness for Law Enforcement	2	1	2
	CRJU	2114**	Traffic Law	3	3	0
	CRJU	2124	General Evidence and Identification Preparation	4	3	2
	CRJU	2160*	Use of Force	2	1	2
	CRJU	2162*	Firearms	3	2	2
	CRJU	2164*	Patrol Practicals	5	3	4
	CRJU	2166*	Tactical Communications/Relations	2	2	0
			Total Professional Peace Officer Pathway Credits	**24**		

Non-Licensure Pathway

Course #			Title	Credits	Lec Hrs	Lab Hrs
	NATR	1112	Land Measurement	3	2	3
	NATR	1120	Dendrology	3	2	2
	NATR	1140	Limnology	3	2	2
	NATR	1200	Introduction to Natural Resources	3	3	0
	NATR	1280	Introduction to GPS & GIS (Arc View)	2	1	2
	NATR	2130*	Wildlife Management	3	3	0
	NATR	2140*	Fisheries Management	3	2	2
			Total Non-Licensure Pathway Credits	**20**		
			Total Required Core Credits	**55**		

(Graduation Requirements continued on next page)

Natural Resource Law Enforcement A.A.S. (A261)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	AMSL SPAN	2420 2420	Deaf Culture (Goals 6 and 7) **OR** Many Faces of Mexico (Goals 6 and 8)	3	3	0
	BIOL	2415	General Ecology (Goals 3 and 10)	4	3	2
	ENGL	1410	Composition 1 (Goal 1)	4	4	0
	SOCL	2405	Criminology (Goal 5)	3	3	0
	SOCL	2481	Race, Ethnicity and Oppression (Goals 5 and 7)	3	3	0
			Total Required General Education Credits	**17**		

GRADUATION REQUIREMENT*** 72

**Denotes Prerequisite*
*** These courses must be completed prior to SKILLS. (Criminal Law/Traffic Law/Fitness for Law Enforcement)*
****Total program credits for students pursuing the Professional Peace Officer Pathway is 76 credits.*

ADDITIONAL PROGRAM REQUIREMENTS: (Please see the Criminal Justice Coordinator for information.)

- Background Check: Students must complete and pass a background check prior to being officially admitted into the program. This background check must be completed prior to the first day of classes.
- MMPI: Students must also complete the Minnesota Multiphasic Personality Inventory (MMPI) with a Psychologist approved by the Program Coordinator prior to admission into the program.
- Students must have completed, or be concurrently enrolled in, an Associate in Arts, Bachelors, or Criminal Justice AAS Degree from an accredited institution for admission into this program.
- Courses required for Minnesota P.O.S.T. licensing must be completed within three (3) years of starting the certificate.
- Students must have a valid Emergency Medical Responder certification (or higher) at the time of the Post Board Exam.

In addition to the program requirements listed above, 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 above.
2. College Cumulative GPA Requirement: Cumulative grade point average (GPA) of credits attempted and completed at CLC must be at least 2.0;
3. 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;
4. Residency Requirement: students must complete 25% of their credits at Central Lakes College.

Natural Resources Technology A.A.S. (A260)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	NATR	1112	Land Measurement	3	2	2
	NATR	1115	Plant Taxonomy	2	1	2
	NATR	1120	Dendrology	3	2	2
	NATR	1125	Ichthyology	3	2	2
	NATR	1130	Mammalogy	3	2	2
	NATR	1135	Ornithology	3	2	2
	NATR	1140	Limnology	3	2	2
	NATR	1200	Introduction to Natural Resources	3	3	0
	NATR	1280	Introduction to GPS and GIS (Arc)	2	1	2
	NATR	2110	Herpetology	2	2	0
	NATR	2120*	Wetland Ecology	3	2	3
	NATR	2130*	Wildlife Management	3	2	2
	NATR	2140*	Fisheries Management	3	2	3
	NATR	2155	Soil Science	3	2	2
	NATR	2161*	Ecosystem Management	2	1	2
	NATR	2170	Advanced GPS and GIS	2	1	2
	NATR	2201	Introduction to Parks and Interpretation	2	1	2
	NATR	2235*	Silviculture and Forest Management	3	2	2
			Total Required Core Credits	**48**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following courses:						
	BIOL	2415	General Ecology	4	3	2
	COMM COMM COMM COMM	1410 1420 1430 2420	Introduction to Communication Studies (Goal 1) **OR** Interpersonal Communication (Goal 1) **OR** Public Speaking (Goals 1 and 2) **OR** Intercultural Communication (Goals 1 and 7)	3	3	0
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1411	Composition II (Goal 1)	4	4	0
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 63

**Denotes Prerequisite*

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.

Natural Resources Technology A.A.S. (A260)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	NATR	1115	Plant Taxonomy	2	1	2
	NATR	1120	Dendrology	3	2	2
	NATR	1200	Introduction to Natural Resources	3	3	0
	NATR	1280	Introduction to GPS and GIS (Arc)	2	1	2
	NATR	2110	Herpetology	2	2	0
			Total Fall Semester – 1st Year	**12**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2415	General Ecology	4	3	2
	NATR	1125	Ichthyology	3	2	2
	NATR	1130	Mammalogy	3	2	2
	NATR	1135	Ornithology	3	2	2
	NATR	1140	Limnology	3	2	2
	NATR	2170	Advanced GPS and GIS	2	1	2
			Total Spring Semester – 1st Year	**18**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	NATR	1112	Land Measurement	3	2	2
	NATR	2120*	Wetland Ecology	3	2	3
	NATR	2130*	Wildlife Management	3	2	2
	NATR	2155	Soil Science	3	2	2
			General Education	7		
			Total Fall Semester – 2nd Year	**19**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	NATR	2140*	Fisheries Management	3	2	3
	NATR	2161*	Ecosystem Management	2	1	2
	NATR	2201	Introduction to Parks and Interpretation	2	1	2
	NATR	2235*	Silviculture and Forest Management	3	2	2
			General Education	4		
			Total Spring Semester – 2nd Year	**14**		

GRADUATION REQUIREMENT 63

**Denotes Prerequisite*

Nursing – Associate of Science Degree (A300)
Advanced Standing Program Course Requirements
2019-2020

Revised 2/20/2019

Prerequisites

Course #			Title	Credits	Lec Hrs	Lab Hrs
	Successful completion of a Practical Nursing Program			8		
	NURS	1547	Professional Nursing Role Transition	4	3	0
			Total Prerequisite Credits	**12**		

General Education Prerequisites

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2467*	Anatomy & Physiology I (Goal 3)	4	3	3
	CHEM	1407**	Life Science Chemistry (Goal 3)	4	3	2
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1411*	Composition II (Goal 1)	4	4	0
	PHIL	2422	Medical Ethics (Goals 6 and 9)	3	3	0
	PSYC	2421	General Psychology (Goals 2 and 5)	4	4	0
			Total General Education Prerequisite Credits	**23**		

General Education Corequisites***

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	BIOL	2468*	Anatomy & Physiology II (Goal 3)	4	3	3
			Total Required General Education Corequisite Credits	**8**		

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	NURS	2540*	Professional Nursing Concepts II	6	6	0
	NURS	2541*	Professional Nursing Practicum II	3	0	9
	NURS	2542*	Advanced Skills for the Professional Nurse	1	0	2
	NURS	2544*	Professional Nursing Concepts III	6	6	0
	NURS	2546*	Professional Nursing Practicum III	3	0	9
	NURS	2547*	Professional Nursing Leadership	2	2	0
			Total Required Core Credits	**21**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

***CHEM 1410, 1414, 1424 or 1425, 2472 or 2473 may be substituted for CHEM 1407.*

****Corequisites may be taken concurrently with required courses; however, applications are considered more competitive when completed prior to admission.*

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

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0.
2. Residency Requirement: students must complete 25% of their credits at Central Lakes College.
3. The student must achieve a B- or better in all Nursing (NURS) courses.
4. The student must also achieve a C or better and a cumulative GPA of 3.0 or higher in the following 4 courses: BIOL 2467, CHEM 1407, ENGL 1411, and PSYC 2421.
5. With the exception of courses listed in #4 above, the student must achieve a C or better in all remaining required general education courses.

Nursing – Associate of Science Degree (A300)
Advanced Standing Program Course Requirements
2019-2020

Revised 2/20/2019

Prerequisites

Course			Title	Credits	Lec Hrs	Lab Hrs
	Successful completion of a Practical Nursing Program			8		
	BIOL	2467*	Anatomy & Physiology I (Goal 3)	4	3	3
	CHEM	1407**	Life Science Chemistry (Goal 3)	4	3	2
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1411*	Composition II (Goal 1)	4	4	0
	NURS	1547	Professional Nursing Role Transition	4	4	0
	PHIL	2422	Medical Ethics (Goals 6 and 9)	3	3	0
	PSYC	2421	General Psychology (Goals 2 and 5)	4	4	0
			Total Fall Semester – 2nd Year	**35**		

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2468*	Anatomy & Physiology II (Goal 3)	4	3	3
	NURS	2540*	Professional Nursing Concepts II	6	6	0
	NURS	2541*	Professional Nursing Practicum II	3	0	9
	NURS	2542*	Advanced Skills for the Professional Nurse	1	0	2
			Total Fall Semester – 1st Year	**14**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	NURS	2544*	Professional Nursing Concepts III	6	6	0
	NURS	2546*	Professional Nursing Practicum III	3	0	9
	NURS	2547*	Professional Nursing Leadership	2	2	0
			Total Spring Semester – 1st Year	**15**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

***CHEM 1410, 1414, 1424 or 1425, 2472 or 2473 may be substituted for CHEM 1407.*

****Corequisites may be taken concurrently with required courses; however, applications are considered more competitive when completed prior to admission.*

Nursing – Associate of Science Degree (A301)
Traditional Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	NURS	1540	Professional Nursing Fundamentals	3	3	0
	NURS	1541	Professional Nursing Fundamentals Lab	2	0	4
	NURS	1542***	Medication Administration Concepts	1	1	0
	NURS	1544*	Professional Nursing Concepts I	4	4	0
	NURS	1545*	Professional Nursing Practicum I	2	0	6
	NURS	2540*	Professional Nursing Concepts II	6	6	0
	NURS	2541*	Professional Nursing Practicum II	3	0	9
	NURS	2542*	Advanced Skills for the Professional Nurse	1	0	2
	NURS	2545*	Professional Nursing Concepts III	6	6	0
	NURS	2546*	Professional Nursing Practicum III	3	0	9
	NURS	2547*	Professional Nursing Leadership	2	2	0
			Total Required Core Credits	**33**		

Required General Education

An associate of science degree requires a minimum of 30 credits selected from **at least six of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	BIOL	2467*	Anatomy & Physiology I (Goal 3)	4	3	3
	BIOL	2468*	Anatomy & Physiology II (Goal 3)	4	3	3
	CHEM	1407**	Life Science Chemistry (Goal 3)	4	3	2
	ENGL	1410	Composition I (Goal 1)	4	4	0
	ENGL	1411*	Composition II (Goal 1)	4	4	0
	PHIL	2422	Medical Ethics (Goals 6 and 9)	3	3	0
	PSYC	2421	General Psychology (Goals 2 and 5)	4	4	0
			Total Required General Education Credits	**31**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*
***CHEM 1410, 1414, 1424 or 1425, 2472 or 2473 may be substituted for CHEM 1407.*
****NURS 2522 may be substituted for NURS 1542.*

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

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0.
2. Residency Requirement: students must complete 25% of their credits at Central Lakes College.
3. The student must achieve a B- or better in all Nursing (NURS) courses.
4. The student must also achieve a C or better and a cumulative GPA of 3.0 or higher in the following 4 courses: BIOL 2467, CHEM 1407, ENGL 1411, and PSYC 2421.
5. With the exception of courses listed in #4 above, the student must achieve a C or better in all remaining required general education courses.

Nursing – Associate of Science Degree (A301)
Traditional Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CHEM	1407**	Life Science Chemistry (Goal 3)	4	3	2
	ENGL	1410	Composition I (Goal 1)	4	4	0
	NURS	1540	Professional Nursing Fundamentals	3	3	0
	NURS	1541	Professional Nursing Fundamentals Lab	2	0	4
	NURS	1542***	Medication Administration Concepts	1	1	0
	PSYC	2421	General Psychology (Goals 2 and 5)	4	4	0
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2467*	Anatomy & Physiology I (Goal 3)	4	3	3
	ENGL	1411*	Composition II (Goal 1)	4	4	0
	NURS	1544*	Professional Nursing Concepts I	4	4	0
	NURS	1545*	Professional Nursing Practicum I	2	0	6
	PHIL	2422	Medical Ethics (Goals 6 and 9)	3	3	0
			Total Spring Semester – 1st Year	**17**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2468*	Anatomy & Physiology II (Goal 3)	4	3	3
	NURS	2540*	Professional Nursing Concepts II	6	6	0
	NURS	2541*	Professional Nursing Practicum II	3	0	9
	NURS	2542*	Advanced Skills for the Professional Nurse	1	0	2
			Total Fall Semester – 2nd Year	**14**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	NURS	2545*	Professional Nursing Concepts III	6	6	0
	NURS	2546*	Professional Nursing Practicum III	3	0	9
	NURS	2547*	Professional Nursing Leadership	2	2	0
			Total Spring Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 64

**Denotes Prerequisite*

***CHEM 1410, 1414, 1424 or 1425, 2472 or 2473 may be substituted for CHEM 1407.*

****NURS 2522 may be substituted for NURS 1542.*

Practical Nursing Diploma (D300)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	Show proof of 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 **OR**	3	2	2
	BIOL	2467*	Anatomy and Physiology I **AND**	4	3	3
	BIOL	2468*	Anatomy and Physiology II	4	3	3
	ENGL	1410*	Composition I	4	0	0
	PNUR	1130 **	Life Span	1	1	0
	PNUR	1140	Medication Calculations for Healthcare Professionals	1	1	0
	PNUR	1149*	Clinical Lab I	3	0	9
	PNUR	1150*	Clinical Lab II	3	0	9
	PNUR	1160*	Practical Nursing Skills Lab	3	0	6
	PNUR	1166*	Gerontological Nursing	2	2	0
	PNUR	1168*	Psychosocial Nursing	3	3	0
	PNUR	1175*	Maternal Child Health	2	2	0
	PNUR	1265*	Medical Surgical Nursing I	5	5	0
	PNUR	1270*	Medical Surgical Nursing II	6	6	0
			Total Required Core Credits	**36**		

GRADUATION REQUIREMENT 36

**Denotes Prerequisites*

***Students may substitute PSYC 2431 Human Development, 3 credits for PNUR 1130 Life Span*

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

1. College Cumulative GPA Requirement: The cumulative grade point average (GPA) must be at least 2.0.
2. Residency Requirement: students must complete 25% of their credits at Central Lakes College.
3. The student must achieve a B- or better in all Practical Nursing (PNUR) courses.
4. The student must achieve a C or better in all required general education courses.

Practical Nursing Diploma (D300)
Program Course Requirements
2019-2020

Revised 2/20/2019

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	Show proof of 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 **OR**	3	2	2
	BIOL	2467*	Anatomy and Physiology I **AND**	4	3	3
	BIOL	2468*	Anatomy and Physiology II	4	3	3
	ENGL	1410*	Composition I	4	0	0
	PNUR	1130 **	Life Span	1	1	0
	PNUR	1140	Medication Calculations for Healthcare Professionals	1	1	0
			Total Summer Session	**9**		

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	PNUR	1149*	Clinical Lab I	3	0	9
	PNUR	1160*	Practical Nursing Skills Lab	3	0	6
	PNUR	1168*	Psychosocial Nursing	3	3	0
	PNUR	1265*	Medical Surgical Nursing I	5	5	0
			Total Fall Semester – 1st Year	**14**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	PNUR	1150*	Clinical Lab II	3	0	9
	PNUR	1166*	Gerontological Nursing	2	2	0
	PNUR	1175*	Maternal Child Health	2	2	0
	PNUR	1270*	Medical Surgical Nursing II	6	6	0
			Total Spring Semester – 1st Year	**13**		

GRADUATION REQUIREMENT 36

**Denotes Prerequisites*

***Students may substitute PSYC 2431 Human Development, 3 credits for PNUR 1130 Life Span*

Occupational Skills Diploma (D310)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1103	Computer Basics I	1	1	0
	COMP	1104	Computer Basics II	1	1	0
	OSKL	1142	Communication I	3	3	0
	OSKL	1144	Critical Reasoning Skills I	4	2	4
	OSKL	1146	Critical Reasoning Skills II	3	1	4
	OSKL	1148	Employability Skills I	3	3	0
	OSKL	1150	Employability Skills II	4	2	4
	OSKL	1154	Supervised Pre-Internship I	4	0	8
	OSKL	1156	Supervised Pre-Internship II	4	0	8
	OSKL	1162	Study Skills I	1	0	2
	OSKL	1164	Study Skills II	1	0	2
	OSKL	1166	Communication II	3	3	0
			Total Required Core Credits	**32**		

Elective Courses:

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must select an additional two (2) credits that are approved by instructor or advisor.						
			Electives	2		
			Total Elective Credits	**2**		

GRADUATION REQUIREMENT 34

**Denotes Prerequisite*

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

Occupational Skills Diploma (D310)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1103	Computer Basics I	1	1	0
	OSKL	1142	Communication I	3	3	0
	OSKL	1144	Critical Reasoning Skills I	4	2	4
	OSKL	1148	Employability Skills I	3	3	0
	OSKL	1154	Supervised Pre-Internship I	4	0	8
	OSKL	1162	Study Skills I	1	0	2
			Elective	1		
			Total Fall Semester – 1st Year	**17**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	COMP	1104	Computer Basics II	1	1	0
	OSKL	1146	Critical Reasoning Skills II	3	1	4
	OSKL	1150	Employability Skills II	4	2	4
	OSKL	1156	Supervised Pre-Internship II	4	0	8
	OSKL	1164	Study Skills II	1	0	2
	OSKL	1166	Communication II	3	3	0
			Elective	1		
			Total Spring Semester – 1st Year	**17**		

GRADUATION REQUIREMENT 34

**Denotes Prerequisite*

Robotics/Automated Systems Technology A.A.S. (A240) Program Course Requirements 2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Introduction to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1113*	Motors and Drives Lab	3	0	6
	RAST	1120	Introduction to Engineering Graphics	2	1	2
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
	RAST	2101*	Application Planning & Layout	2	1	2
	RAST	2105*	Transducers	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
	RAST	2132*	Robotic Programming	3	1	4
	RAST	2151*	Robotic Integration Lab	6	0	12
	RAST	2154*	Robot Controller Maintenance	2	1	2
	RAST	2165*	Fluid Power	2	1	2
	RAST	2355*	Programmable Logic Controllers II	2	1	2
	RAST	2395*	Advanced Robot Controller Programming	2	1	2
	RAST RAST	2390* 2399*	Robotics Internship **OR** Independent Study	1-3		
			Total Required Core Credits	**55**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must include within the General Education component the following course:						
	MATH	1470	College Algebra (Goal 3)	3	3	0
			Additional MnTC courses	12		
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 70

**Denotes Prerequisite*

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.

Robotics/Automated Systems Technology A.A.S. (A240) Program Course Requirements 2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Introduction to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1120	Introduction to Engineering Graphics	2	1	2
			General Education	3		
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1113*	Motors & Drives Lab	3	0	6
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
			General Education	3		
			Total Spring Semester – 1st Year	**17**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2101*	Application Planning & Layout	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
			Total Summer Session – 1st Year	**6**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2105*	Transducers	2	1	2
	RAST	2132*	Robotic Programming	3	1	4
	RAST	2151*	Robotic Integration Lab	6	0	12
	RAST	2165*	Fluid Power	2	1	2
	RAST	2355*	Programmable Logic Controllers II	2	1	2
	MATH	1470	College Algebra (Goal 3)	3	3	0
			Total Fall Semester – 2nd Year	**18**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2154*	Robot Controller Maintenance	2	1	2
	RAST	2395*	Advanced Robot Controller Programming	2	1	2
	RAST RAST	2390* 2399*	Robotics Internship **OR** Independent Study	1-3		
			General Education	6		
			Total Spring Semester – 2nd Year	**11**		

GRADUATION REQUIREMENT 70

**Denotes Prerequisite*

Robotics/Automated Systems Technology Diploma (D240) Program Course Requirements 2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Introduction to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1113*	Motors and Drives Lab	3	0	6
	RAST	1120	Introduction to Engineering Graphics	2	1	2
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
	RAST	2101*	Application Planning & Layout	2	1	2
	RAST	2105*	Transducers	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
	RAST	2132*	Robotic Programming	3	1	4
	RAST	2151*	Robotic Integration Lab	6	0	12
	RAST	2154*	Robot Controller Maintenance	2	1	2
	RAST	2165*	Fluid Power	2	1	2
	RAST	2355*	Programmable Logic Controllers II	2	1	2
	RAST	2395*	Advanced Robot Controller Programming	2	1	2
	RAST RAST	2390* 2399*	Robotics Internship **OR** Independent Study	1-3		
			Total Required Core Credits	**55**		

Required General Education Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MATH	1500	Applied Mathematics (or higher)	3	3	0
			Additional General Education courses	3		
			Total Required General Education Credits	**6**		

GRADUATION REQUIREMENT 61

**Denotes Prerequisite*

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.

Robotics/Automated Systems Technology Diploma (D240) Program Course Requirements 2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Processes	2	1	2
	RAST	1101*	Industrial Electronics I	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Introduction to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1120	Introduction to Engineering Graphics	2	1	2
			General Education	3		
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	1102*	Industrial Electronics II	3	3	0
	RAST	1103*	Motors and Drives	3	3	0
	RAST	1113*	Motors & Drives Lab	3	0	6
	RAST	1206*	Programmable Logic Controllers I	3	1	4
	RAST	1212*	Industrial Electronics Lab II	2	0	4
	MATH	1500	Applied Mathematics (or higher)	3	3	0
			Total Spring Semester – 1st Year	**17**		

Summer Session – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2101*	Application Planning & Layout	2	1	2
	RAST	2106*	Industrial Electronics III	2	2	0
	RAST	2116*	Industrial Electronics Lab III	2	0	4
			Total Summer Session – 1st Year	**6**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2105*	Transducers	2	1	2
	RAST	2132*	Robotic Programming	3	1	4
	RAST	2151*	Robotic Integration Lab	6	0	12
	RAST	2165*	Fluid Power	2	1	2
	RAST	2355*	Programmable Logic Controllers II	2	1	2
			Total Fall Semester – 2nd Year	**15**		

Spring Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2154*	Robot Controller Maintenance	2	1	2
	RAST	2395*	Advanced Robot Controller Programming	2	1	2
	RAST	2390*	Robotics Internship **OR**	1-3		
	RAST	2399*	Independent Study			
			Total Spring Semester – 2nd Year	**5**		

GRADUATION REQUIREMENT 61

**Denotes Prerequisite*

Robotic Vision Advanced Certificate (C243)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2123*	Robotic Vision Programming	2	1	2
	RAST	2124*	Lenses, Lighting, and Vision Hardware	2	1	2
	RAST	2153*	Applied Robotic Certification Lab	6	0	12
			Total Required Core Credits	**10**		

GRADUATION REQUIREMENT 10

**Denotes Prerequisite*

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: 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.

Robotic Welding Advanced Certificate (C382)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2120*	Offline Programming and Simulation	3	1	4
	RAST	2134*	Robotic ARC Welding	3	1	4
	RAST	2153*	Applied Robotic Certification Lab	6	0	12
			Total Required Core Credits	**12**		

GRADUATION REQUIREMENT 12

**Denotes Prerequisite*

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: 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.

Robotic Welding Certificate (C381)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	RAST	1104	Introduction to Automation	2	1	2
	RAST	2134*	Robotic ARC Welding	3	1	4
	WELD	1100	Introduction to Welding	2	0	4
	WELD	1111	Blueprint Reading I	2	1	2
	WELD	1112*	Blueprint Reading II	2	1	2
	WELD	1117	Gas Metal ARC Welding I	2	0	4
	WELD	1118*	Gas Metal ARC Welding II	3	1	4
			Total Required Core Credits	**16**		

GRADUATION REQUIREMENT 16

**Denotes Prerequisite*

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: 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.

Robotic Human Machine Interface
Advanced Certificate (C242)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2121*	SCADA Programming	2	1	4
	RAST	2122*	HMI Programming	2	1	4
	RAST	2153*	Applied Robotic Certification Lab	6	0	12
			Total Required Core Credits	**10**		

GRADUATION REQUIREMENT 10

**Denotes Prerequisite*

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: 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.

Robotic Manufacturing Certificate (C239)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	MTTS	1264	Introduction to Machining Process	2	1	2
	RAST	1101	Industrial Electronics I	3	3	0
	RAST	1104	Introduction to Automation	2	1	2
	RAST	1109	Computers in Industry	2	1	2
	RAST	1110	Introduction to Manufacturing	2	2	0
	RAST	1111	Industrial Electronics Lab I	2	0	4
	RAST	1120	Introduction to Engineering Graphics	2	1	2
	MATH	1500	Applied Mathematics (or higher)	3	3	0
			Total Required Core Credits	**18**		

GRADUATION REQUIREMENT 18

**Denotes Prerequisite*

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

Robotic Offline Programming Advanced Certificate (C244) Program Course Requirements 2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	RAST	2120*	Offline Programming and Simulation	3	1	4
	RAST	2153*	Applied Robotic Certification Lab	6	0	12
			Total Required Core Credits	**9**		

GRADUATION REQUIREMENT 9

**Denotes Prerequisite*

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: 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.

Welding and Fabrication A.A.S. (A380)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	WELD	1100	Introduction to Welding	2	1	2
	WELD	1101	Shielded Metal ARC Welding I	2	0	4
	WELD	1102*	Shielded Metal ARC Welding II	3	1	4
	WELD	1111	Blueprint Reading I	2	2	0
	WELD	1112*	Blueprint Reading II (Welding Symbols)	2	2	0
	WELD	1113*	Blueprint Reading III (CAD Systems)	2	2	0
	WELD	1115	Gas Tungsten ARC Welding I	2	0	4
	WELD	1116*	Gas Tungsten ARC Welding II	3	1	4
	WELD	1117	Gas Metal ARC Welding I	2	0	4
	WELD	1118*	Gas Metal ARC Welding II	3	1	4
	WELD	1120*	Fabrication Design and Construction	4	1	6
	WELD	1134*	Welding Qualification	3	1	4
	WELD	1140	Welding Trade Knowledge	4	3	2
	WELD	1150*	Advanced Metal Fabrication/CNC Automation	4	1	6
	WELD	1160	Welding Theory	4	4	0
			Total Required Core Credits	**45**		

Required General Education Courses

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 (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
			Total Required General Education Credits	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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.

Welding and Fabrication A.A.S. (A380)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	WELD	1100	Introduction to Welding	2	1	2
	WELD	1101	Shielded Metal ARC Welding I	2	0	4
	WELD	1111	Blueprint Reading I	2	2	0
	WELD	1115	Gas Tungsten ARC Welding I	2	0	4
	WELD	1117	Gas Metal ARC Welding I	2	0	4
	WELD	1140	Welding Trade Knowledge	4	3	2
	WELD	1160	Welding Theory	4	4	0
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	WELD	1102*	Shielded Metal ARC Welding II	3	1	4
	WELD	1112*	Blueprint Reading II (Welding Symbols)	2	2	0
	WELD	1116*	Gas Tungsten ARC Welding II	3	1	4
	WELD	1118*	Gas Metal ARC Welding II	3	1	4
	WELD	1150*	Advanced Metal Fabrication/CNC Automation	4	1	6
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	WELD	1113*	Blueprint Reading III (CAD Systems)	2	2	0
	WELD	1120*	Fabrication Design and Construction	4	1	6
	WELD	1134*	Welding Qualification	3	1	4
			Total Summer Semester – 2nd Year	**9**		

Fall Semester – 2nd Year

Course			Title	Credits	Lec Hrs	Lab Hrs
			General Education	15		
			Total Fall Semester – 2nd Year	**15**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

Welding & Fabrication Diploma (D380)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	WELD	1100	Introduction to Welding	2	1	2
	WELD	1101	Shielded Metal ARC Welding I	2	0	4
	WELD	1102*	Shielded Metal ARC Welding II	3	1	4
	WELD	1111	Blueprint Reading I	2	2	0
	WELD	1112*	Blueprint Reading II (Welding Symbols)	2	2	0
	WELD	1113*	Blueprint Reading III (CAD Systems)	2	2	0
	WELD	1115	Gas Tungsten ARC Welding I	2	0	4
	WELD	1116*	Gas Tungsten ARC Welding II	3	1	4
	WELD	1117	Gas Metal ARC Welding I	2	0	4
	WELD	1118*	Gas Metal ARC Welding II	3	1	4
	WELD	1120*	Fabrication Design and Construction	4	1	6
	WELD	1134*	Welding Qualification	3	1	4
	WELD	1140	Welding Trade Knowledge	4	3	2
	WELD	1150*	Advanced Metal Fabrication/CNC Automation	4	1	6
	WELD	1160	Welding Theory	4	4	0
			Total Required Core Credits	**45**		

GRADUATION REQUIREMENT 45

**Denotes Prerequisite*

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.

Welding & Fabrication Diploma (D380)
Program Course Requirements
2019-2020

Revised 2/20/2019

Fall Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	WELD	1100	Introduction to Welding	2	1	2
	WELD	1101	Shielded Metal ARC Welding I	2	0	4
	WELD	1111	Blueprint Reading I	2	2	0
	WELD	1115	Gas Tungsten ARC Welding I	2	0	4
	WELD	1117	Gas Metal ARC Welding I	2	0	4
	WELD	1140	Welding Trade Knowledge	4	3	2
	WELD	1160	Welding Theory	4	4	0
			Total Fall Semester – 1st Year	**18**		

Spring Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	CCST	1530	Employment Strategies	3	3	0
	WELD	1102*	Shielded Metal ARC Welding II	3	1	4
	WELD	1112*	Blueprint Reading II (Welding Symbols)	2	2	0
	WELD	1116*	Gas Tungsten ARC Welding II	3	1	4
	WELD	1118*	Gas Metal ARC Welding II	3	1	4
	WELD	1150*	Advanced Metal Fabrication/CNC Automation	4	1	6
			Total Spring Semester – 1st Year	**18**		

Summer Semester – 1st Year

Course			Title	Credits	Lec Hrs	Lab Hrs
	WELD	1113*	Blueprint Reading III (CAD Systems)	2	2	0
	WELD	1120*	Fabrication Design and Construction	4	1	6
	WELD	1134*	Welding Qualification	3	1	4
			Total Fall Semester – 2nd Year	**9**		

GRADUATION REQUIREMENT 45

**Denotes Prerequisite*

Associate of Arts Degree *(AA)* – Liberal Arts and Sciences
2019-20 Program Planner

Revised 4/15/19

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 of Arts Degree.
- A cumulative GPA of 2.0 or higher in all Minnesota Transfer Curriculum courses is required to complete the MnTC.
- 15 credits must be earned at Central Lakes College to be eligible for an Associate of 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 GOALS

Minnesota Transfer Curriculum (MnTC) courses with passing grades transfer and apply to the MnTC.

Goal 1 – Communications (9-11 credits)

CR

ENGL 1410 or ENGL 1420 ( )
ENGL 1411 or ENGL 1421 ( )
And *one additional course Goal 1 course:*

_____ ( )

Goal 2 – Critical Thinking (1 course)

_____ ( )

Goal 3 – Natural Sciences (6 credits)

(2 disciplines recommended, including one analytical lab course)

_____ ( )
_____ ( )

Goal 4 – Math/Logical Reasoning (3 credits)

_____ ( )

Goal 5 – History/Social Behavioral Sciences (9 credits)

(2 disciplines required, 3 recommended)

_____ ( )
_____ ( )
_____ ( )

Goal 6 – Humanities & Fine Arts (9 credits)

(2 disciplines required, 3 recommended)

_____ ( )
_____ ( )
_____ ( )

Goal 7 – Human Diversity (1 course)

_____ ( )

Goal 8 – Global Perspective (1 course)

_____ ( )

Goal 9 – Ethic & Civic Responsibility (1 course)

_____ ( )

Goal 10 – People & the Environment (1 course)

_____ ( )

If you fulfill the 10 goal areas in fewer than 40 semester credits, select courses from any of the goals to achieve the 40 credit total.

_____ ( )
_____ ( )

Total (40 credits minimum) _____

Fitness for Life (2 credits)

_____ ( )
_____ ( )

Student Success (1-3 credits)

_____ ( )

General Electives (15-17 credits)

_____ ( )
_____ ( )
_____ ( )
_____ ( )
_____ ( )

Goal 1 - Communications (9-11 credits)

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

AMSL 1420 American Sign Language Cultural Immersion Travel (2 cr)	***1,8***	AMSL 2414 Conversational ASL (1 cr)	***1***
COMM 1410 Introduction to Communication (3 cr)	***1***	COMM 1420 Interpersonal Communication (3 cr)	***1***
COMM 1422* Honors Interpersonal Communication (3 cr)	***1***	COMM 1430 Public Speaking (3 cr)	***1,2***
COMM 2420 Intercultural Communication (3 cr)	***1,7***	COMM 2422* Honors Intercultural Communication (3 cr)	***1,7***
ENGL 1410 Composition I (4 cr)	***1***	ENGL 1411 Composition II (4 cr)	***1***
ENGL 1420* Honors Composition I (4 cr)	***1***	ENGL 1421* Honors Composition II (4 cr)	***1,9***
ENGL 1422 Practical Writing (3 cr)	***1,2***	PHIL 1421 Critical Thinking (3 cr)	***1,2***
PHIL 1422* Honors Critical Thinking (3 cr)	***1,2***	THTR 1461 Acting I (3 cr)	***1***

Goal 2 - Critical Thinking (1 course)

COMM 1430 Public Speaking (3 cr)	***1,2***	COMM 1450 Introduction to Mass Communication (3 cr)	***2,9***
ENGL 1422 Practical Writing (3 cr)	***1,2***	ENGL 2450 World Literature (3 cr)	***2,8***
GEOG 1430 Introduction to Geographic Information Systems (3 cr)	***2,5***	MATH 1461* Honors Introduction to Statistics (4 cr)	***2,4***
PHIL 1417 Immortality and the Afterlife (3 cr)	***2,6***	PHIL 1421 Critical Thinking (3 cr)	***1,2***
PHIL 1422* Honors Critical Thinking (3 cr)	***1,2***	PHIL 1460 Logic (3 cr)	***2,4***
PHIL 2410 Introduction to Philosophy (3 cr)	***2,6***	PSYC 2421 General Psychology (4 cr)	***2,5***
PSYC 2423* Honors General Psychology (4 cr)	***2,5***	SOCL 1401 Introduction to Sociology (3 cr)	***2, 5***

Goal 3 - Natural Sciences (6 credits)

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

BIOL 1404 Human Biology (3 cr)	***3***	BIOL 1411 Concepts of Biology (3 cr)	***3***
BIOL 1415 Environmental Biology (4 cr)	***3,10***	BIOL 1420 Nutrition (3 cr)	***3***
BIOL 1431 General Biology I (5 cr)	***3***	BIOL 1432 General Biology II (5 cr)	***3,10***
BIOL 2411 Biology of Women (3 cr)	***3,7***	BIOL 2415 General Ecology (4 cr)	***3,10***
BIOL 2420 Genetics (4 cr)	***3***	BIOL 2457 Microbiology (4 cr)	***3***
BIOL 2467 Anatomy & Physiology I (4 cr)	***3***	BIOL 2468 Anatomy & Physiology II (4 cr)	***3***
CHEM 1407 Life Science Chemistry (4 cr)	***3***	CHEM 1410 Environmental Chemistry (3 cr)	***3,10***
CHEM 1414 Fundamentals of Chemistry (4 cr)	***3***	CHEM 1424 Chemical Principles I (5 cr)	***3***
CHEM 1425 Chemical Principles II (5 cr)	***3***	CHEM 2472 Organic Chemistry I (5 cr)	***3***
CHEM 2473 Organic Chemistry II (5 cr)	***3***	ESCI 1400 Geology of National Parks (3 cr)	***3,10***
ESCI 1405 Astronomy (4 cr)	***3***	ESCI 1421 Minnesota Geology (3 cr)	***3***
ESCI 1444 Natural Disasters (3 cr)	***3,10***	ESCI 1451 Oceanography (3 cr)	***3,10***
ESCI 1452 Oceanography Lab (1 cr)	***3,10***	ESCI 1454 Planet Earth (4 cr)	***3,10***
ESCI 1455* Honors Earth Science and the Environment (4 cr)	***3,10***	ESCI 1460 Exploring the Edge of Space (3 cr)	***3***
ESCI 1461* Honors Exploring the Edge of Space (4 cr)	***3***	ESCI 1480 Flight to Edge of Space: Learning and Experimentation (2 cr)	***3***
PHYS 1401 College Physics I (4 cr)	***3***	PHYS 1402 College Physics II (4 cr)	***3***
PHYS 1407 Principles of Physics (3 cr)	***3***	PHYS 1411 Classical Physics I (5 cr)	***3***
PHYS 1412 Classical Physics II (5 cr)	***3***	PHYS 1425* Honors Astronomy/Physics (4 cr)	***3***
PHYS 1430 Concepts of Physics: A Universe of Hidden Charm (3 cr)	***3***	PHYS 1480 Flight to Edge of Space: Electronic, Mechanical, and Navigational Systems (2 cr)	***3***

Goal 4 - Mathematical or Logical Reasoning (3 credits)

MATH 1441 Concepts in Mathematics (3 cr)	***4***	MATH 1460 Intro to Statistics (4 cr)	***4***
MATH 1461* Honors Introduction to Statistics (4 cr)	***2,4***	MATH 1470 College Algebra (3 cr)	***4***
MATH 1472 Precalculus (5 cr)	***4***	MATH 1477 Calculus I (5 cr)	***4***
MATH 1478 Calculus II (5 cr)	***4***	MATH 1480* Honors Calculus I (5 cr)	***4***
MATH 2457 Linear Algebra (3 cr)	***4***	MATH 2458 Multivariable Calculus (4 cr)	***4***
MATH 2459 Differential Equations (4 cr)	***4***	PHIL 1460 Logic (3 cr)	***2,4***

Goal 5 - History and Social and Behavioral Sciences (9 credits)

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

ANTH 1457 Cultural Anthropology (3 cr)	***5,8***	ANTH 2411 Cultures of American Indians (3 cr)	***5,7***
ECON 1450 The American Economy (3 cr)	***5***	ECON 1451* Honors American Economy (3 cr)	***5***
ECON 2401 Principles of Economics-Macroeconomics (3 cr)	***5***	ECON 2402 Principles of Economics-Microeconomics (3 cr)	***5***
ENVR 1400 Introduction to Environmental Studies (3 cr)	***5,10***	GEOG 1400 Physical Geography (3 cr)	***5,10***
GEOG 1410 Maps and Places (3 cr)	***5,8***	GEOG 1421 World Regional Geography (3 cr)	***5,8***
GEOG 1430 Introduction to Geographic Information Systems (3 cr)	***2,5***	GEOG 1459 Cultural Geography (3 cr)	***5,8***
GEOG 1460* Honors Cultural Geography (3 cr)	***5,8***	GLST 1401 Introduction to Global Studies (3 cr)	***5,8***
GLST 1491 Global Studies Experience - International Travel (1-4 cr)	***5,8***	HIST 1412 World History I, From the Beginning to 1500 (3 cr)	***5,8***
HIST 1413 World History II, 1500 to Present (3 cr)	***5,8***	HIST 1472 U.S. History to 1865 (3 cr)	***5,7***
HIST 1473 U.S. History Since 1865 (3 cr)	***5,7***	HIST 1475* Honors U.S. History 1865 to Present (3 cr)	***5,7***
HIST 2404 Minnesota History (3 cr)	***5***	HIST 2411 American Indian History (3 cr)	***5,7***
HIST 2420 History of Women in the U.S. (3 cr)	***5,7***	POLS 1430 Introduction to Political Science (3 cr)	***5,9***
POLS 1435 American Government and Politics (3 cr)	***5,9***	POLS 1439 State and Local Government (3 cr)	***5,9***
POLS 1440 Society and Law (3 cr)	***5,9***	POLS 2401 Federal Indian Policy (3 cr)	***5***
POLS 2402 Tribal Government (3 cr)	***5,9***	POLS 2450 International Relations (3 cr)	***5,8***
PSYC 1423 Positive Psychology: The Science of Well-Being (3 cr)	***5,9***	PSYC 1425 Environmental Psychology (3 cr)	***5,10***
PSYC 2421 General Psychology (4 cr)	***2,5***	PSYC 2423* Honors General Psychology (4 cr)	***2,5***
PSYC 2427 Statistics for Psychology (4 cr)	***5***	PSYC 2431 Human Development (3 cr)	***5***
PSYC 2435 Educational Psychology (3 cr)	***5,7***	PSYC 2470 Abnormal Psychology (3 cr)	***5,7***
SOCL 1401 Introduction to Sociology (3 cr)	***2, 5***	SOCL 1403* Honors Introduction to Sociology (3 cr)	***5,8***
SOCL 1472 Sociology of the Family (3 cr)	***5***	SOCL 2405 Criminology (3 cr)	***5***
SOCL 2411 Social Problems (3 cr)	***5,9***	SOCL 2422 Culture and Environment (3 cr)	***5,10***
SOCL 2480 Sociology of Death and Dying (3 cr)	***5***	SOCL 2481 Race, Ethnicity & Oppression (3 cr)	***5,7***
SPAN 2425 Cultures of Latin America (3 cr)	***5,8***	THTR 2450 Theatre History (3 cr)	***5,8***
WMST 1400 Introduction to Women's Studies (3 cr)	***5,7***	WMST 2420 Women & Religion (3 cr)	***5,7***

Goal 6 - Humanities and Fine Arts (9 credits)

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

AMSL 2420 Deaf Culture (3 cr)	***6,7***	ARTS 1401 Black and White Photography I (3 cr)	***6***
ARTS 1403 Color Photo I (3 cr)	***6***	ARTS 1405 Exploring Color Photography (3 cr)	***6***
ARTS 1420 The Art of Digital Photography (3 cr)	***6***	ARTS 1425 Introduction to Graphic Design (3 cr)	***6***
ARTS 1450 Introduction to Studio Art (3 cr)	***6***	ARTS 1458 Drawing (3 cr)	***6***
ARTS 1459 2-D Design & Color (3 cr)	***6***	ARTS 1468 Painting (3 cr)	***6***
ARTS 1470 Art Appreciation (3 cr)	***6***	ARTS 1487 Ceramics: Beginning Hand Building (3 cr)	***6***
ARTS 1488 Ceramics: Beginning Throwing (3 cr)	***6***	ARTS 1489 Intermediate Ceramics (3 cr)	***6***
ARTS 2401 Black and White Photography II (3 cr)	***6***	ARTS 2403 Color Photo II (3 cr)	***6***
ARTS 2410 Introduction to Photo/Video Art (3 cr)	***6***	ARTS 2485 American Indian Art (3 cr)	***6,7***
ARTS 2486 Art History/Ancient (3 cr)	***6***	ARTS 2487 Art History/Modern (3 cr)	***6***
ARTS 2490 Art History/Non-Western (3 cr)	***6,8***	ENGL 1450 Introduction to Humanities (3 cr)	***6,8***
ENGL 1452 Classical Mythology (3 cr)	***6***	ENGL 1454 Film Appreciation (3 cr)	***6***
ENGL 1456 Environmental Literature (3 cr)	***6,10***	ENGL 1460* Honors Literature: The Great Books (3 cr)	***6***
ENGL 1463 Introduction to Literature (3 cr)	***6,7***	ENGL 1468 Poetry (3 cr)	***6***
ENGL 1470 Introduction to Science Fiction and Fantasy Literature (3 cr)	***6,9***	ENGL 1477 Authors in Focus (1-3 cr)	***6***
ENGL 1478 Authors in Focus (1-3 cr)	***6***	ENGL 2451 Women in Literature (3 cr)	***6***
ENGL 2455 Native Indian Literature (3 cr)	***6,7***	ENGL 2460 Survey of American Literature (3 cr)	***6,7***
ENGL 2470 Creative Nonfiction (3 cr)	***6***	ENGL 2483 Creative Writing (3 cr)	***6***
MUSC 1403 American Popular Music (3 cr)	***6,7***	MUSC 1405 Central Lakes Jazz Orchestra (0-1 cr)	***6***
MUSC 1408 Central Lakes Wind Symphony (0-1 cr)	***6***	MUSC 1415 Brass Ensemble (0-1 cr)	***6***

MUSC 1418 Woodwind Ensemble (0-1 cr)	***6***	MUSC 1419 Percussion Ensemble (1 cr)	***6***
MUSC 1421 Cantare' Concert Chorale (1 cr)	***6***	MUSC 1431 CLC Choir (1 cr)	***6***
MUSC 1441 Applied Music Lessons - Guitar (1 cr)	***6***	MUSC 1450 Music in World Cultures (3 cr)	***6,8***
MUSC 1452 Intro to Music Industry (3 cr)	***6,9***	MUSC 1453 Audio Recording I (3 cr)	***6***
MUSC 1455 Voice Training (2 cr)	***6***	MUSC 1457 Music Appreciation (3 cr)	***6***
MUSC 1459 Musicology (3 cr)	***6***	MUSC 1464 Applied Music Lessons - Brass (1 cr)	***6***
MUSC 1475 Applied Music Lessons - Woodwind (1 cr)	***6***	MUSC 1477 Applied Music Lessons - Bass Guitar (1 cr)	***6***
MUSC 1481 Applied Music Lessons - Piano (1 cr)	***6***	MUSC 1485 Applied Music Lessons - Percussion (1 cr)	***6***
MUSC 1491 Applied Music Lessons - Voice (1 cr)	***6***	MUSC 2401 Evolution of Jazz (3 cr)	***6,7***
PHIL 1411 World Religions (3 cr)	***6,8***	PHIL 1415 Philosophy and Popular Culture (3 cr)	***6***
PHIL 1417 Immortality and the Afterlife (3 cr)	***2,6***	PHIL 2410 Introduction to Philosophy (3 cr)	***2,6***
PHIL 2420 Ethics (3 cr)	***6,9***	PHIL 2421* Honors Ethics (3 cr)	***6,9***
PHIL 2422 Medical Ethics (3 cr)	***6,9***	PHIL 2430 Contemporary Moral Problems (3 cr)	***6,9***
SPAN 2401 Intermediate Spanish I (4 cr)	***6,8***	SPAN 2404 Intermediate Spanish II (4 cr)	***6,8***
SPAN 2420 Many Faces of Mexico (3 cr)	***6,8***	THTR 1442 Improvisation (3 cr)	***6***
THTR 1443 Stage to Screen: Plays that Become Movies (3 cr)	***6***	THTR 1445 Acting for the Camera (3 cr)	***6***
THTR 1451 Introduction to Theatre (3 cr)	***6,8***	THTR 1452 Stage Make-up (3 cr)	***6***
THTR 1453 Theatre Costuming (3 cr)	***6***	THTR 1462 Acting II (3 cr)	***6***
THTR 1466 Acting Lab (1 cr)	***6***	THTR 1471 Theatre Production Lab (1 cr)	***6***
THTR 1478 Technical Theatre (3 cr)	***6***	THTR 1480 The Theatre Experience (1-3 cr)	***6***
THTR 1481 The Theatre Experience-New York (1-3 cr)	***6***	THTR 1482 The Theatre Experience-London (1-3 cr)	***6,8***
THTR 1483* Honors Theatre Experience (3 cr)	***6,7***	THTR 1496 Summer Theatre Workshop (3 cr)	***6***
THTR 2410 Children's Theatre (3 cr)	***6***	THTR 2441 Directing for the Theatre (3 cr)	***6***
THTR 2491 Theatre Independent Study (1-3 cr)	***6***		

Goal 7 - Human Diversity (1 course)

AMSL 2420 Deaf Culture (3 cr)	***6,7***	ANTH 2411 Cultures of American Indians (3 cr)	***5,7***
ARTS 2485 American Indian Art (3 cr)	***6,7***	BIOL 2411 Biology of Women (3 cr)	***3,7***
COMM 2420 Intercultural Communication (3 cr)	***1,7***	COMM 2422* Honors Intercultural Communication (3 cr)	***1,7***
ENGL 1463 Introduction to Literature (3 cr)	***6,7***	ENGL 2455 Native Indian Literature (3 cr)	***6,7***
ENGL 2460 Survey of American Literature (3 cr)	***6,7***	HIST 1472 U.S. History to 1865 (3 cr)	***5,7***
HIST 1473 U.S. History Since 1865 (3 cr)	***5,7***	HIST 1475* Honors U.S. History 1865 to Present (3 cr)	***5,7***
HIST 2411 American Indian History (3 cr)	***5,7***	HIST 2420 History of Women in the U.S. (3 cr)	***5,7***
MUSC 1403 American Popular Music (3 cr)	***6,7***	MUSC 2401 Evolution of Jazz (3 cr)	***6,7***
PSYC 2435 Educational Psychology (3 cr)	***5,7***	PSYC 2470 Abnormal Psychology (3 cr)	***5,7***
SOCL 2481 Race, Ethnicity & Oppression (3 cr)	***5,7***	THTR 1483* Honors Theatre Experience (3 cr)	***6,7***
WMST 1400 Introduction to Women's Studies (3 cr)	***5,7***	WMST 2420 Women & Religion (3 cr)	***5,7***

Goal 8 - Global Perspective (1 course)

AMSL 1410 American Sign Language I (4 cr)	***8***	AMSL 1412 American Sign Language II (4 cr)	***8***
AMSL 1420 American Sign Language Cultural Immersion Travel (2 cr)	***1,8***	AMSL 2410 American Sign Language III (4 cr)	***8***
AMSL 2412 American Sign Language IV (4 cr)	***8***	ANTH 1457 Cultural Anthropology (3 cr)	***5,8***
ARTS 2490 Art History/Non-Western (3 cr)	***6,8***	ENGL 1450 Introduction to Humanities (3 cr)	***6,8***
ENGL 2450 World Literature (3 cr)	***2,8***	GEOG 1410 Maps and Places (3 cr)	***5,8***
GEOG 1421 World Regional Geography (3 cr)	***5,8***	GEOG 1459 Cultural Geography (3 cr)	***5,8***
GEOG 1460* Honors Cultural Geography (3 cr)	***5,8***	GLST 1401 Introduction to Global Studies (3 cr)	***5,8***
GLST 1421* Honors Global Studies: Nobel Conference Experience (3 cr)	***8***	GLST 1491 Global Studies Experience - International Travel (1-4 cr)	***5,8***
GLST 1492 Global Studies Cultural Immersion Experience (1-3 cr)	***8***	GLST 2401 Global Studies Capstone (1-3 cr)	***8***
HIST 1412 World History I, From the Beginning to 1500 (3 cr)	***5,8***	HIST 1413 World History II, 1500 to Present (3 cr)	***5,8***
MUSC 1450 Music in World Cultures (3 cr)	***6,8***	OJIB 1401 Beginning Ojibwe I (4 cr)	***8***
OJIB 1402 Beginning Ojibwe II (4 cr)	***8***	OJIB 2401 Intermediate Ojibwe I (4 cr)	***8***
OJIB 2402 Intermediate Ojibwe II (4 cr)	***8***	PHIL 1411 World Religions (3 cr)	***6,8***

POLS 2450 International Relations (3 cr) ***5,8***
SPAN 1401 Beginning Spanish I (4 cr) ***8***
SPAN 2401 Intermediate Spanish I (4 cr) ***6,8***
SPAN 2420 Many Faces of Mexico (3 cr) ***6,8***
SUST 1400 Introduction to Sustainability (3 cr) ***8***
THTR 1482 The Theatre Experience-London (1-3 cr) ***6,8***
SOCL 1403* Honors Introduction to Sociology (3 cr) ***5,8***
SPAN 1402 Beginning Spanish II (4 cr) ***8***
SPAN 2404 Intermediate Spanish II (4 cr) ***6,8***
SPAN 2425 Cultures of Latin America (3 cr) ***5,8***
THTR 1451 Introduction to Theatre (3 cr) ***6,8***
THTR 2450 Theatre History (3 cr) ***5,8***

Goal 9 - Ethic and Civic Responsibility (1 course)

COMM 1450 Introduction to Mass Communication (3 cr) ***2,9***
ENGL 1470 Introduction to Science Fiction and Fantasy Literature (3 cr) ***6,9***
PHIL 2420 Ethics (3 cr) ***6,9***
PHIL 2422 Medical Ethics (3 cr) ***6,9***
POLS 1430 Introduction to Political Science (3 cr) ***5,9***
POLS 1439 State and Local Government (3 cr) ***5,9***
POLS 2402 Tribal Government (3 cr) ***5,9***
SOCL 2411 Social Problems (3 cr) ***5,9***
ENGL 1421* Honors Composition II (4 cr) ***1,9***
MUSC 1452 Intro to Music Industry (3 cr) ***6,9***
PHIL 2421* Honors Ethics (3 cr) ***6,9***
PHIL 2430 Contemporary Moral Problems (3 cr) ***6,9***
POLS 1435 American Government and Politics (3 cr) ***5,9***
POLS 1440 Society and Law (3 cr) ***5,9***
PSYC 1423 Positive Psychology: The Science of Well-Being (3 cr) ***5,9***

Goal 10 - People and the Environment (1 course)

BIOL 1415 Environmental Biology (4 cr) ***3,10***
BIOL 2415 General Ecology (4 cr) ***3,10***
ENGL 1456 Environmental Literature (3 cr) ***6,10***
ESCI 1400 Geology of National Parks (3 cr) ***3,10***
ESCI 1451 Oceanography (3 cr) ***3,10***
ESCI 1454 Planet Earth (4 cr) ***3,10***
GEOG 1400 Physical Geography (3 cr) ***5,10***
SOCL 2422 Culture and Environment (3 cr) ***5,10***
BIOL 1432 General Biology II (5 cr) ***3,10***
CHEM 1410 Environmental Chemistry (3 cr) ***3,10***
ENVR 1400 Introduction to Environmental Studies (3 cr) ***5,10***
ESCI 1444 Natural Disasters (3 cr) ***3,10***
ESCI 1452 Oceanography Lab (1 cr) ***3,10***
ESCI 1455* Honors Earth Science and the Environment (4 cr) ***3,10***
PSYC 1425 Environmental Psychology (3 cr) ***5,10***

Fitness for Life (2 credits)

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

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

Student Success (1-3 credits)

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

CCST 1510 College Success Skills (3 cr)
CCST 1520 Career Planning (2 cr)
CCST 1535* Honors Leadership Development (3 cr)
CCST 1550 Introduction to College (1 cr)
CCST 1552 Success Strategies for Athletes (1 cr)
CCST 1570 On Course (3 cr)

General Electives (17 credits)

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

Associate of Arts Degree - Honors Program (15 credits)

Associate of Arts Degree students may choose to also complete the Honors Program. This is available to students who have completed CCST 1535 Honors Leadership Development (required) PLUS any 12 credits of the honors courses (15 credits total honors courses) listed below as part of their course work for an AA degree, and have a cumulative GPA of 3.5 or higher. Students interested in completing the Honors Program must contact the CLC Admissions Department of their intent. Questions about the Honors Program should be directed to an advisor or the Honors Coordinator.

REQUIRED - CCST 1535* Honors Leadership Development (3 cr)

COMM 2422* Honors Intercultural Communication (3 cr)	***1,7***	COMM 1422* Honors Interpersonal Communication (3 cr)	***1***
ENGL 1420* Honors Composition I (4 cr)	***1***	ECON 1451* Honors American Economy (3 cr)	***5***
ENGL 1460* Honors Literature: The Great Books (3 cr)	***6***	ENGL 1421* Honors Composition II (4 cr)	***1,9***
ESCI 1461* Honors Exploring the Edge of Space (4 cr)	***3***	ESCI 1455* Honors Earth Science and the Environment (4 cr)	***3,10***
GLST 1421* Honors Global Studies: Nobel Conference Experience (3 cr)	***8***	GEOG 1460* Honors Cultural Geography (3 cr)	***5,8***
MATH 1461* Honors Introduction to Statistics (4 cr)	***2,4***	HIST 1475* Honors U.S. History 1865 to Present (3 cr)	***5,7***
PHED 1597* Honors Fitness for Life (3 cr)		MATH 1480* Honors Calculus I (5 cr)	***4***
PHIL 2421* Honors Ethics (3 cr)	***6,9***	PHIL 1422* Honors Critical Thinking (3 cr)	***1,2***
PSYC 2423* Honors General Psychology (4 cr)	***2,5***	PHYS 1425* Honors Astronomy/Physics (4 cr)	***3***
THTR 1483* Honors Theatre Experience (3 cr)	***6,7***	SOCL 1403* Honors Introduction to Sociology (3 cr)	***5,8***

Health Sciences Broad Field A.S. Degree (A120)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	BIOL	1431	General Biology I (Goal 3)	5	3	4
	BIOL	2457*	Microbiology (Goal 3)	4	2	4
	BIOL	2467*	Anatomy and Physiology I (Goal 3)	4	3	3
	BIOL	2468*	Anatomy and Physiology II (Goal 3)	4	3	3
	CHEM	1407	Life Science Chemistry (Goal 3) **OR**	4	3	2
	CHEM	1424*	Chemical Principles I (Goal 3)	5	3	3
	COMM	1420	Interpersonal Communication (Goal 1) **OR**	3	3	0
	COMM	2420	Intercultural Communication (Goals 1 and 7)			
	ENGL	1410	Composition I (Goal 1)	4	4	0
	HLTH	1520	Principles of Nutrition	3	3	0
	MATH	1460*	Introduction to Statistics (Goal 4)	4	4	0
	MATH	1470*	College Algebra (Goal 4)	3	3	0
	PHIL	2420	Ethics (Goals 6 and 9)	3	3	0
	PSYC	2421	General Psychology (Goals 2 and 5)	4	4	0
	PSYC	2431*	Human Development (Goal 5)	3	3	0
	SOCL	1401	Introduction to Sociology (Goals 2 and 5)	3	3	0
			Total Required Core Credits	**51-52**		

Additional General Education Courses

An associate in science degree requires a minimum of 30 general education credits selected from **at least six of the ten goal areas** of the Minnesota Transfer Curriculum (MnTC).

Course #			Title	Credits	Lec Hrs	Lab Hrs
Students must select additional MnTC courses to complete 12-13 credits. The following course is highly recommended:						
	ENGL	1411*	Composition II (Goal 1)	4		
			Additional MnTC course credits	8-9		
			Total Required General Education Credits	**12-13**		

GRADUATION REQUIREMENT 60

**Denotes Prerequisite*

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

Economics Transfer Pathway AA Degree *(TPEC)*

2019-20 Program Planner

Revised 3/22/18

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 Psychology Transfer Pathway Degree.
- A cumulative GPA of 2.0 or higher in all Minnesota Transfer Curriculum courses is required to complete the MnTC.
- 15 credits must be earned at Central Lakes College to be eligible for an Associate in Arts Degree.
- Classes may meet requirements for more than one goal area, but credit will not be awarded for any course twice.

MINNESOTA TRANSFER CURRICULUM GOALS

Minnesota Transfer Curriculum (MnTC) courses with passing grades transfer and apply to the MnTC.

Goal 1 – Communications (9-11 credits)

	CR
ENGL 1410 or ENGL 1420	(4)
ENGL 1411 or ENGL 1421	(4)
And *one additional course Goal 1 course:*	
_____	(3)

Goal 2 – Critical Thinking (1 course)

_____ (DD)

Goal 3 – Natural Sciences (6 credits)

(2 disciplines recommended, including one analytical lab course)

_____

_ (3)

Suggested: 1 course to fulfill Goals 3 and 10 (3)

Goal 4 – Math/Logical Reasoning (3 credits)

MATH 1470 COLLEGE ALGEBRA (4)

Goal 5 – History/Social Behavioral Sciences (9 credits)

(2 disciplines required, 3 recommended)

ECON 2401 Principles of Economics - Macroeconomics (3)
ECON 2402 Principles of Economics - Microeconomics (3)
Choose 1 course from another discipline (not ECON) (3)

***Economics courses beyond the two required courses (above) are not guaranteed to transfer to Economics programs at Minnesota State Universities.*

Goal 6 – Humanities & Fine Arts (9 credits)

(2 disciplines required, 3 recommended)

_____ (3)

_____ (3)

_____ (3)

Goal 7 – Human Diversity (1 course)

_____ ( )

Goal 8 – Global Perspective (1 course)

_____ ( )

Goal 9 – Ethic & Civic Responsibility (1 course)

_____ ( )

Goal 10 – People & the Environment (1 course)

_____ ( )

If you fulfill the 10 goal areas in fewer than 40 semester credits, select courses from any of the goals to achieve the 40 credit total.

_____ ( )

_____ ( )

Total (40 credits minimum) _____

Fitness for Life (2 credits)

_____ ( )

Student Success (1-3 credits)

_____

(3)

General Electives (15-17 credits)

MATH 1460 INTRODUCTION TO STATISTICS (4)
_____ (3)
_____ (3)
_____ (3)
_____ (3)
_____ (2)

Psychology Transfer Pathway AA Degree

2019-20 Program Planner (TPPS)

Revised 10/8/19

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

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

MINNESOTA TRANSFER CURRICULUM GOALS

Minnesota Transfer Curriculum (MnTC) courses with passing grades transfer and apply to the MnTC.

Goal 1 – Communications (9-11 credits) **CR**

ENGL 1410 or ENGL 1420 (4)
ENGL 1411 or ENGL 1421 (4)
And *one additional course Goal 1 course:*
COMM 1420 Interpersonal Communication or
COMM 1410 Introduction to Communication (3)

Goal 2 – Critical Thinking (1 course)

PSYC 2421 General Psychology or
PSYC 2423 Honors General Psychology (DD)

Goal 3 – Natural Sciences (6 credits)

(2 disciplines recommended, including one analytical lab course)
Strongly recommend 1 course in BIOL (with lab),
BIOL 2411 or BIOL 1404 suggested (3)
1 course to fulfill Goals 3 and 10 suggested (3)

Goal 4 – Math/Logical Reasoning (3 credits)

MATH 1470 College Algebra or
MATH 1460 Introduction to Statistics or
MATH 1461 Honors Introduction to Statistics (3-4)

Goal 5 – History/Social Behavioral Sciences (9 credits)

(2 disciplines required, 3 recommended)
PSYC 2421 General Psychology or
PSYC 2423 Honors General Psychology (4)
PSYC 2427 Statistics for Psychology (4)

Choose 1 course from another discipline (not PSYC) (3)

Goal 6 – Humanities & Fine Arts (9 credits)

(2 disciplines required, 3 recommended)

Strongly recommend 1 course in PHIL
PHIL 2420 Ethics or PHIL 2421 Honors Ethics suggested (3)

_____ ( )

_____ ( )

Goal 7 – Human Diversity (1 course)

_____ ( )

Goal 8 – Global Perspective (1 course)

_____ ( )

Goal 9 – Ethic & Civic Responsibility (1 course)

_____ ( )

Goal 10 – People & the Environment (1 course)

_____ ( )

If you fulfill the 10 goal areas in fewer than 40 semester credits, select courses from any of the goals to achieve the 40 credit total.

_____ ( )

_____ ( )

Total (40 credits minimum) _____

Fitness for Life (2 credits)

_____ ( )

Student Success (1-3 credits)

Suggested: CCST 1510 COLLEGE SUCCESS SKILLS (3)

General Electives (15-17 credits)

PSYC 2431 Human Development or
PSYC 2470 Abnormal Psychology (3)
1 additional PSYC course--Choose from PSYC 1423, 1425, 2435; or 2431, 2470 or 2441 (if not taken above) (3)

_____ ( )

***Psychology courses beyond the four required courses (above) are not guaranteed to transfer into a Psychology Program in Minnesota State.*

Sociology Transfer Pathway AA Degree *(TPSO)*

2019-20 Program Planner

Revised 10.31.18

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

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

MINNESOTA TRANSFER CURRICULUM GOALS

Minnesota Transfer Curriculum (MnTC) courses with passing grades transfer and apply to the MnTC.

Goal 1 – Communications (9-11 credits)

	CR
ENGL 1410 or ENGL 1420	(4)
ENGL 1411 or ENGL 1421	(4)
And *one additional course Goal 1 course:*	
_____	(3)

Goal 2 – Critical Thinking (1 course)

SOCL 1401 Introduction to Sociology X
OR SOCL 1403 Honors Introduction to Sociology

Goal 3 – Natural Sciences (6 credits)

(2 disciplines recommended, including one analytical lab course)
Suggested: select one course to fulfill Goals 3 and 10

_____ (3)
_____ (3)

Goal 4 – Math/Logical Reasoning (3 credits)

_____ (3)

Goal 5 – History/Social Behavioral Sciences (9 credits)

(2 disciplines required, 3 recommended)

SOCL 1401 Introduction to Sociology (3)
OR SOCL 1403 Honors Introduction to Sociology (3)
SOCL 1472 Sociology of the Family (3)
OR SOCL 2405 Criminology (3)

Choose 1 course from another discipline (not SOCL) (3)

Goal 6 – Humanities & Fine Arts (9 credits)

(2 disciplines required, 3 recommended)

_____ ( )
_____ ( )
_____ ( )

Goal 7 – Human Diversity (1 course)

_____ ( )

Goal 8 – Global Perspective (1 course)

_____ ( )

Goal 9 – Ethic & Civic Responsibility (1 course)

_____ ( )

Goal 10 – People & the Environment (1 course)

_____ ( )

If you fulfill the 10 goal areas in fewer than 40 semester credits, select courses from any of the goals to achieve the 40 credit total.

_____ ( )
_____ ( )

Total (40 credits minimum) _____

Fitness for Life (2 credits)

_____ ( )

Student Success (1 credit)

_____ ( )

General Electives (17 credits)

SOCL 2481 Race, Ethnicity and Oppression (3)
OR SOCL 2411 Social Problems (3)
_____ ( )
_____ ( )

#Students must be accepted into the Honors Program in order to take these courses.

Deaf Studies Certificate (C051)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	AMSL	1410	American Sign Language I	4	4	0
	AMSL	1412*	American Sign Language II	4	4	0
	AMSL	2410*	American Sign Language III	4	4	0
	AMSL	2412*	American Sign Language IV	4	4	0
	AMSL	2414	Conversational ASL	1	1	0
	AMSL	2420	Deaf Culture	3	3	0
	COMM	2420	Intercultural Communication	3	3	0
			Total Required Core Credits	**23**		

GRADUATION REQUIREMENT 23

**Denotes Prerequisite*

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

Environmental Studies Certificate (C400)
Program Course Requirements
2019-2020

Revised 2/19/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
Select 15 credits from the following list of courses:						
	BIOL	1415	Environmental Biology	3	2	3
	BIOL	2415	General Ecology	4	3	2
	CHEM	1410	Environmental Chemistry	3	2	2
	ENVR	1400	Intro to Environmental Studies	3	3	0
	ESCI	1444	Natural Disasters	3	2	2
	ESCI	1451	Oceanography	3	3	0
	ESCI	1452	Oceanography Lab	1	0	2
	ESCI	1454	Earth Science and the Environment	4	3	2
	SOCL	2422	Culture and Environment	3	3	0
			Total Required Core Credits	**15**		

GRADUATION REQUIREMENT 15

**Denotes Prerequisite*

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

Wildlife Tourism Certificate (C260)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	NATR	1130	Mammalogy	3	2	2
	NATR	1135	Ornithology	3	2	2
	NATR	1360	Animal Behavior	3	3	0
	NATR	2110	Herpetology	2	2	0
	NATR	2130	Wildlife Management	3	2	2
	NATR	2201*	Introduction to Parks and Interpretation	2	1	2
	COMM	1410	Introduction to Communication **OR**	3	3	0
	COMM	1420	Interpersonal Communications **OR**			
	COMM	1430	Public Speaking			
			Total Required Core Credits	**19**		

GRADUATION REQUIREMENT 19

**Denotes Prerequisite*

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

Women's Studies Certificate (C290)
Program Course Requirements
2019-2020

Revised 2/20/2019

Required Core Courses

Course #			Title	Credits	Lec Hrs	Lab Hrs
	WMST	1400	Introduction to Women's Studies	3	3	0
Choose 9 credits from the following:						
	BIOL	2411	Biology of Women	3	2	2
	ENGL	2451	Women in Literature	3	3	0
	HLTH	1531	Women's Health	3	3	0
	HIST	2420	History of Women in the U. S.	3	3	0
	WMST	2420	Women and Religion	3	3	0
			Total Required Core Credits	**12**		

GRADUATION REQUIREMENT 12

**Denotes Prerequisite*

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

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ACCT 2011	Accounting Principles I (Financial)	4	Accuplacer Reading Score of 56+

This course serves as an introduction to the generally accepted accounting principles used to identify, measure, and communicate useful economic information to users. Specific topics include accrual accounting, financial statements, accounting systems, merchandise accounting, internal control, and accounting for assets, liabilities, and owners' capital. International issues and ethics are incorporated into appropriate topics.

ACCT 2012 Accounting Principles II (Managerial) 4 ACCT 2011

This course continues the study of generally accepted accounting principles used to identify, measure, and communicate useful economic information to users. Specific topics include the statement of cash flows and financial statement analysis. In addition, a major portion of this course focuses on the informational needs of management for strategic decision-making. Topics include cost-volume-profit analysis, product costing, cost management, cost behavior, relevant information, performance measurement, and capital budgeting. Ethics are incorporated into projects and discussions throughout the course.

ACCT 2114 Payroll Accounting 3 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.

ACCT 2121 Intermediate Accounting I 4 ACCT 2012

This course is an in-depth study of financial accounting theories, concepts, and practices. It provides a review of the accounting process, the conceptual framework of accounting, and the financial statements. Topics covered in detail include cash and receivables, inventories, property, plant and equipment, and intangible assets.

ACCT 2123 Intermediate Accounting II 4 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.

ACCT 2137 Accounting for Governmental and Not-for-Profit Entities 3 ACCT 2012

This course focuses on the application of generally accepted accounting principles to state and local governmental units, health care organizations, and other not-for-profit entities. Topics covered include the governmental fund accounting cycle, budget considerations, financial statement preparation and analysis, and special accounting considerations for health care and other not-for-profit organizations.

ACCT 2138 Computerized Accounting Software 3 ACCT 2011

This course is an introduction to computerized accounting software. During the course, students complete the accounting cycle using an up-to-date version of a popular small business accounting software package. By means of a practical, hands-on approach, students apply abstract accounting principles to concrete accounting procedures. Students record cash sales and deposits, prepare invoices, enter bills, write checks, maintain inventory, process payroll, reconcile accounts, generate financial statements and other managerial reports, close the period, and manage vital data lists.

ACCT 2140 Accounting Applications 3 none

Students will apply various skills, knowledge and tools when analyzing and solving hands-on accounting application problems. This course will train students how to deliver timely, accurate accounting information that is relevant and essential for business making decisions.

ACCT 2161 Cost Accounting I 3 ACCT 2012

This course provides theoretical and practical knowledge of the fundamentals of a cost accounting information system, including cost behavior, cost-volume-profit relationships, costing techniques in service and manufacturing sectors, budgeting, variance analysis and the creation of pro-forma financial statements to evaluate a company's performance. Management use cost accounting information for decision making.

ACCT 2165 Income Tax 4 ACCT 2011

This course is an introductory course in the study of U.S. taxation policy, the application of that policy to calculate the correct tax position, and to prepare a Federal Form 1040 and accompanying schedules along with a MN income tax return in good form for various taxpayers.

ACCT 2170 Tax Updates with Tax Software 1 ACCT 2165

Students will demonstrate an understanding of the most current tax laws and prepare individual income tax returns using TaxWise Software. Students will be expected to achieve IRS certification at the advanced level using interactive training modules and volunteer to prepare individual tax returns at VITA Sites of their choosing within a 60-mile radius of Central Lakes College- Brainerd campus.

ACCT 2350 Accounting Internship 1-9 instructor's consent

The accounting internship is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

ACCT 2370 Special Problems in Accounting 1-3 instructor's consent

This course allows accounting students to study accounting types of problems relevant for their own career objectives. Students will meet with their instructor to set up their own course of study, and may satisfy course requirements through industry seminars, outside training experiences or individual research.

ADMN 1120 Administrative Support Applications 3 COMP 1109, COMP 1131, COMP 1135

This course teaches students to develop skill in performing typical office tasks including electronic and manual file management, mailable document processing, classifying of mail, meeting and event planning, travel arrangements, managing office supplies as well as email and other electronic communication system management. Students will also develop skill in telephone and calendaring procedures through projects and simulations as well as on-line and library and/or internet reference assignments. Emphasis will be on setting priorities and practicing time management skills.

ADMN 1125 Business English Skills 3 COMP 1109

This course is an extensive, comprehensive study of Business English grammar, spelling, word usage, punctuation, number usage, capitalization and abbreviation rules, and proofreading. Students will develop the technical skills utilizing business/industry standards.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ADMN 1156	Championship Keyboarding	3	ADMN 1300

This course is an independent class and is designed to help students develop superior keyboarding skills by improving accuracy and speed. Emphasis is placed on accuracy first, speed second. The student will learn how to evaluate their typing errors and how to determine the corrective practice need to improve accuracy and speed. Great emphasis is placed on typing letter by letter with rhythm rather than word by word.

ADMN 1300	Introduction to Keyboard	1	none

This course is designed for the student who has never had keyboarding or for the student who wants to improve their keyboarding skills. The major objectives are to develop touch control of the keyboard and proper typing techniques, and to build basic speed and accuracy. This class is learning the keyboard only. It will not cover letter styles or reports.

ADMN 2110	Administrative Assistant Capstone	3	ADMN 1120, ADMN 1125

This Capstone course is designed to integrate and reinforce the skills and knowledge learned in previous courses in the program. Project emphasis will develop the students' awareness of work flow, chain of command, and creation/integration of office documents. The use of electronic tools and the integration of documents created in various Microsoft Office Suite programs is the primary focus of this course. Students will learn from hands-on training and business examples to gain general knowledge of day-to-day office procedures. This class would be taken in lieu of an Internship. This should be taken the last semester of their program.

ADMN 2150	Internship	1-6	ADMN 1120, ADMN 1125

This internship provides students with on-the-job experience in the student's career major. A competency-based training plan will be developed for each student in collaboration with the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. The internship program will be available to students who have demonstrated readiness and willingness to learn in a professional business organization. Students will learn from hands-on training and business examples to gain general knowledge of day-to-day office procedures. This should be taken the last semester of their program.

AGRI 1100	Introduction to Precision Agriculture	2	none

This course will prepare students for the advanced technologies and theories that are emerging in the agriculture industry. Students will develop skills in geographic information systems, global positioning systems, yield monitoring concepts, and remote sensing technologies. Classroom experiences will enable students to combine technologies needed to meet the demanding needs of the agriculture industry.

AGRI 2150	Agricultural Studies Internship	1-9	see instructor to register

The agricultural studies internship is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

AGRO 1100	Introduction to Agronomy	3	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.

AMSL 1410	American Sign Language I	4	Accuplacer Reading 56+, or Next Gen Reading 237+

In this introductory course, you will engage in receptive and expressive language readiness activities as well as learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn appropriate introductions, how to exchange personal information, sign about their surroundings, explain where they live, speak about their family and converse about activities. Basic aspects of Deaf Culture will also be integrated throughout the course.

AMSL 1412	American Sign Language II	4	AMSL 1410 I

n this level 2 introductory course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to give directions, describe physical and personal characteristics of others, make requests and talk about family, routines and occupations. Basic aspects of Deaf Culture will also be integrated throughout the course.

AMSL 1420	American Sign Language Cultural Immersion Travel	2	Instructor permission required

Students in this course will participate in an American Sign Language/Deaf Culture immersion travel-study trip. The entire duration of the trip will be conducted in American Sign Language. Topics of study will derive from art, culture, history and geography of the area being visited. Classroom time prior to the trip will involve basic culture lessons and preparation for travel. Post-trip classroom meetings will emphasize reflection of travel experience and learning.

AMSL 2370	Topics in American Sign Language	1-4	none

This course will examine selected topics of interest in American Sign Language. Offered on demand.

AMSL 2410	American Sign Language III	4	AMSL 1412

In this level 3 course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to describe placement and give directions, make requests, complaints and suggestions, ask for permission and clarification, tell about life events, nationalities and family history. In depth practice with multiple meaning words in ASL and basic aspects of Deaf Culture will also be integrated throughout the course.

AMSL 2412	American Sign Language IV	4	AMSL 2410

In this level 4 course, you will engage in receptive and expressive language readiness activities as well as continuing to learn vocabulary, basic use of ASL grammatical structure and signing space, conversational regulators, fingerspelling and introductory aspects. Students will learn to exchange in-depth personal information, describe and identify shapes, patterns and textures, and sign about weekend activities. In-depth practice with multiple meaning words in ASL and basic aspects of Deaf Culture will also be integrated throughout the course.

AMSL 2414	Conversational ASL	1	AMSL 1410

In this course, students will build receptive and expressive conversational skills through small group work. Vocabulary and classifier building through conversational settings. Continued practice with real world experiences and discussions.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
AMSL 2420	Deaf Culture	3	none

No sign language experience is necessary for this course! This class introduces students to the history and culture of Deaf people. Students will study the influences in Deaf culture, the implications of being pathologically deaf vs. culturally Deaf, and various aspects of Deaf community and culture. The course also examines the historical treatment of deaf people as well as educational influences, causes, and treatment of deafness.

ANSI 1100 Introduction to Animal Science 4 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.

ANSI 1110 Food Safety: From Farm to Fork 3 none

This course is a producer and consumer oriented introduction to food safety and food safety risks associated with the agrifood industry, specifically the food animal sector. Topics of study will include zoonotic and food borne pathogens, chemicals, toxins and drug residues, biosecurity, current technology, consumer perceptions and regulatory agencies responsible for overseeing food safety in the industry. Students will examine food safety risks associated with production, harvest, transporting, processing, distribution, retail sale, home and commercial kitchen use of animals and animal products and learn the control, prevention and intervention strategies available to help minimize the risk of food borne disease.
Students completing this course have the opportunity to earn the National Restaurant Association ServSafe Certificate, which meets the State of Minnesota's requirements for Food Manager Certification.

ANTH 1457 Cultural Anthropology 3 Accuplacer Reading 56+, or Next Gen Reading 237+

Cultural Anthropology is the comparative study of contemporary human cultures, and includes analysis of various aspects of culture, such as language, food-getting, family and kinship, economics, politics, religion, and change.

ANTH 1598 Topics in Anthropology 1-3 none

This course will examine selected topics of interest in Anthropology. Offered on demand.

ANTH 2411 Cultures of American Indians 3 none

This course is an examination of Native American Cultures that will include discussion of contemporary issues facing native communities. It will focus on the distinct worldviews that influence all aspects of culture within those communities as well as their relationships with other communities, both native and non-native.

APPD 1110 Programming in C# 3 none

This is an introductory course in programming languages. It is designed to begin at basic level concepts and move into advanced topics as the course progresses. This course uses C# as the programming language for software development in order to help students prepare for certification exams that use C#. The basic programming concepts learned in this course can be applied to a number of other languages. This course is designed to focus on programming concepts and uses the C# platform to present the material. Students will be creating projects based on the C# platform. This course is intended to be one of a series of courses that prepares students for application development and uses concepts that students will be able to use to prepare for industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. The students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft 70-483.

APPD 1111 Problem Solving Using Java 3 none

This course is designed to introduce students to developing solutions to problems and developing a formalized understanding of programming logic. By using pseudocode (high level language) to represent solutions and developing an understanding of a programming language to implement the solutions, a student will have the fundamental understanding to begin developing programs in other languages and environments. Topics include the System Development Life Cycle, Agile programming methodology and the fundamentals of solving real-world problems using logic. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 1113 Programming in HTML5/CSS with JavaScript 3 none

This introductory course will help students learn basic HTML5 and JavaScript programming skills and the implementation of styles using CSS3. It focuses on using HTML5, and JavaScript to implement programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications. This course is designed to focus on developing application concepts while using HTML5 with JavaScript and CSS3 to present the material. Students will learn how to implement and manipulate document structures and objects, implement program flow, access and secure data and use CSS3 in applications. This course is intended to be the first course in a series of courses that prepare students for HTML5 and JavaScript application development and uses concepts that students will be able to use to prepare for industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCSD 70-480.

APPD 1115 Database Design Fundamentals 3 none

This course is designed to introduce students to database design and Structured Query Language (SQL). The building blocks of database design, such as fields, rows, and columns will be addressed. Topics will include data design and modeling in relational databases. Students will also learn how to select, add, update and delete records from a database. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 1120 Android Application Development Fundamentals 3 none

This course is designed to introduce students to Android development using the Java programming language and object-oriented programming. Students will learn how to plan, develop, and debug Java applications. Topics include introduction to the Android environment, introduction to Java programming and the implementation of project development techniques in a mobile application development environment. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
APPD 1125	Database Management Systems	3	none

This course is designed to further students' knowledge in database design and management of SQL server databases. Topics include disaster planning and recovery, safeguarding data, automating database management processes and optimizing SQL server performance. Concepts covered in this course will help students prepare for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 2111 Advanced Problem Solving with Java 3 APPD 1111

This course is designed to expose students to the Google Cloud Messaging (GCM) service and to access an SQL server database from an Android application. Students will use GCM as they develop and update their Android applications. Topics include Google Cloud Messaging, application synchronization, SQL server access and client-server database design. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 2114 Advanced Programming in C# 3 APPD 1110

This is an advanced programming course using C# for software development. This course is designed to focus on programming concepts and uses the C# platform to present the material. Students will create projects based on the C# platform. This course is the second course in a series of courses that prepare students for application development and industry certification exams. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. Students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCSD 70-484.

APPD 2116 Web Development with HTML5/CSS with and JavaScript 3 APPD 1113

This course is a web development course using HTML5 and JavaScript. This course will help students learn essential programming skills and techniques that are required to develop web applications. This course is the second course in a series of courses that prepare students for HTML5 and JavaScript application development. The programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer.

APPD 2120 Advanced Android Development 3 APPD 1113

This course is designed to advance students' knowledge in the Android programming environment. Students will learn how to install and modify the Android SDK environment, create databases using SQLite, use XML and JSON to use external databases and plan, develop, and debug Android. Topics include Java programming and the integration of internal and external databases into the Android applications. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 2122 iOS Development Fundamentals 3 none

This course is designed to introduce students to iOS development using the Objective-C programming language and the Xcode environment. Students will learn how to plan, develop, and debug Objective-C applications. Topics include introduction to the iOS environment, introduction to Objective-C programming and the implementation of project development techniques in a mobile application development environment. Concepts covered in this course will prepare students for careers in information technology such as Application Developer, Web Programmer, Computer Programmer, Mobile Application Developer, Business Analyst and Database Analyst.

APPD 2124 Security in Android Software Development 3 APPD 1120

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 Android software can be developed using the principles of today's accepted and widely used methodologies applying security principles. Students will spend time working with each of the methodologies listed: SDLC, Agile, Microsoft Solutions Framework (MSF), and Scrum. Other methodologies will also be explored. Focus will be on an Agile methodology or an evolved Agile methodology. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: none.

APPD 2126 Security in Application Development Using HTML5/CSS and JavaScript 3 APPD 2116

This course is an advanced course in programming languages using HTML5, JavaScript and CSS3. This course is the third course in a series of courses that prepare students for HTML5 and JavaScript application development and industry certification exams. The focus is on advanced programming skills and techniques that are required to develop Windows Applications using HTML5 and JavaScript platforms. Programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCSD 70-482.

APPD 2128 Security in Application Development Using C# 3 APPD 2114

This is an advanced programming course designed to focus on programming concepts using the C# platform to create secure Windows applications. This course is the third course in a series of courses that prepare students for application development and industry certification exams. Programming concepts in this course will help students develop a strong understanding of coding structure and how that carries forward into other programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. Students are expected to develop projects using object-oriented design methods. This course is a culminating course in C#. Students will design and work through the publishing process to publish an application developed individually or in a team project. Career Preparation: Studies in this course will prepare students for careers in information technology such as Programmer, Application Developer, Mobile Application Developer, Coding Specialist, Software Designer, and Software Developer. Certification Preparation: Optional. Microsoft MCSD 70-485.

APPD 2128 Special Project 1-6 none

This course will examine selected projects of interest in the Mobile Applications Development program.

APPD 2132 Cross-Platform Android/iOS/Windows Development 3 APPD 1125, APPD 2122

This course is designed to advance students' knowledge in the Android, iOS, and Windows programming environment. Students will use tools to migrate Android apps into iOS apps. 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
APPD 2150	Application Development Internship	1-6	none

The mobile application development internship is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

ARTS 1401 Black and White Photography I 3 Accuplacer Reading 56+, or Next Gen Reading 237+

Students will learn basic shooting and compositional techniques with the use of digital cameras. Information regarding current and cutting edge technology will be employed in the field and classroom. Students will photograph subjects on field trips, images will be converted to black and white using Adobe software and exported on printers. Critique sessions will follow in the classroom after students produce finished images. This course provides the basic framework for other photography courses.

ARTS 1403 Color Photo I 3 Accuplacer Reading 56+, or Next Gen Reading 237+

Students will learn basic shooting and compositional techniques with the use of digital cameras. Students will learn to visualize images in the field conveying their personal vision as an artist. Students will explore the use of contrast, depth of field and focus to interpret the image during digital capture. Critique sessions will follow in the classroom. This course provides the basic framework for other photography courses.

ARTS 1405 Exploring Color Photography 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course focuses on digital photography, integrating principles and processes of contemporary image capture. A variety of visual projects engage students in solving aesthetic and technical problems incorporating analysis, interpretation, expression and presentation. An historical perspective will also be included. Commercial labs will be used for print processing. It is strongly recommended participants have a digital camera with manual exposure control.

ARTS 1420 The Art of Digital Photography 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course is an introduction to visual art, stressing the basic skills involved in creating and understanding Digital Photography. The objective of this course is to encourage the students to open their mind to the cultural significance of visual arts as well as develop the ability to use digital media as a vehicle of artistic expression. The course is composed of equal parts of lecture and creative studio work.

ARTS 1425 Introduction to Graphic Design 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ARTS 1450 Introduction to Studio Art 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This is an introductory course that explores materials, techniques, and concepts used in contemporary and historical art. The possibilities of 3-dimensional and 2-dimensional art will be investigated through the elements and principles of design. This course will challenge students to generate ideas, experiment with meaning and metaphor, develop aesthetic sensitivity, and participate in critique and self-evaluation. This is a basic course designed to provide a foundation for all art studio courses, and is recommended as an introduction to the art field and creative process for all students.

ARTS 1458 Drawing 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ARTS 1459 2-D Design & Color 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course is an introduction to the elements and principles of two-dimensional design presented through study of significant master works by artists from various cultures. Projects will emphasize creative decision-making and development of the language of visual composition. This class is recommended for students going into visually oriented fields of study such as visual arts, graphic design, architecture, etc. Art majors and minors should schedule it early in their first year of study.

ARTS 1468 Painting 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ARTS 1470 Art Appreciation 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course is an introduction to the history and appreciation of art through a survey of humanity's needs and aspirations as expressed in painting, sculpture, printmaking, crafts, etc. A study of individual artists and art movement in specific context relative to the political and economical circumstances is a component of the class. Other components include critical analysis and writing requirements.

ARTS 1487 Ceramics: Beginning Hand Building 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course focuses on creative three-dimensional design in clay emphasizing hand construction methods. Further emphasis is on surface treatment, the nature of clay and glaze, bisque and glaze firing. Study of aesthetics through the students' work as well as historical and contemporary masters of various cultures. This course is recommended for art majors and minors.

ARTS 1488 Ceramics: Beginning Throwing 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course is a focus on development of basic skills in the use of the potter's wheel. Selected slide presentations of historical and contemporary potters from throughout the world and discussion of the aesthetics of pottery and vessels will be explored.

ARTS 1489 Intermediate Ceramics 3 ARTS 1487 or ARTS 1488

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ARTS 1510	Autumn Landscape Photography	3	none

This is an accelerated and intensive landscape photography course that is scheduled for Autumn. Students will work in an outdoor setting photographing images in either color or black and white. Emphasis is placed upon specific challenges and opportunities that photographing in an outdoor setting provides. Compositional techniques and proper exposure values will be covered in great detail. All images will be captured on digital cameras. The images will be burned to compact disks and critiqued by the instructor and class.

ARTS 1512 The Art of Photographing Wildflowers 3 none

This is an accelerated and intensive photography course that specializes in wildflowers. Students will work in an outdoor setting photographing images in either color or black and white. Emphasis is placed upon specific challenges and opportunities that photographing in an outdoor setting provides. Compositional techniques and proper exposure values will be covered in great detail. All images will be captured on digital cameras. The images will be burned to compact disks and critiqued by the instructor and class.

ARTS 1596 Topics in Art 1-3 none

This course will examine selected topics of interest in Art. Offered on demand.

ARTS 1597 Topics in Art 1-3 none

This course will examine selected topics of interest in Art. Offered on demand.

ARTS 1598 Topics in Art 1-3 none

This course will examine selected topics of interest in Art. Offered on demand.

ARTS 2401 Black and White Photography II 3 ARTS 1401

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.

ARTS 2403 Color Photo II 3 ARTS 1403

Students will create a personal project with digital imagery that follows their vision as a photographer. This course explores the essence of using color and tone to convey emotion and feeling with the camera. Images will be captured in color and edited using Adobe software. Critique sessions will guide the student to explore all aspects of the subject. Possible venues for the published work will be researched with each student.

ARTS 2410 Introduction to Photo/Video Art 3 Accuplacer Reading score of 56 or greater

This course is an introduction to the aesthetic and conceptual practices of digital capture media. This course is a studio art class as such it will concentrate on conceptualization, interpretation, and evaluation of still and video-based art. Students will develop skills as artists through still and continuous image capture, presentation and/or screenings, discussions, critique, demonstrations, and assigned projects. Students will become familiar with basic production techniques, including project planning and storyboarding, lighting, exposure control, audio, editing, and performance for the camera.

ARTS 2485 American Indian Art 3 Accuplacer Reading score of 56 or greater

The purpose of this course is to introduce the student to American Indian Art through a survey of the historical art from the landmass north of Mexico. Indian art by culture areas include the Plains, the Southwest, California, the Great Basin, Pacific Plateau, the Pacific Northwest Coast, Arctic Coast, and the Woodlands. Contemporary artists and works are included.

ARTS 2486 Art History/Ancient 3 Accuplacer Reading score of 56 or greater

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.

ARTS 2487 Art History/Modern 3 Accuplacer Reading score of 56 or greater

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.

ARTS 2490 Art History/Non-Western 3 Accuplacer Reading score of 56 or greater

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.

ARTS 2583 Independent Study 1-3 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.

AUTM 1101 A1 Engine Repair 4 none

This course covers the fundamentals of internal combustion engine operation, repair and maintenance, the procedures for removal, replacement, diagnosing, rebuilding, and assembly. Proper tool and equipment application and failure diagnosis are emphasized in this course. This course provides a minimum of 125 clock hours of the 120 required NATEF clock hours.

AUTM 1102 A2 Automatic Transmission & Transaxle 4 AUTM 1106, AUTM 1108, AUTM 1116

This course teaches the theory of operation of automatic transmissions and transaxles and the related components. The fundamentals of service of the components of the transmissions will be introduced and practiced in this course. This course provides a minimum of 125 clock hours of the 120 required NATEF clock hours.

AUTM 1103 A3 Manual Drive Train & Axles 4 none

This course covers standard automotive and light truck clutches, drive line, differential/4x4 and manual transmissions/transaxles. The clutch section includes design, adjustment, overhaul, diagnosis and repair of mechanical and hydraulic systems. The drive line section includes phasing alignment and balance. The manual transmission/transaxle section teaches the operation theory and repair. This course provides a minimum of 100 clock hours of the 100 required NATEF clock hours.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite

AUTM 1104 A4 Steering & Suspension 4 AUTM 1106
This course teaches suspension systems using leaf springs, coil springs, MacPherson struts, torsion bars and wheel balance. It also covers the principles of operation, disassembly, checks and adjustments of power and manual steering gears, and manual and power rack and pinion systems. Also teaches the procedures required for checking and adjusting wheel alignment. This course provides a minimum of 100 clock hours of the 95 required NATEF clock hours.

AUTM 1105 A5 Brakes 4 AUTM 1106
This course teaches the principles of brakes, hydraulic system fundamentals, disc and drum brakes, parking brakes and power assist units. Also included is an introduction to ABS systems. Emphasis is placed on operation, diagnosis and repair of various types of brake systems. This course provides a minimum of 125 clock hours of the 105 required NATEF clock hours.

AUTM 1106 A6 Electrical/Electronic Systems I 4 none
This course covers the theory and operation of all electrical and electronic systems on the automobile. It will cover basic electronics, starting and charging, body electronics, and computer operation. This course provides a minimum of 125 clock hours of the 230 required NATEF clock hours.

AUTM 1107 A7 Heating & Air Conditioning 4 AUTM 1106
This course teaches the principles of air conditioning and its relationship to the heating system. The various types, diagnosis of malfunctions, testing and repair are studied in the classroom. Practical experience is performed on live systems: recovering, evacuating, component replacement, charging and performance testing on the systems. This course provides a minimum of 100 clock hours of the 90 required NATEF clock hours.

AUTM 1108 A8 Engine Performance I 4 AUTM 1101, AUTM 1106
This course teaches the theory and repair of automotive engine systems. It includes ignition systems, emission controls, electronic engine controls, and engine performance diagnosis. This course provides a minimum of 125 clock hours of the 220 required NATEF clock hours.

AUTM 1116 A6 Electrical/Electronic Systems II 4 AUTM 1106
This course covers the theory and operation of all electrical and electronic systems on the automobile. It will cover basic electronics, starting and charging, body electronics, and computer operation. This course provides a minimum of 125 clock hours of the 230 required NATEF clock hours.

AUTM 1118 A8 Engine Performance II 4 AUTM 1108
This course teaches the theory and repair of automotive engine systems. It includes ignition systems, emission controls, electronic engine controls, and engine performance diagnosis. This course provides a minimum of 125 clock hours of the 220 required NATEF clock hours.

AUTM 1120 Transportation Industry Skills I 1 none
This course is designed to give students an understanding of safety procedures used in a working automotive shop. Safety involving tools and equipment, as well as personal safety, will be discussed. Students will gain an understanding of the tools and equipment used in a working automotive production shop. Preparation of automotive repairs and delivery to the customer will be stressed.

AUTM 1121 Transportation Industry Skills II 1 none
This course is designed to give the students workplace employability skills needed for a successful career in the automotive field. It deals with people skills, problem solving skills, ethics, communications and teamwork.

AUTM 1122 Transportation Industry Skills III 1 none
This course is designed to teach math and common measurement tools used in an automotive shop environment. Fasteners and sealants will also be discussed and applied to proper usage. Safe handling and disposal of hazardous wastes will be emphasized.

AUTM 1123 Transportation Industry Skills IV 1 none
This course describes different job classifications available to the automotive industry. This course will also teach skills needed to conduct a job interview successfully, and to write and maintain a resume.

BIOL 1404 Human Biology 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This course provides an introduction to the structure and function of the human body using an organ systems approach. The organ systems studied include the integumentary, skeletal, muscular, circulatory, respiratory, digestive, excretory, nervous, endocrine and reproductive systems. Human development and heredity will also be integrated. Two hours lecture and two-hour lab weekly.

BIOL 1411 Concepts of Biology 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This course is a one_semester survey of the fundamental concepts of biology. Topics covered may include: cell structure and function, understanding how living things grow, reproduce, acquire, and use energy, and respond to their environments, plants, animals, behavior, evolution, ecology, or biotechnology. Two hours lecture and a two hour lab weekly. This course is intended for non_science majors.

BIOL 1415 Environmental Biology 4 Accuplacer Reading 56+, or Next Gen Reading 237+
This course takes a holistic approach to current status and future prospects of earth's life support systems emphasizing human impact on the environment. Topics include interrelationships of organisms and their environment, population dynamics, pollution, major ecosystems, examination of causes and possible solutions to major local, national and global environmental problems. This course is intended for non-science majors.

BIOL 1420 Nutrition 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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

BIOL 1431 General Biology I 5 Accuplacer Reading Score of 75+, or Next Gen Reading 250+
An introduction to the basic life process at the cellular level including the chemistry of life, organization of the cell, membranes, energy, enzymes, respiration, photosynthesis, cell division, Mendelian genetics, molecular genetics (DNA), and genetic engineering. There is a strong emphasis on problem solving and the scientific process.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
BIOL 1432	General Biology II	5	Accuplacer Reading Score of 75+, or Next Gen Reading 250+

A macroscopic approach to biology covering the topics of evolution, ecology and biodiversity of living organisms. Topics include taxonomy and classification of the major living groups including their structure and function, development, and behavior. Lecture and laboratory. For majors and non-majors.

BIOL 1510 Essentials of Human Anatomy 3 none

This course explores the structure and function of the human body at multiple levels: individual cells; their coming together to form tissues; the organization of tissues into organs; organs working together as parts of organ systems; and finally, how those organ systems support one another to maintain the body. Normal structure and function are presented as a starting point, and then the effects of disease processes on structure and function are examined. The effects of disease are also considered at multiple levels: from cells to organ systems; and then beyond the effects on individuals to how diseases affect populations and societies. This course is primarily designed for students enrolled in the HINS Healthcare Administrative Specialist program.

BIOL 2411 Biology of Women 3 none

This biology course is designed to introduce basic biological concepts in the context of human reproduction. Relevant topics covered may include human reproductive anatomy and physiology, human genetics, menstrual cycles and disorders, pregnancy, labor and delivery, infertility and reproductive technology, fetal development, contraception, sexually transmitted diseases and reproductive organ cancers, menopause, and global women's health care issues. Lab included. This course is intended for non-science majors and is not for women only.

BIOL 2415 General Ecology 4 none

This course is structured so that students can see the variations and complexities of nature. Topics cover the physical environment, the organism and the environment, populations, species interactions, community, and ecosystem dynamics. Lecture is accompanied by laboratory and field exercises.

BIOL 2420 Genetics 4 BIOL 1431 and CHEM 1424

This laboratory science course provides an introduction to the study of genetics. Topics covered include: classical genetics - Mendelian principles underlying inheritance; population genetics – natural and artificial (trait) selection; and modern molecular genetics – with applications to medical genetics, agriculture, and society. The laboratory component requires careful manipulation, observations, recording of data, and analyses of results.

BIOL 2457 Microbiology 4 BIOL 1404 and CHEM 1407, or BIOL 1404 and CHEM 1414, or BIOL 1404 and CHEM 1424, or BIOL 1431, or BIOL 2401, or BIOL 2467Microbiology is the study of microbes such as bacteria, viruses, and fungi. Structure and function of microbes are examined, with an emphasis placed on the transmission, pathogenesis and control of microbial infections. In addition to medical aspects, the course covers environmental and industrial roles of microbes. Microbiological lab techniques include culturing, staining, and identification of microbes. This course meets for two hours of lecture and two 2-hour labs weekly. It is designed for liberal arts and sciences students, biology, nursing and other science related fields.

BIOL 2467 Anatomy & Physiology I 4 BIOL 1404 or BIOL 1411 or BIOL 1431 or CHEM 1405 or CHEM 1414 or CHEM 1424

The first of a two-course sequence in which the details of the human body are explored beginning with the organization of the human body that includes a comprehensive study of (bio)chemistry, cytology and histology. Then proceeds to investigate both the anatomy (structures) and physiology (functions) of the: integumentary, skeletal, muscular, nervous, (and an introduction to the) endocrine systems. For liberal arts and sciences students, biology, nursing and other science related fields.

BIOL 2468 Anatomy & Physiology II 4 BIOL 2467 with grade of C or higher

The second of a two_course sequence designed to investigate the anatomy and physiology of the remaining organ systems including the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Three hours lecture and a three_hour lab weekly. For liberal arts and sciences students, biology, nursing and other science related fields.

BUSN 1102 Accounting for Non-Accountants 3 none

This course is a practical introduction to accounting, the language of business, for business owners and managers. Both the how and the why of accounting principles and practices are blended to provide a foundation for the financial management of service and merchandise businesses. The procedural based model of instruction provides a hands-on learning experience for students. The course is recommended for all business careers outside of the accounting field.

BUSN 1110 Marketing Principles 3 none

This course provides a foundation of marketing concepts for the student. The course material is designed to develop a knowledge of both general and specialized marketing terms. Topics include marketing function, consumer behavior, product strategies, marketing channels, pricing strategies, and promotion.

BUSN 1131 Business Math 3 none

This course is designed to provide calculator and mathematical knowledge and skills needed to make calculations necessary to solve business problems. Success is based on the touch method of operating calculators efficiently, and mathematical calculations relative to the fundamental mathematical processes used for basic math, solving for unknowns, percentages, discounts, markups and markdowns, checking accounts, interest, payroll, compound interest and present value, annuities and sinking funds, credit cards, home mortgages, stocks and bonds, and basic business statistics.

BUSN 1162 Customer Relations 3 none

This course will introduce the basics of customer service in the areas of service strategies, attitudes, retention, communication, and sales. The student will learn how to create positive memorable experiences for customers, provide consistent caring and professional service, and avoid becoming involved in unproductive customer interactions.

BUSN 1164 International Business 3 none

This course provides students with an understanding of the core concepts related to the international environment in which business is conducted today. Students are expected to be able to understand the global economy as well as the structural frameworks that influence an organization's global operations.

BUSN 1166 Business Communications 3 none

This course emphasizes the importance of individual and organizational image when communicating in any matter with customers, fellow employees and employers. A concept-and-practice approach focuses on purpose, content, and planning.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
BUSN 1501	Introduction to Business	3	none

This course is a survey of the forces that shape business in American and overview of how American business responds. Topics include business economics, forms of business organizations, management functions, marketing procedures, business finance, and insurance considerations.

BUSN 2541 Legal Environment of Business 3 none

This course is a study of the political and legal framework within which American businesses operate. Topics include the nature and formation of law and its application to business, constitutional, administrative, criminal, and international laws, contracts, torts, product liability, cyber law, bankruptcy, consumer protection, environment, real property, business organization, and employee relations.

CMAE 1502 Technical Math 3 Accuplacer Arithmetic score of 45, Accuplacer Reading score of 52

This is an introductory technical math course. The course is for students who have basic math skills and for those who need basic technical math concepts. The primary goals of this course are to help individuals acquire a solid foundation in algebra and geometry used in a technical setting. This course will show how these skills can model and solve authentic real-world problems.

CMAE 1506 Introduction to Computers 2 Accuplacer Reading score of 52

This is an introductory course in Microsoft Office computer applications for technical fields. The primary goal of this course is to help individuals acquire a hands-on working knowledge of current personal computer applications including word-processing, spreadsheets, database, presentation, and internet browser software.

CMAE 1510 Print Reading 2 Accuplacer Reading score of 52

This course will give students an understanding of basic mechanical drawing principles. Topics include the alphabet of lines, arrangement of views, orthographic projections, scaling, dimensioning, tolerancing, and symbols. Students will read and interpret mechanical drawings.

CMAE 1514 MSSC Safety 2 Accuplacer Reading score of 52

This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Safety. The curriculum is based upon federally endorsed national standards for production workers including Occupational Safety Health Administration (OSHA) standards relating to Personal Protective Equipment (PPE), Hazardous Material (HAZMAT), tool safety, and confined spaces.

CMAE 1518 Manufacturing Processes and Production 2 Accuplacer Reading score of 52

This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Manufacturing Processes. The curriculum is based upon federally endorsed national standards for production workers emphasizing lean manufacturing principles, basic supply chain management, communication skills, and customer service.

CMAE 1522 Quality Processes 2 Accuplacer Reading score of 52 This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Quality Practices. The curriculum is based upon federally endorsed national standards for production workers. Emphasis is placed 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.

CMAE 1526 Maintenance Awareness 2 Accuplacer Reading score of 52

This course aligns with the Manufacturing Skill Standards Council's (MSSC) assessment and certification system for Maintenance Awareness. The curriculum is based upon federally endorsed national standards for production workers. The course introduces the concepts of Total Productive Maintenance (TPM) and preventative maintenance with the fundamental principles of lubrication, electricity, hydraulics, pneumatics, and power transmission systems.

CMAE 1528 Career Success Skills 1 none

This is an introductory career success skills course. The primary goal of this course is 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.

CMAE 1530 Machining Math 2 Accuplacer Arithmetic score of 62 or higher, CMAE 1502

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.

CMAE 1532 Machine Tool Print Reading 2 Accuplacer Reading score of 52 or greater, CMAE 1510

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.

CMAE 1534 Machine Tool Technology Theory 2 CMAE 1530 and CMAE 1532

This course covers measurement tools and uses, cutting tools and types, machine shop tools such as band saws, lathes, vertical milling machines, basic machine tool set-up, operations of machine tools, terminology used within the scope of machining processes.

CMAE 1536 Machine Tool Technology Lab I 2 CMAE 1534

This course will address the basic operations of drill presses, tool grinders, vertical milling machines, engine lathes and metal cutting saws. Machine safety, machine component identification, as well as turning, milling sawing, bench work project layout, single point tool grinding projects are also included in the course. Students will be introduced to the proper use and care of inspection measuring tools.

CMAE 1538 Machine Tool Technology Lab II 2 CMAE 1536

This course will address the advanced operations of a drill press, vertical milling machine, engine lathe, surface grinder and saws, machine safety, machine component identification, as well as turning, milling, sawing, surface grinding lab projects. Students will also learn the care of and use of high precision measuring equipment.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CMAE 1542	Geometric Dimensioning and Tolerancing	2	CMAE 1532

Students will learn how to read prints with geometric dimensioning and tolerance applications. Each of the geometric controls will be examined so that the student is able to determine the allowable variation in form and size between part features. The Y14.5 M standard will be part of the overall instruction. Using precision equipment, most of the geometric controls will be inspected to print specifications.

CMAE 1550 DC Power 3 CMAE 1502

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.

CMAE 1554 Digital Electronics 3 CMAE 1502

In this course learners will acquire a fundamental knowledge of digital electronics. Boolean algebra, numbering systems covered include hexadecimal, binary, BCD, and octal. Digital devices and circuits, analog to digital conversion along with digital to analog conversion will be covered. Learners will build and test basic digital circuits, test circuits to digital truth tables, troubleshoot circuits as required.

CHEM 1407 Life Science Chemistry 4 Accuplacer Arith 65+; or Next Gen Arith 235+, or QAS 240

This course will provide the student with an introduction to general, organic and biological chemistry. Topics include: scientific measurement, atomic and molecular structure, periodicity, chemical bonding, nomenclature, chemical reactions, nuclear chemistry, solutions, acids, bases, organic functional groups, carbohydrates, lipids, amino acids, proteins and enzymes. The laboratory will reinforce lecture concepts.

CHEM 1410 Environmental Chemistry 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

CHEM 1414 Fundamentals of Chemistry 4 Accuplacer Arithmetic 65+ or Elem Alg 52+; or Next Gen Arith 235+, or QAS 240

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

CHEM 1424 Chemical Principles I 5 Accuplacer Arithmetic 65+ or Elem Alg 52+; or Next Gen Arith 250+, or QAS 240

This course includes a more rigorous collegiate treatment of topics in physical measurement, dimensional analysis, state of matter, nomenclature, chemical reactions, stoichiometry, gas laws, thermochemistry, atomic structure, and molecular bonding theory.

CHEM 1425 Chemical Principles II 5 CHEM 1424

This course is a continuation of CHEM 1424 and includes topics in gases and their properties, intermolecular forces and liquids, chemistry of solids, solutions and their behavior, chemical kinetics, chemical equilibria, acid-base theories, common ion and buffer systems, precipitation reactions, thermodynamics and equilibrium, and an introduction to organic chemistry.

CHEM 2472 Organic Chemistry I 5 CHEM 1425

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.

CHEM 2473 Organic Chemistry II 5 CHEM 2472

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.

CDEV 1100 Foundations of Child Development 3 none

This course provides an overview of typical and atypical child development across cultures, from prenatal through school age including physical, social-emotional, language, cognitive, aesthetic, and identity/individual development. It integrates developmental theory with appropriate practices in variety of early childhood care education settings.

CDEV 1102 Introduction to Early Childhood Education 3 none

This course provides an overview of the Early Childhood profession through exploring and examining aspects such as: historical roots of the profession, theory, program types for children birth through age eight, career opportunities, personal characteristics of professionals, developmentally appropriate practice, and ethics.

CDEV 1104 Child Growth and Development 3 none

This course provides an overview of the developmental stages of children, prenatal through age eight including physical, social, emotional, language, cognitive, and creative development. While studying the integration of theory and developmentally appropriate, best practice students will observe children and analyze characteristics of development at various stages. Attention will be focused on theory, developmentally appropriate, best practice, and environmental factors that may affect development. In addition, this course contains an off-site lab experience that will assist in guiding students to obtain the skills necessary to become a successful professional within early childhood settings. All students will be required to obtain and pass a Minnesota background check prior to completing 30 hours at an approved lab site.

CDEV 1105 Child Safety, Health & Nutrition 4 none

This course will guide the student in obtaining skills needed to establish and maintain a physically and psychologically safe and healthy learning environment for young children. Topics include preventing illness and accidents, handling emergencies, providing health, safety and nutrition education experiences, meeting children's basic nutritional needs, child abuse and current health related issues.

CDEV 1106 Child Health, Wellness, Safety, and Nutrition 3 none

This course will guide students in understanding teacher strategies and skills needed to establish and maintain a physically and psychologically safe, healthy learning environment for young children birth through age eight. Topics include preventing illness and accidents, handling emergencies, providing health, safety, and nutrition educational experiences within the daily routine, meeting children's basic nutritional needs, child abuse and neglect, childhood stress, trauma and current health, safety, and nutrition related issues.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CDEV 1110	Guidance: Managing the Physical/Social Environment	4	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.

CDEV 1112	Child Behavior and Guidance	3	CDEV 1102, CDEV 1104

This course provides an examination 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 exploring, observing, and practicing problem prevention and positive child guidance strategies through coursework and a lab experience. This course contains an off-site lab experience that will assist in guiding students to obtain the skills necessary to become a successful professional within early childhood settings. All students will be required to obtain and pass a Minnesota background check prior to completing 30 hours at an approved lab site.

CDEV 1114	Diverse Children and Family Relations	3	CDEV 1102, CDEV 1104

This course covers the relationship between the caregiver/teacher, child, family, and community. Students will explore teaching and environmental strategies that promote understanding and supporting diverse cultural and family structures. Students will examine cultural diversity/dynamics, bias, sensitivity, theory, and the importance of the context of family, culture and society as it relates to learning and child development.

CDEV 1115	Planning & Implementing Curriculum	3	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.

CDEV 1116	Integration of Play	3	CDEV 1102, CDEV 1104

This course examines play during infant, toddler, preschool, and school aged years of development. Course will examine the physical environment in relation to play, construct meaning of play materials appropriate to the play of children, theories of play, how play promotes all areas of development and learning.

CDEV 1120	Professional Relations in Early Childhood Careers	3	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.

CDEV 1130	Infant/Toddler Development and Learning	4	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.

CDEV 1133	Creative Developmental Experiences	3	none

This course examines the development of children with special needs and prepares caregiver/teachers to integrate children with special needs into child development settings. The course includes review of legislation affecting children with disabilities, classroom strategies to meet the needs of a child with disabilities, the child within the family and community and overview of a variety of disabling conditions which might affect a young child.

CDEV 1135	Profiles of Exceptional Child	3	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.

CDEV 1150	Childcare Business Strategies	3	none

This course provides students with an introduction to budgeting, financial management, and financial record keeping in child development programs. Specific topics include: start-up costs, determining utilization rates, setting/collecting parent fees, identifying break-even points, preparing financial statements, and fundraising.

CDEV 1160	Internship	1-4	instructor's consent

This course provides the student an opportunity to integrate theory and practice, applying knowledge and skills in an instructor approved, licensed pre-school development setting. Students participate in the setting as members of the teaching team. Students implement a variety of learning experiences that are developmentally appropriate and culturally sensitive for a specific group of children. Students complete a portfolio documenting learning experiences based on selected BOT standards.

CDEV 1162	Internship in Specialized Setting	2	none

This course provides on the job training for students interested in working with children with special needs. This course will create connections with future employers and provide students with an opportunity to reinforce previously introduced content regarding instructional planning, working with families, collaboration, and theories of disabilities.

CDEV 1305	Child Abuse and Neglect	1	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.

CDEV 1306	Child Safety	1	none

This course offers an opportunity to learn and practice accident prevention procedures, emergency, and safety education learning experiences.

CDEV 1307	Child Health	1	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.

CDEV 1308	Nutrition	1	none

This course will guide the student in obtaining skills needed to establish policies and practices that meet basic nutritional needs of young children. Topics include policies and procedures of a developmentally appropriate nutrition program, appropriate nutritional education activities for infants through school age children.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CDEV 1323	Guidance: Developmentally Appropriate Practice	1	none

Emphasis will be placed on applying and practicing strategies and techniques to sensory, cognitive, social-emotional, language and creative learning environments. Designed for anyone working in the child care and development industry.

CDEV 1394 Topics in Child Development 1 none
Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

CDEV 1395 Topics in Child Development 1 none
Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

CDEV 1396 Topics in Child Development 1 none
Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

CDEV 1397 Topics in Child Development 1 none
Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

CDEV 1398 Topics in Child Development 1-3 none
Trends, issues, conference tracks may be chosen as a topic of study. Students apply knowledge of the chosen topic to actual programs for children ages 0-8 years.

CDEV 2100 Introduction to Foundations of Public School Education 3 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.

CDEV 2104 Observation and Assessment 3 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114
This course provides the student with an opportunity to observe, assess, record, interpret, and develop plans to strengthen the development of children. Students will study then carry out numerous informal and formal methods of observing and assessing children and will construct a child study based on assessments gathered throughout the course of the semester.

CDEV 2106 Creative Activities and the Learning Environment 3 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114
This course provides an overview of developmentally appropriate learning experiences in home, center-based, and school settings. Students integrate knowledge of developmental needs, environments, and teaching strategies to enhance all areas of a child's emerging development throughout the curriculum.

CDEV 2108 Introduction to Language and Literacy 3 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114
This course provides an overview of language and literacy development for children birth to age eight. Students will research, evaluate, plan, and design developmentally appropriate language and literacy-rich experiences for children. Students will also learn teaching strategies utilized to promote literacy development within the program/school setting and home.

CDEV 2110 Characteristics of Students w/Learning and Behavior Disorders 3 none
This course focus is on characteristics and issues related to students with learning disabilities and emotional behavioral disorders. The student will strengthen effective educational practice, promote inquiry, and build leadership skills for regular and special educations and professionals in related fields.

CDEV 2112 Collaboration Skills & Transition Training 3 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.

CDEV 2114 Introduction to Autism Spectrum Disorder 2 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.

CDEV 2116 Infant and Toddler Development, Learning, and Responsive Relationships 3 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114
This course provides an overview of infant/toddler theory, development, and responsive practice in home or center-based settings. Students will integrate knowledge of developmental needs, developmentally appropriate environments, effective care giving, teaching strategies and observation methods.

CDEV 2202 Introduction to Special Education 3 CDEV 1102, CDEV 1104 Students will examine strategies that support inclusive programs for children and families along with legal and ethical requirements, eligibility and qualification for services, including but not limited to American Disabilities Act and Individuals with Disabilities Education Act, typical and atypical development. Strategies to adapt curriculum to meet the needs of children with developmental differences and cultivate partnerships with families will also be explored.

CDEV 2204 Characteristics of Children with Autism, Learning Disabilities, Emotional Behavioral Disorders 2 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114, CDEV 2104, CDEV 2106
This course provides an overview of characteristics and early interventions to support children with autism, learning disabilities, and emotional behavioral disorders and create an inclusive learning environment. The student will strengthen effective educational practice, promote inquiry, and build leadership skills for regular and special education.

CDEV 2206 Careers and Business Strategies in Early Childhood 3 CDEV 1102, CDEV 1104, CDEV 2106
This course provides students with information regarding possible careers/roles within early childhood professions such as paraprofessional's role in a school setting, center director/teacher and home-based child care providers. Business strategies to support a successful and professional business will also be covered.

CDEV 2208 Undertanding and Planning Curriculum 3 CDEV 1102, CDEV 1104, CDEV 1112, CDEV 1114, CDEV 2104, CDEV 2106
This course exposes students to what developmentally appropriate curriculum is for infants, toddlers, preschool and young school age children. Students will examine curriculum components along with how curricula differs and effects teaching and learning for specific and multi-age groups. Curriculum theory, models, research, evaluation, assessment, implementation, and evaluation will be explored.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CDEV 2210	Child Development Internship	1-6	CDEV 1102, CDEV 1104, CDEV 1106, CDEV 1112, CDEV 1114, CDEV 1116, CDEV 2104, CDEV 2106

This course provides an opportunity to apply knowledge and skill in an actual child development setting. Students will observe and assess children's behavior, facilitate free choice play, implement adult-directed learning experiences, and maintain professional relationships.

CDEV 2340 Professional Leadership 3 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.

CDEV 2343 School Age Development and Learning 4 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.

CDEV 2350 Practicum I 3 instructor's consent
This course provides an opportunity to apply knowledge and skill in an early childhood setting. Students implement a variety of learning experiences that are developmentally appropriate for and culturally sensitive to a specific age and group of children.

CCST 1510 College Success Skills 3 Accuplacer Reading score of 56 or greater
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.

CCST 1512 Combat to Classroom 2 none This course will assist students to understand the unique needs of Veteran, military members and their families as they transition from their military related experiences to the college environment and the community. Particular focus will be on, but not be limited to :The development process for the service member and their family related to separation and reconnecting from deployments, the emotional issues related to military service and combat experiences, the physical/disability issues related to military service and combat experiences, the issues of stress and anxiety including Post TraumaticStress 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.

CCST 1520 Career Planning 2 Accuplacer Reading score of 56 or greater his course provides a comprehensive approach to career planning, educational planning, and decision making. The course begins with a self-exploration process in which students examine their values, personality characteristics, interests, strengths, skills, and goal setting. Current trends, occupational information, job seeking skills, and other resources will be explored to evaluate career options and educational goals.

CCST 1530 Employment Strategies 3 none
This course is designed to provide the student an opportunity to research and explore all aspects of employment seeking strategies. Students will develop job-search strategies that will lead to more effective marketing of their skills. Critical components of the course include: planning your job search, gathering the tools (resumes, cover letters), beginning the search, interviewing and evaluating job offers.

CCST 1535 Honors Leadership Development 3 Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors CoordinatorThis course is designed to provide students the opportunity to explore the concept of leadership, to develop and improve their leadership skills, and gain personal insight that will help them reach their educational and personal goals. The course integrates readings from the humanities, experiential exercises, films, and contemporary readings on leadership. In addition the course provides opportunities for students to become service leaders through service learning. Courses in the Honors program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with the instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

CCST 1541 Student Senate 1 none This is a first year course that provides a practical introduction to leadership. Students will study and apply the theories of leadership through the weekly Student Senate meetings, student activities, and service learning projects. This course is designed to prepare students for a lifetime of engaged, responsible, and active community involvement.

CCST 1542 Student Senate II 1 none
This second year course provides a practical introduction to leadership. Students will study and apply the theories of leadership through the weekly Student Senate meetings, student activities, and service learning projects. This course is designed to prepare students for a lifetime of engaged, responsible, and active community involvement.

CCST 1550 Introduction to College 1 none
This course will provide college students with the skills necessary to make a successful transition to college. In this course, students will gain personal insight and identify strategies that will help them reach their educational and personal goals. Course activities will focus on introducing students to the skills that are needed for academic success, such as time management, educational planning, strategies for learning, and use of college resources.

CCST 1552 Success Strategies for Athletes 1 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.

CCST 1559 Money Management Skills 1 none
This course introduces students to basic money management skills so they will make informed decisions in managing their personal finances. Topics include understanding the student loan process and obligations, creating a budget, debt management, use of credit and credit cards, credit reports, checking and savings accounts, banking basics, insurance issues, developing a personal financial plan and setting financial goals.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CCST 1560	Math Success Strategies	2	none

This course helps students be successful in math through questioning strategies, modeling and visual representations, number flexibility, making connections among ideas, and identifying math in your life and future career. Students will explore a variety of math concepts with hands-on activities and cooperative learning to build confidence in math, develop math skills and conceptual understanding, and apply effective learning strategies for mathematics. Throughout the course, students will apply the concepts of effective learning while participating in math activities, games, cooperative learning. Math topics may vary depending on interests and needs of the group.

CCST 1570	On Course	3	Accuplacer Reading score of 40 or greater

The goal of this course is to help you grow academically and personally. This course is ideal for you if your career goals are unclear or if you've reached a point in your life where you feel stuck. Topics include personal responsibility, self-motivation, self-management, and interdependence. You will have opportunities to grow in the ways you think, learn, and communicate.

CCST 1590	Service Learning and Civic Engagement	1	none

Students in this course develop and/or implement service learning project to help the college's community including the surrounding local community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies. Projects may include collaboration with college classes, various community agencies and organizations, education projects for college students, mentoring and shadowing. Students gain hands-on experience in project planning, development, implementation and evaluation.

CCST 1598	Topics in CCST	1-3	none

This course will examine selected topics of interest in College & Career Studies. On demand.

CCST 2520	Career Internship Experience	1	Instructor's Permission

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.

COMM 1410	Introduction to Communication	3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

COMM 1420	Interpersonal Communication	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is a study of communication behaviors in dyads (pairs) and their impact on personal relationships. Learners analyze the common variables of interpersonal communication and learn techniques to overcome barriers to effective communication. Students will learn techniques of interpersonal competency improving one-on-one skills for verbal and non-verbal communication, perception, self-disclosure, listening and feedback, sharing emotions, assertiveness, coping with conflict, appropriate mediated interpersonal communication and communicating with family and friends and in the workplace.

COMM 1422	Honors Interpersonal Communication	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

Honors Interpersonal Communication is an enriched study of communication behaviors in dyads (pairs) and their impact on personal relationships. Learners analyze the common variables of interpersonal communication and learn techniques to overcome barriers to effective communication. Students will learn techniques of interpersonal competency improving one-on-one skills for verbal and non-verbal communication, perception, self-disclosure, listening and feedback, sharing emotions, assertiveness, coping with conflict, appropriate mediated interpersonal communication and communicating with family, friends and in the workplace. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways. This course will feature an expanded reading load, as well as more in-depth assignments and discussions.

COMM 1430	Public Speaking	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is designed to introduce students to the basic principles of effective public speaking, focusing on informative and persuasive techniques. Topics included are topic selection and research/development; message and argument construction; audience and occasion analysis, critical thinking and evaluation; outlining and structure; and delivery and presentation skills. Students will also compare and contrast mediated communication performance skills and theory with traditional delivery mediums of public address.

COMM 1450	Introduction to Mass Communication	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course will study how mass forms of communication disseminate information and influence situations. Included will be an introduction to the history and development of mass communication systems: newspapers, magazines, books, recorded music, radio, television, movies and social networking. Units in advertising and public relations will also be included. Students will study and critically assess the technical, historical, social, economic, global and ethical aspects of mass communication including legal issues, global citizenship, and rights and responsibilities as media consumers and producers.

COMM 2420	Intercultural Communication	3	Accuplacer Reading score of 56 or greater

This course is designed to study communication among individuals of different cultural backgrounds, including the study of similarities and differences across cultures. Intercultural Communication is designed to help students learn about their own cultural identities, recognize cultural differences, identify barriers, adjust their communication, and build successful relationships to help them better succeed in their professional and personal lives. We'll look inclusively at culture, exploring both international and domestic variables. Topics will include communication and intercultural communication theory, barriers to communication such as ethnocentrism, stereotyping, prejudice and discrimination, cultural variables affecting communication such as language, nonverbal behaviors, perception, rules, values and worldview.

COMM 2422	Honors Intercultural Communication	3	Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator

Honors Intercultural Communication is an enriched study of communication among individuals of different cultural backgrounds, including similarities and differences across cultures. Intercultural Communication is designed to help students learn about their own cultural identities, recognize cultural differences, identify barriers, adjust their communication, and build successful relationships to help them better succeed in their professional and personal lives. We'll look inclusively at culture, exploring both international and domestic (sub-culture) variables. Topics will include intercultural communication theory, identity, history and historical trauma, linguistics and verbal behaviors, nonverbal behaviors, perception, rules, values, ethics and worldview, as well as barriers to communication such as ethnocentrism, stereotyping, prejudice and discrimination. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMM 2510	Applied Communication	3	Accuplacer Reading score of 56 or greater

This course allows students to earn credit while participating in a supervised applied learning experience in a career communication, service learning communication, or leadership communication context. A minimum of 54 service hours per credit per semester or summer session will be required for completion of the course. In addition, all proposed projects (with required project outlines created by the student) must be pre-approved by the supervising Communication instructor and all arrangements made prior to registration for the semester in which the project is proposed to be scheduled.

COMP 1101 Computer Fundamentals 3 none

This is a beginning course for students who want to understand the basics of computer hardware, the operating system, office applications and the internet, and how they integrate together in the computer world. Topics and skills will include using and changing the Windows desktop, downloading software from the internet, the file hierarchy and saving files, using the basic functions of word processing, spreadsheet, database and presentation software to create and format documents, understanding the basics of a network for the office and across the internet, the use of email clients to send messages, how to attach documents and organize tasks, connecting to and using the internet, searching the web effectively, working with sounds and picture files, and understanding privacy issues and how to prevent identity theft when using computers and the internet.

COMP 1103 Computer Basics-Operating Systems 1 none

This course is a slow moving and a step by step procedure in delivery of the material. Course will provide basic skills including functions of the following: how a computer works, internet security, password security, applications, functions of the toolbar, windows desktop, file structure, and saving documents. The proper use of email and its functions will be explored along with the features of a particular email system. Utilization of the help and support feature and its functions within the operating system and email system will be addressed.

COMP 1104 Computer Basics-Applications 1 none

This course is a slow moving and a step by step procedure in delivery of the material. Course will provide basic skills including functions of the following: how a computer works, internet security, password security, applications, functions of the toolbar, windows desktop, file structure, saving, formatting and managing word documents, resume writing, editing text documents and font attributes. Organizational skills and managing a file system will be explored and implemented. Utilization of help and support feature within the applications used will be explored.

COMP 1109 Introduction to Operating Systems 3 none

This course covers the basics of how to get the most out of using the Microsoft Windows operating system. Topics include identifying minimal hardware requirements needed to run Windows; customizing the desktop environment; file management; maintaining hard drives and other removable storage media; multitasking; the Windows applications of WordPad, Paint, Notepad and Windows Live; and sharing hard drives and printers in a small network environment. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Certiport: IC3 - Computing Fundamentals.

COMP 1120 Introduction to Computer Applications 3 none

This course covers the current computer application software most used in the business and education worlds, the Microsoft Office suite of Word, Excel, Access, PowerPoint and Outlook. Some of the topics to be covered include: formatting Word documents; creating research papers and resumes using wizards and templates; creating Web pages with Word; using Excel to create worksheets and embedded charts; using Excel formulas and functions; creating what-if analysis; creating static and dynamic web pages using Excel; creating and querying an Access database; creating a PowerPoint presentation with a unified design; pictures and sound elements; and using Outlook to send and view mail, manage appointments and contacts. Career Preparation: Any business career that uses the Microsoft Office suite applications, including, but not limited to: Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Certiport: IC3 - Key Applications.

COMP 1121 Advanced Computer Applications 3 COMP 1120

This course covers some of the advanced features and formatting options available in the Microsoft Office suite applications of Word, Excel, Access, and PowerPoint. Topics include: creating tables, charts and watermarks in Word documents, generating form letters, mailing labels and envelopes, creating newsletters, using the financial functions available in Excel to create data tables and amortization schedules, creating templates, creating reports from an Access database, creating Access forms and subforms, creating macros and using wizards, creating a switchboard manager in Access, using and modifying visual and sound elements in PowerPoint presentations, delivering PowerPoint presentations and collaborating in workgroups. Integration between the Office suite applications will be emphasized. Career Preparation: Any business career that uses the Microsoft Office suite applications, including, but not limited to: Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst. Certification Preparation: Optional. Microsoft Office Specialist, Word Core and Excel Core.

COMP 1122 IT Essentials 3 none

IT Essentials curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level Information and Communication Technology (ICT) professionals. The curriculum covers the fundamentals of computer hardware and software as well as advanced concepts such as security, networking, and the responsibilities of an ICT professional. Students develop working knowledge of how computers operate, how to assemble computers, and how to troubleshoot hardware and software issues. Hands-on labs and virtual learning tools help students develop critical thinking and complex problem-solving skills. The course emphasizes the practical application of skills and procedures needed to install and upgrade hardware and software and troubleshoot systems. The IT Essentials (ITE) curriculum emphasizes practical experience to help students develop fundamental computer and career skills. ITE helps students prepare for entry-level career opportunities in ICT and the CompTIA A+ certification. The course also provides a learning pathway to the Cisco CCNA. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA A+ Hardware (220-801) and A+ Operating Systems (220-802). Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently.

COMP 1123 Introduction to Networks (CCNA-I) 3 none

This course is the first of four courses designed to prepare students for Cisco CCNA certification, and the first of two courses required for Cisco CCENT Certification. This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCENT & CompTIA Network+ N10-005.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMP 1124	Routing and Switching Essentials (CCNA-II)	3	COMP 1123

This course is the second of four courses designed to prepare students for Cisco CCNA certification, and the second of two courses required for Cisco CCENT Certification. This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer. Certification Preparation: Optional. Cisco CCENT

COMP 1131 Microsoft Word Comprehensive 4 none

This course focuses on basic through advanced skill sets using the current Microsoft Word Office Suite software application. Students will use Microsoft Word 2010 to create, format, and edit documents, research papers with citations and references, business letters with a letterhead and tables, and documents with a title page, tables, and watermarks. Students will use templates to create a resume. Students will generate form letters, implement mail merge functions and create mailing labels, and directories. Students will 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 need to be efficient with operating system functions as this course focuses on the application itself with the assumption that students have effective operating system functional skills. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, Administrative Support, Administrative Assistant and Help Desk/Computer Repair Technician. Certification Preparation: Optional. Certiport: MOS: Microsoft Office Word 2013 Expert Exam 77-425. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

COMP 1132 Microsoft Access Comprehensive 4 none

This course focuses on basic through advanced skill sets using the Microsoft Access 2010 software application. Students will use Microsoft Access 2010 to create databases and database objects while learning introductory database table structure. Students will learn the concepts for querying a database, maintaining a database and to create reports, forms, multiple table forms and advanced report techniques. Students will learn to use SQL and advanced form techniques. Students will write macros, create navigation forms, PivotTables, and PivotCharts. Students will learn how to design a database and then administer a database system. This course covers the skill sets and exam objectives for the Microsoft Office Specialist (MOS) 77-885 certification exam. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, Database Management, and Help Desk/Computer Repair Technician. Certification Preparation: Optional. Certiport: MOS: Microsoft Office Access 2010 Exam 77-885. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

COMP 1133 Microsoft PowerPoint Comprehensive 3 none

This course focuses on basic through advanced skill sets using the current Microsoft PowerPoint Office Suite software application. Students will learn use Microsoft PowerPoint to create and edit a basic presentation, enhance a presentation with pictures and shapes, reuse a presentation and add multimedia. Students will work with information graphics, deliver and collaborate on presentations, add emphasis with text boxes, and create self-running presentations containing animation. Students will enhance presentations with hyperlinks and action buttons, develop presentations from an outline and create a photo album presentation with shapes. Student will create and customize a template and handouts using masters. Students will learn project planning guidelines, how to publish Office Web pages online, and saving presentations to the Web. This course covers the skill sets and exam objectives for the Microsoft Office Specialist (MOS) 77-422 certification exam. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician and Administrative Support. Certification Preparation: Optional. Certiport: MOS: Microsoft Office PowerPoint Exam 77-422. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

COMP 1134 Microsoft Outlook Comprehensive 1 none

This course focuses on basic through advanced skill sets using the current Microsoft Outlook Office Suite communication software application. The course learning objectives are centered on the Microsoft Office Specialist (MOS) 77-423 certification exam objectives. Students will learn use Microsoft Outlook to format message content by using character and paragraph formatting, use graphic elements such as charts and tables, and create contact records, tasks, and appointments from incoming messages. Students will create contact groups, schedule meetings, and share schedules to facilitate communication with other Outlook users. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician, Administrative Assistant and Administrative Support. Certification Preparation: Optional. Certiport: MOS: Microsoft Office Outlook 2013 Exam 77-423. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

COMP 1135 Microsoft Excel Comprehensive 4 none

This course focuses on basic through advanced skill sets using the current Microsoft Excel Office Suite software application. The course learning objectives are centered on the Microsoft Office Specialist (MOS) 77-427 certification exam objectives. Students will use Microsoft Excel to create charts, create analytical and financial reports, optimize data entry, create a family budget, format numerical (financial, statistical, etc.) reports, create forms, create graphing analyses, process data using what-if analyses, design reports, and create trending data. Students will learn to be proficient with advanced formulas, functions, and data analysis tools. Students will also learn to manipulate data for analysis, presentation, and collaboration. Students will learn to manipulate Excel options to customize their environment to meet varying organizational needs and enhance their productivity. Career Preparation: The studies in this course will help students prepare for careers in Business, Management, and general use of computer applications for nearly all organizations. It will also prepare students for careers in Computer Support, Information Technology, and Help Desk/Computer Repair Technician, Administrative Assistant and Administrative Support. Certification Preparation: Optional. Certiport: MOS: Microsoft Office Excel 2013 Exam 77-427. Prerequisite advisory: Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMP 1138	iPad Technologies	3	none

This course will help students maximize the power of their iPad and master all the versatile and fun features while using their iPad. Topics include how to configure settings, access the Internet, use Mail and Safari, and download music, movies, TV shows, ebooks, apps, games, and more. Students will get tips for taking photos and video with the camera, use FaceTime for video chatting, navigate with GPS, and connect to social networks. Students will set up, customize, sync, and back up their iPad and choose a data plan for their iPad. Students will configure mail and integrate with various email accounts and connect with social networks. A current iPad is required for this course.

COMP 1140 Survey of Web-Based Tools 3 none

This course focuses on using current technology tools for collaboration, entertainment, professional development, system security, and networking on the Internet. Innovative technologies that will be explored include many of the following: social networking sites (MySpace, Friendster, Facebook, LinkedIn), virtual technologies (virtual environments, 3D chat, avatars, and online meetings), social network integration tools (RSS feeds, wikis, blogs, mashups, podcasts), voice and video collaboration tools and file sharing services (VoIP, TokBox, Skype, Twitter, Facetime, SnapChat, Instagram, Pinterest Windows Live Mesh, Live Meeting, Animoto), security and personal safety (firewall technology, anti-spyware, anti-virus, anti-spam, phishing and identity theft, netiquette and ethnics), marketing and business tools (Flickr and E-bay), Web 3.0 application design strategies, and career opportunities on today's Web.

COMP 1204 Computer Repair I 4 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).

COMP 1206 Computer Repair II 3 COMP 1204

This course is the sequel to COMP 1204 and addresses many of the objectives of the CompTIA A+ Hardware (220-801) and A+ Software (220-802) Certification Exams, introducing students to the operation, diagnosis, troubleshooting, and maintenance of microcomputer components. Topics include complete system assembly, maintenance, operating system architecture, installation, maintenance and troubleshooting, simple networking, viruses, data backup, and disaster recovery. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA A+ Hardware (220-801) and A+ PC Software (220-802).

COMP 1230 Network Essentials 4 none

This course provides individuals who are new to Microsoft Windows product client/server networking technologies with the knowledge necessary to understand and identify the tasks involved in supporting Microsoft Windows based networks. This course will introduce networking terminology, LANs and WANs, client/server networks, peer-to-peer networks, communication protocols, communication devices, OSI model, IEEE standards, media, cabling, network topologies, Ethernet, TCP/IP, IP Addressing, connectivity devices, disaster recovery. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. CompTIA Network + N10-005.

COMP 1253 Client Operating System Administration 4 COMP 1109

This course is one of a series of Microsoft Operating System Administration and Engineering courses that help prepare students for client support and help desk MCSA Microsoft Certification. This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows on stand-alone and client computers that are part of a workgroup or domain. Students work with networks configured as a domain-based or peer-to-peer environment with access to the Internet and cloud services. This course focuses on installation, configuration, and management of client computers in a network environment and the skills to administer upgrades, migration paths, disk structure, permissions, sharing, and other security issues related to file systems. Students will learn how to Install and Upgrade to Windows 8, Configure Hardware and Applications, Configure Network Connectivity, Configure Access to Resources, Configure Remote Access and Mobility, Monitor and Maintain Windows Clients, Configure Backup and Recovery Options. Career Preparation: The studies in this course will help students prepare for careers in Computer Networking and System Administration such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Microsoft 70-687.

COMP 1305 Exploring Digital World Technologies 3 none

This course focuses on basic through advanced computer concepts with an emphasis on both the personal computer and enterprise computing. Topics include hardware, application and system software, the Internet and World Wide Web, communications, e-commerce, societal issues, database management, systems analysis and design, programming, information systems, career opportunities, certifications in the computer field, and computer trends. Students will finish the course with a solid understanding of computers, how to use computers, and how to access information on the Web. This course presents the most-up-to-date technology in an ever-changing discipline, gives students an in-depth understanding of why computers are essential components in business and society, frames the fundamentals of computers and computer nomenclature, particularly with respect to personal computer hardware and software, and the Web. Students will learn the latest trends in technology and computer concepts and how these topics are integrated into their daily lives. This course will assist students in exploring a career centered on current and emerging technologies.

COMP 1315 Computer Literacy and E-learning 3 none

This course begins with understanding and effectively using the CLC E-learning components including D2L, Google gmail, and MnSCU E-services. The course then focuses on computing fundamentals, key applications, and living online - the three standard skills sets categories of the IC3 computer literacy curriculum. The learning domains included in this course are Computer Hardware, Peripherals and Troubleshooting, Computer Software, Using an Operating System, Common Program Functions, Word Processing Functions, Spreadsheet Features, Communication with Presentation Software, Communication Networks and the Internet, Electronic Communication and Collaboration, Using the Internet and the World Wide Web, and The Impact of Computing and the Internet on Society. This course will help students prepare for the IC3 certification exam. Career Preparation: Diverse - All business and organizational careers using current computer technologies. Certification Preparation: IC3.

COMP 1398 Topics in Computer Technology 1-3 none

This course will cover selected topics of interest in Computer Technology. These topics could include a variety of current computer technology issues, releases, platforms, security, networking or others. Career Preparation: Information Technology, Computer Technology. Certification Preparation: None, unless specified in topic material.

COMP 2107 Supporting Client Operating Systems 3 none

This course provides students who are new to Microsoft client operating systems with the knowledge and skills necessary to troubleshoot basic problems end users will face while running Microsoft client operating systems in an active directory network environment, or in a workgroup environment. This is an introductory level computer-support course designed to provide an overview of operating system concepts and how to troubleshoot the current version of Microsoft client operating systems. This is the first course in the Microsoft Certified IT Professional

Course Descriptions

Course Code ***Course Label*** ***Credits*** ***Prerequisite***

(MCITP) certification. This course is intended for new entrants and career changers new to the IT industry who have experience using Microsoft Office and have basic Microsoft Windows navigation skills. This course is also intended for a current call center technician with six months experience looking to validate and update their support skills. Career Preparation: The studies in this course will help students prepare for careers in computer support, client support, and system support such as MCDST, systems analyst, support technician, support analyst, and help desk administrator. Certification Preparation: Optional. Microsoft 70-620. Students are expected to know how to use a current Windows operating system including navigation, saving files, file management/hierarchy structure, compression, extraction, installation of programs, setting up user accounts and administrative operating system tasks. Students without this experience should take COMP 1109 Introduction to Operating Systems either before they take this course or concurrently while they are taking this course.

COMP 2111 Security Essentials 4 COMP 1123 or COMP 1230

This course addresses the objectives of CompTIA's Security+ Certification and will help prepare students to pass the Security+ Certification Exam. This course is designed to provide students with a broad-based knowledge of network security and assist them in preparing for a career in information technology or for further study in specialized security fields. Subjects covered will include, but not be limited to, the following: authentication, security attacks, malicious code, remote access, e-mail, web security, direct and file transfer services, hacking and anti-hacking utilities, wireless and instant messaging devices, media, network security topologies, intrusion detection, security baselines, cryptography, physical security, disaster recover, and computer forensics. Career Preparation: The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA Security+ SY0-301.

COMP 2113 Advanced Operating Systems: Command Line Administration 3 COMP 1230 and COMP 1253

This course focuses on the concepts of the command line interface using the Command Prompt window, referred to as the MS_DOS prompt window in earlier versions of Windows. Topics covered include commands, syntax, switches, attributes, pipes, filters, redirection, advanced batch files, optimizing performance and troubleshooting using batch sequence processing, and how to use simple Internet_related internal commands from the command line. Both internal and external commands will be studied and applied in the command interpreter. Students will create batch files and learn how to apply these utilities in an operating system and network operating system environment. Students will build maintenance utility and automation programs using the command line interpreter. Career Preparation: The studies in this course will help students prepare for careers in information technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, Computer Support, Information Technology, and Help Desk/Computer Repair Technician.

COMP 2115 Command Line and PowerShell Administration 4 COMP 1109

This course focuses on the concepts of the command line interface using the Command Prompt window, referred to as the MS-DOS prompt window in earlier versions of Windows. Students will also be introduced to PowerShell as an alternative scripting tool. Topics covered include commands, syntax, switches, attributes, pipes, filters, redirection, advanced batch files, optimizing performance and troubleshooting using batch sequence processing, and how to use simple Internet-related internal commands from the command line. Both internal and external commands will be studied and applied in the command interpreter. Students will create batch files and learn how to apply these utilities in an operating system and network operating system environment. Students will build maintenance utility and automation programs using the command line interpreter. Students will also use PowerShell, a scripting technology and create automation of system management tasks and the creation of system management tools. Topics covered include the Windows PowerShell Command Line, object based scripting with .NET, writing PowerShell Scripts, working with variables, arrays and hashes, implementing conditional logic, using loops to process data, organizing scripts using functions, and basic system administration. Career Preparation: The studies in this course will help students prepare for careers in information technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, Computer Support, Information Technology, and Help Desk/Computer Repair Technician.

COMP 2116 IT Project Management 3 COMP 1109

This course will introduce students to the principles of managing information technology (IT) projects. This course focuses on presenting the PEMBOK Guide 5e project management principles, and preparing students for industry certifications, including CompTIA Project+ and PMI's PMP. Topics covered include project integration, scope, time, cost, quality, human resource, communications, risk, procurement, and stakeholder management as well as team building and performance measuring. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer. Certification Preparation: Optional. CompTIA Project+ and PMI PMP.

COMP 2118 Server Administration 4 COMP 1230 and COMP 1253

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course provides students with the knowledge and skills necessary to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server environment. These tasks include managing user, computer, and group accounts; managing access to network resources; managing printers; managing an organizational unit in a network based on Active Directory directory service; and implementing Group Policy to manage users and computers. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-640. Was previously COMP 1254.

COMP 2119 Network Infrastructure 4 COMP 2118

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course provides students with the knowledge and skills necessary to install, configure, maintain, and safeguard data in a Microsoft Windows Server environment. These tasks include managing, configuring, administering, and installing the Dynamic Host Configuration Protocol, Domain Name System, configuring File Services, Printers, Network Policy and Access Services, and Securing a Windows Environment. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-642. Was previously COMP 1255.

COMP 2120 Network Planning and Design 4 COMP 2119

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 Deploying IIS and Active Directory Certificate Services, and network access. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional Microsoft Certified IT Professional (MCITP) certification 70-646.

COMP 2121 Directory Services Infrastructure 4 COMP 2120

This course is the final course in a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course is a capstone course which provides students with the knowledge and skills to successfully plan, design, implement, configure, and troubleshoot a Microsoft Windows Server Active Directory directory service infrastructure. The course focuses on a review of all previous Microsoft Server courses, including Business Continuity. Windows Server directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMP 2126	Wireless Networking	3	none

This course focuses on the evolving need of home and office wireless technologies and mastering wireless local area networks. The course covers aspects of wireless networks with a particular emphasis on wireless network security and design. Course material includes implementing practical hardware, software and network configurations for wireless networking. This course will address the objectives of the CWNA (Certified Wireless Network Administrator) industry certification. The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, Support Technician, and Systems Engineer. Certification Preparation: Planet3 Wireless CWNA

COMP 2127	Hardware/Software Evaluation	2	COMP 1109

This course focuses on the evaluation of emerging product technologies. The content will vary with new release hardware components and software betas. Evaluation criteria will be established for the product evaluation and students will work through a systematic evaluation process. Career Preparation: The studies in this course will help students prepare for careers such as Security Administrator, Network Administrator, Network Engineer, Systems Analyst, and Systems Engineer.

COMP 2130	Scaling Networks (CCNA-III)	3	none

This course is the third of four courses designed to prepare students for Cisco CCNA certification. This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCNA.

COMP 2131	Connecting Networks (CCNA-IV)	3	COMP 2130

This course is the fourth of four courses designed to prepare students for Cisco CCNA certification. This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Cisco CCNA.

COMP 2132	Implementing Cisco IOA Network Security	3	COMP 1124

CCNA Security helps students prepare for entry-level security specialist careers by developing an in-depth understanding of network security principles and the tools and configurations needed to secure a network. The curriculum provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data devices. CCNA Security offers the following: provides an in-depth, theoretical overview of network security principles as well as the tools and configurations available; emphasizes the practical application of skills needed to design, implement, and support network security; supports development of critical thinking and complex problem-solving skills through hands-on labs. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer. Certification Preparation: Optional. Cisco CCNA Security.

COMP 2133	Fundamentals of Voice Over IP	3	COMP 1124

This course covers associate-level knowledge and skills required to administer a voice network, the required skill set for specialized job roles in voice technologies such as voice technologies administrator, voice engineer, and voice manager, and important skills in VoIP technologies such as IP PBX, IP telephony, handset, call control, and voicemail solutions. Students will learn the skills and knowledge related to the Cisco Unified Communications Manager, which is typically employed by large organizations such as governments, large companies, and colleges, as well as the Cisco CallManager Express (CME) and Cisco Unity Express (CUE) solutions typically used by medium and small organizations such as companies with less than 2,000 employees, retail businesses, and small school districts. Career Preparation: The studies in this course will help students prepare for careers in Networking such as CCNA, CCNP, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator, and Systems Engineer.

COMP 2150	Windows Server Administration I	5	COMP 1230 or COMP 1123

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the first of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of core services such as the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure, Active Directory and networking services. In addition, this course also covers such valuable skills as: Managing Active Directory Domain Services Objects, Automating Active Directory Domain Services Administration, Implementing Local Storage, Implementing File and Print Services, Implementing Group Policy, Implementing Server Virtualization with Hyper-V. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-410 Installing and Configuring Windows Server 2012 exam objectives.

COMP 2151	Windows Server Administration II	5	COMP 2150

his course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the second of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of core services such as user and group management, network access, and data security. In addition, this course also covers such valuable skills as: Implementing a Group Policy Infrastructure, Managing User and Service Accounts, Maintaining Active Directory Domain Services, Configuring and Troubleshooting DNS, Configuring and Troubleshooting Remote Access, Installing, Configuring, and Troubleshooting the Network Policy Server Role, Optimizing File Services, Increasing File System Security, Implementing Update Management. Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-411 Administering Windows Server 2012 exam objectives.

COMP 2152	Windows Server Administration III	5	COMP 2151

This course is one of a series of Microsoft Server System Administration and Engineering courses that help prepare students for the Microsoft Certification. This course prepares students for the third of a series of three exams which validate the skills and knowledge necessary to implement a core Windows Server 2012 Infrastructure into an existing enterprise environment. This course focuses and prepares a student on real skills for real jobs and prepares students to prove mastery of Advanced Windows Server 2012 Services such as advanced configuring tasks necessary to deploy, manage, and maintain a Windows Server 2012 infrastructure. It covers such skills as fault tolerance, certificate services, and identity federation. In addition, this course also covers such valuable skills as: Implementing Advanced Network Services, Implementing Advanced File Services, Implementing Dynamic Access Control, Implementing Network Load Balancing, Implementing Failover Clustering, Implementing Disaster Recovery, Implementing Active Directory Certificate Services (AD CS), Implementing Active Directory Federation Services (AD FS).Career Preparation: The studies in this course will help students prepare for careers in Networking such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. This course is mapped to the 70-412 Configuring Advanced Windows Server 2012 Services exam objectives.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMP 2153	Client Operating System Management	4	COMP 1253

This course is one of a series of Microsoft Operating System Administration and Engineering courses that help prepare students for client support and help desk MCSA Microsoft Certification. This course provides students with the knowledge and skills necessary to master configuration or support for Windows 8 computers, devices, users and associated network and security resources. Students work with networks configured as a domain-based or peer-to-peer environment with access to the Internet and cloud services. Students will also work on Designing an Installation and Application Strategy, Maintaining Resource Access, Maintaining Windows Clients and Devices, and Managing Windows 8 Using Cloud Services and Microsoft Desktop Optimization Pack. Career Preparation: The studies in this course will help students prepare for careers in Computer Networking and System Administration such as Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional. Microsoft 70-688.

COMP 2154	Advanced Network Defense	3	COMP 2111

This course examines theoretical understanding of network security principles as well as the tools and configurations available. The course will emphasize the practical application of skills needed to design, implement, and support network security. Students will develop critical thinking and complex problem solving skills using simulation-based scenarios that promote the exploration of networking security concepts, allowing students to experiment with network behavior and ask What if questions. Students will be equipped with the knowledge and skills needed to prepare for entry-level security specialist careers. The course will cover modern network security threats, securing network devices, authentication, authorization and accounting, firewall technologies, intrusion prevention, cryptography, implementing virtual private networks, managing a secure network, and implementing the Cisco adaptive security appliance. Career preparation: GSEC, GSED, CCNA, MCTA, MCSA, security analyst, information security officer, network security administrator, network security engineer, security systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, and network manager. Certification preparation: GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GCIA), Security Certified Network Professional (SCNP)

COMP 2155	Network Intrusion	3	COMP 2111

This course examines ethical hacking and information systems security auditing. Students will focus on the current security threats, advanced attack vectors, and practical real time demonstration of the latest hacking techniques, methodologies, tools, tricks, and security measures. The course will explore pentesting (Penetration Testing), hacking and securing systems. The lab intensive environment provides student's in-depth knowledge and practical experience with the current security systems. Foundational concepts include how perimeter defenses work and scanning and attacking networks. Students will learn how intruders escalate privileges and what steps can be taken to secure information technology system. Content topics include: intrusion detection, policy creation, social engineering, Distributed Denial-of-Service (DDoS) attacks, buffer overflows, and virus creation. Career preparation: GSEC, GSED, CCNA, MCTA, MCSA, security analyst, information security officer, network security administrator, network security engineer, security systems analyst, (LAN) administrator, wide area network (WAN) administrator, IT support technician, and network manager. Certification preparation: GIAC Security Essentials (GSEC), GIAC Certified Enterprise Defender (GCED), GIAC Certified Intrusion Analyst (GCIA), Security Certified Network Professional (SCNP)

COMP 2160	Ethics in Information Technology	3	COMP 1109

This course will introduce students to ethical topics and situations that exist in, and are possibly unique to, information technology. Actual case studies will be explored, and students will earn practical advice on how to deal with these issues if they arise. Topics covered will include a definition of ethics, ethics for IT professionals and users, computer crime, internet crime, privacy laws, constitutional freedoms, intellectual property, software development, employment issues, and industry codes of ethics. Career Preparation: The studies in this course will help students prepare for careers such as Computer Support Specialist, PC Repair Technician, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, IS Manager and CIO.

COMP 2170	Linux Systems	4	COMP 1230, COMP 1253

This course introduces students to the Linux operating system and will help students prepare for entry-level Linux certification. Topics covered include system architecture; Linux installation and package management, GNU and Unix commands, devices, Linux file systems and file system hierarchy standards, shells, scripting and data management, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals, and security. The studies in this course help students prepare for careers in Networking, such as Linux Administrator, Network Administrator, Network Engineer, Systems Analyst, LAN Administrator, WAN Administrator and Systems Engineer. Certification Preparation: Optional, CompTIA LX0-101 and LX0-102 and LPI LPIC-1 (101 and 102)

COMP 2202	Computer User Support	3	COMP 1204

This course provides an overview of microcomputer user support responsibilities. This course provides students with a comprehensive understanding of the helpdesk environment and the knowledge, skills, and abilities necessary to work in the user support industry. Students will learn problem-solving, communication skills, working individually and in teams. Troubleshooting strategies and tools will be analyzed and used. Studies include historical changes in computer use, end-user application support, help systems, communication strategies, customer satisfaction techniques, evaluation techniques, industry and organizational standards, needs assessments and documentation. Career Preparation: The studies in this course will help students prepare for careers in technology support such as Computer Support Specialist, Help Desk Technician, and Information Technology Specialist. Was previously COMP 1202.

COMP 2213	Computer Careers Internship	1-6	instructor's consent

This internship provides students with on-the-job experience in the student's computer career major. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. Career Preparation: The studies in this course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst, Linux Administrator, Help Desk Technician, MCSE, MCSA, LAN Administrator, WAN Administrator depending on the major of study. Certification Preparation: None.

COMP 2214	Help Desk Internship I	5	instructor's consent

This internship provides students with on-the-job experience in a computer user support field. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job setting situation. Career Preparation: The studies in this course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist and Help Desk Technician. Certification Preparation: None.

COMP 2216	Help Desk Internship II	5	COMP 2214

This is a continuing internship providing students with additional on-the-job experience in the student's computer career major. A competency-based training plan will be developed for each student and the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation. The studies in this course will help students prepare for careers in Computer/Information Technology such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, and Business Analyst, Linux Administrator, Help Desk Technician, LAN Administrator, WAN Administrator depending on the major of study.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
COMP 2220	Introduction to Computer Programming	4	COMP 1109

This course is an introduction to the techniques used in structured programming using current programming languages. Students will learn how to design and code their own programs as well as testing and debugging techniques. The students are expected to develop projects using object-oriented design methods. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst. Systems Engineer and Business Analyst.

COMP 2222	Introduction to Visual Basic and Scripting	3	COMP 1109

This course provides an overview of Visual Basic programming and scripting and entry-level programming fundamentals including variables, controls, data types and structures, emphasizing design and development considerations for Windows based application programs and operating systems. Students will write Visual Basic code to perform operations using arrays, manipulating strings, and performing file input and output functions. Topics include: the Visual Basic and scripting development environment, intrinsic controls, data types, control structures, procedures and functions, arrays, user-defined types, file handling, Visual Basic as an object oriented language, and writing scripts for systems calls and command line arguments. Career Preparation: The studies in this course will help students begin preparation for careers in information technology such as Computer Support Specialist and Network Administrator, Network Engineer, Systems Analyst. Systems Engineer and Business Analyst.

COMP 2314	Introduction to Project Manager	3	none

This course addresses the objectives covered by the CompTIA IT Project+ Certification Exam, and is designed to introduce students to project management, with an emphasis on IT project management. Topics include project initiation and scope definition, project planning, project execution, control and coordination, and project closure, acceptance, and support. Career Preparation: The studies in this course will help students prepare for careers in Project Management such as Computer Support Specialist, Network Administrator, Network Engineer, Systems Analyst, Systems Engineer, Business Analyst, IT Project Manager, and Senior IT Project Manager. Certification Preparation: Optional. CompTIA Project+.

CRJU 1101	Criminal Justice	3	none

This is an introduction into the American Criminal Justice System. The course will cover police, court, and correctional facilities, and given an overview of how our criminal justice system works. Discussion on various topics will analyze procedures and cases that made our laws what they are today.

CRJU 1104	Juvenile Justice	3	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.

CRJU 1106	Corrections & Probation	3	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.

CRJU 1108	Community Corrections	3	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.

CRJU 1109	Report Writing in Law Enforcement	3	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.

CRJU 1112	Police and the Community	3	none

This course will study the historical and contemporary roles of policing in society, strategies for positive police-community relations and job-related issues for police officers. Students will be introduced to positive principles of interaction between the police officer and citizens of the community in which the officer serves. The course will also cover contemporary police practices which include community-oriented policing and problem-oriented policing.

CRJU 1125	Personal Protection Awareness	2	none

This course will enhance the student's ability to learn survival techniques, increase confidence levels with successful applications of physical techniques. This course includes but not limited to PPCT's survival by prevention psychology, principles of avoidance, passive releases and escapes. The course will also include survival stress and provide information that will enhance safety in combative situations such as Sexual Harassment and Rape Prevention and provide recommendations regarding issues related to critical incident management.

CRJU 2101	Criminal Law	3	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.

CRJU 2102	Criminal Procedures	4	CRJU 1101 or instructor's consent

This course covers the study of constitutional law and criminal procedures utilizing the opinions of the U.S. Supreme Court and the Minnesota Rules for Criminal procedures. Emphasis is placed on the constitutional guidelines for law enforcement, rules of arrest, search and seizure, and the Minnesota Rules of Procedures.

CRJU 2106	Fitness for Law Enforcement	2	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.

CRJU 2108	Criminal Investigations	3	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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CRJU 2110	Topics in Criminal Justice	1-3	none

This course will address those issues currently under public scrutiny. These would likely include, but not be limited to, deadly force and use of force, capital punishment, racism in the system, sexism within the justice system, police corruption, abuse of authority throughout the system, the code of silence found within the system, and other relevant topics of timely nature.

CRJU 2112	Ballistic and Firearms Identification	4	none

This course is a study of internal and external ballistics and their relationships to criminal investigations. Included in the coursework will be comprehensive analysis of projectile striation operational signatures, projectile impact signatures, and gunshot powder residue analysis, both spectrographically and reproductions. Students will be required to complete an investigatory process that includes testimony in mock court.

CRJU 2114	Traffic Law	3	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.

CRJU 2116	Science of Fingerprints	4	none

This course is a study of fingerprints as it relates to criminal investigations and the identification of suspects and victims of crimes. The student will learn the Henry system of obtaining rolled impressions and the techniques of computerization in locating and filing unknown latent prints. Dusting, lifting, and photographing latent prints in various mediums will also be examined. Laser detection and ultraviolet location of latent prints will be presented in class.

CRJU 2118	Criminal Justice Photography	4	none

A primary facet of criminal investigation is founded in recording of evidence and the crime scene for trial via still and video photography. This course of study will take the student through various investigative endeavors which create photographic tasks similar to actual crime scenes and criminal investigations which require photographic documentation.

CRJU 2124	General Evidence and Identification Preparation	4	none

A substantial component of criminal investigations is found in crime scene reconstruction. This course enables the student to undertake a physical examination of various forms of evidence likely encountered in a variety of crime scene investigations. Plaster and plastic reproductions of latent tracks, number restoration, crime scene sketching, and the collection and preservation of physical evidence will be examined. Related photography will also be a part of the course.

CRJU 2135	Internship	1-8	instructor's permission

This is a practical learning experience in criminal justice in the area of the student's interest. This course is usually scheduled after the student has completed one year of course work. Coordinator and agency approval is required. Students are not guaranteed an internship.

CRJU 2140	Law Enforcement & Behavioral Science	3	none

This course examines the dark side of law enforcement. The student will explore corruption, deviancy, and criminality found within police departments nationally, and discuss how it impacts upon relations within poor and minority citizens.

CRJU 2150	Constitutional Law and the Justice System	3	none

This course gives students an appreciation and understanding of the United States Constitution and its importance within our democracy. The historical basis and development of constitutional concepts will be examined. Specific attention will be paid to constitutional limitations upon government authority over private citizens. In addition to stressing amendments with the Bill of Rights , the course will look at the 14th Amendment. We will address the Minnesota POS T Board learning objectives relating to constitutional law.

CRJU 2160	Use of Force	2	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

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	3	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

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.

CRJU 2164	Patrol Practicals	5	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

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.

CRJU 2166	Tactical Communications/Relations	2	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

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.

CRJU 2311	Basic Firearms	1	CRJU students only

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
CRJU 2315	POST Prep	1	none

This course is a review of information that is contained in the Learning Objectives for Professional Peace Officer Education, as approved by the Minnesota Board of Peace Officer Standards and Training. Course information is divided into five parts to match each of the five categories as found in the Learning Objectives for Professional Peace Officer Education. The five categories will cover the following information: Category One (Practical Applications and Techniques), Category Two (The Criminal justice System: Civil and Criminal Law), Category Three (Community Policing), Category Four (Victims and Victims' Rights). Category Five (Leading, Managing and Communicating).

CRJU 2399	Seminar in Police Administration	3	none

This course takes a broad look at management in law enforcement and the challenges that comes with being a supervisor. Basic management skills, personal skills, managing problems, hiring personnel, budgeting, and deploying law enforcement resources to improve productivity will be discussed.

CULA 1101	Culinary Techniques and Terminology	1	none

This course provides an overview of basic kitchen skills, such as knife handling, safety, sanitation, culinary terms, and equipment identification.

CULA 1104	Applied Food Safety and Sanitation	1	none

his course provides in-depth knowledge of food safety and sanitation. Students will learn all facets of proper food handling, use, temperature, storage, and safety in a kitchen environment. Upon competition of the course, students will pass the ServSafe Food Manager certification.

CULA 1107	Culinary Math and Spreadsheet Analysis	2	none

This course explores the math needed in a kitchen environment to assist in measuring, conversions, weights, and scaling. Spreadsheet analysis will be used to demonstrate costing, volume and profit, inventory, price analysis, temperature control limits, and recipe breakdown.

CULA 1110	Food Production Lab I	3	none

This course introduces students to foundational skills in commercial cooking. Students will learn kitchen sanitation and safety; historical and national influences on food; preparation of stocks, soups, and sauces; and the selection and use of herbs and spices.

CULA 1113	Food Production Lab II	3	none

In this course students learn fruit, vegetable, and starch identification and cookery. Students will also learn to prepare salads, salad dressings, and breakfast items. Employability traits such as professionalism, communication, accountability, and productivity will be covered.

CULA 1116	Food Production Lab IIII	3	none

In this course, students will learn the techniques of roasting, broiling, stewing, braising, poaching, sautéing, and frying. Students will learn how to process meats, poultry, and seafood. Emphasis will be placed on production techniques, menu selection, food presentation, and quality. This course will also review basic cooking techniques and methods and will strengthen their understanding of culinary terminology, proper care and use of tools, and sanitation and safety techniques.

CULA 1119	Garde and International Flavors	2	none

This course covers practical applications of cold food preparation and presentation with an emphasis on international cookery. Students will create hors d'oeuvres and appetizers, buffet salads, pates, sausages, smoked foods, and cheeses. Traditional approaches, elements of artistry, new culinary concepts, and innovative methods will be addressed.

CULA 1122	Food Identification and Purchasing	1	none

This course focuses on specification requirements for purchasing the major types of foods, beverage, and non-foods. Students will learn product identification and proper receiving, storage, and inventory control methods. Nutrition concepts will also be covered.

CULA 1125	Introduction to Baking and Pastry Techniques	2	none

This course provides an overview of the concepts of baking and pastry production, including proper tools and formulas. Skills developed will include breads, sweet doughs, choux paste, pies, mousses, tarts, and beginning cakes.

CULA 1128	Internship I	1-6	none

The culinary Internship I is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

CULA 1131	Internship II	1-6	none

The culinary Internship II is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

CULA 1134	Internship III	1-6	none

The culinary Internship III is designed to provide the student with a purposeful occupational experience. Since each internship is an individualized experience, a training plan is specifically created for each student in conjunction with the training site to which the student is assigned.

DENT 1106	Dental Orientation & Anatomy	2	none

This course will focus on correct pronunciation, spelling and the meaning of terms used in the dental vocabulary. The terminology presented in this course will be utilized by the student throughout the Dental Assisting program. This course will focus on identifying structures of the head and neck and describe their functions to include the skull, face, mandible, hard palate, muscles of mastication, sinuses, oral cavity, salivary glands, nerves and blood supply. This course will focus on the development of the tissues and organs found in the oral cavity, the structural components of the hard and soft tissues and the detailed anatomy of the adult and primary dentition.

DENT 1108	General Anatomy	3	none

This course provides an introductory level for health professionals who need a basic understandnig of anatomy and physiology, and the interrelationships between the structures and functions.The organ systems include integumentary, skeletal, muscular, nervous, sensory, endocrine, circulation, respitory, digestive, excretory and reproductive systems.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
DENT 1114	Pathology, Pharmacology, Law & Emergencies	3	DENT 1106

This course is designed to provide the student with a knowledge of pathology, the body's defense, healing mechanisms, and diseases of the oral cavity. This course will provide the student with a basic knowledge of drugs and their effects. It provides knowledge of emergencies and the prevention and treatment of these emergencies within a dental office environment. It will also acquaint students with ethical practices of dentistry, along with knowing Minnesota dental law.

DENT 1116 Dental Clinic I 8 DENT 1106

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.

DENT 1118 Dental Radiology I 2 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.

DENT 1120 Preventive Dentistry 2 none

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 deferentiate intrinsic and extrinsic stains of the teeth. The use of fluoride therapies will be explained and idenitfied. The signs and symptoms of periodontal disease will be explained. The course will cover basic nutrition and its relationship to dental health.

DENT 1123 Dental Clinic II 9 DENT 1116, DENT 1118, DENT 1106, DENT 1120

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.

DENT 1124 Biomaterials 2 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.

DENT 1129 Dental Radiology II 2 DENT 1118

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.

DENT 1132 Dental Specialties 2 DENT 1106

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.

DENT 1133 Principles of Practice Management & Communication 2 DENT 1106

This course teaches general principles of communication in health care settings. Specific emphasis is placed on verbal and nonverbal skills, assertiveness and confidentially in a variety of situations to include receptionist, office manager, business manager, insurance clerk, records manager, data processor, appointment clerk and bookkeeping. It will cover the use of the dental software system Dentrix and operation of basic office equipment.

DENT 1150 Dental Internship 1-7 instructor's permission

This course is designed to provide the student with the opportunity of a practical application of chair-side procedures within a dental practice/facility environment. The student's progress is monitored by an instructor and supervised by a licensed dentist.

DENT 1340 Dental Review 1 instructor's permission

This course is designed to provide the student with the opportunity to review for the national certification and state registration exams.

DENT 1342 Topics in Dentistry 1-4 none

This course will cover selected topics of interest in Dental Assisting.

DHET 1103 Introduction to Construction Equipment 1 none

This course will introduce students to various makes and models of construction equipment and safety related to the basic operation of construction equipment.

DHET 1107 Electrical Theory 3 none

This course covers the theory, principles of operation, troubleshooting, testing, maintenance, and repair techniques of electrical components and systems found on modern construction equipment and trucks. Battery starting, charging, accessory systems, electronic controls will be emphasized.

DHET 1108 Electrical Lab 5 none

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.

DHET 1117 Engine Theory 3 none

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.

DHET 1118 Engine Lab 5 none

This course is associated with the engine theory class. Students will be assigned lab projects relating to the troubleshooting and repair of diesel engines used on construction equipment and trucks.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
DHET 1123	Customer Service & Service Management	1	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.

DHET 1125 Hydraulic Theory 3 none
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.

DHET 1126 Hydraulic Lab 5 none
This course is associated with the hydraulic theory courses. Students will be assigned lab projects relating to troubleshooting and repair of hydraulic and hydrostatic components and systems used on construction equipment and truck related systems.

DHET 1128 Power Train Theory 2 none
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.

DHET 1129 Power Train Lab 5 none
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.

DHET 1130 Diesel Internship 1-6 instructor's permission
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.

DHET 1132 On Highway Vehicle Systems Theory 3 DHET 1107 and DHET 1117, or DHET 1125 and DHET 1128
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.

DHET 1133 On Highway Vehicle Systems Lab 4 DHET 1107 and DHET 1117, or DHET 1125 and DHET 1128
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.

DHET 1135 Welding for Diesel Equipment 1 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.

DHET 1310 Trade Math 2 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.

ESCI 1400 Geology of National Parks 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This introductory course is a survey of the principles of geology, thematically centered on the processes that shaped the continent of North America, with special emphasis on the National Parks and Monuments of the United States. It includes topics such as plate tectonics, mountain building, volcanoes, faults and faulting, erosion by water, wind, and ice, ice ages, glacial landscapes, fossilization, and geologic time. Students will apply newly acquired geologic skills to case studies of individual national parks.

ESCI 1405 Astronomy 4 Accuplacer Reading 56+, or Next Gen Reading 237+
s 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 summaries 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.

ESCI 1421 Minnesota Geology 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

ESCI 1444 Natural Disasters 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

ESCI 1451 Oceanography 3 Accuplacer Reading 56+, or Next Gen Reading 237+ 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ESCI 1452	Oceanography Lab	1	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ESCI 1454 Planet Earth 4 Accuplacer Reading 56+, or Next Gen Reading 237+

This beginner's course explores Earth's solid, liquid, gas, and living layers; what they are, how they act, and how they interact. In this course you can expect to not only learn about geoscience, but engage with it, by practicing the techniques of working professionals in the field.

ESCI 1455 Honors Earth Science and the Environment 4 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

This course is a survey of the scientific underpinnings of contemporary environmental issues on the global, continental, and regional scales. For the geoscience disciplines of geology, meteorology, climatology, and oceanography, it is an introductory course. But is also a course on the practical applications of these sciences for inquiry into the human impact on Earth's concentric spheres. Students enrolled in this honors course will be required to read additional scientific literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation. At least one extended field trip may be required.

ESCI 1460 Exploring the Edge of Space 3 Accuplacer Reading 56+, or Next Gen Reading 237+

In this course students will work as a team to plan and successfully conduct a near-space high-altitude balloon flight (HAB). Such flights involve learning Earth surface and atmospheric structure and dynamic processes, hypothesis writing, experimental design and construction, electronics testing and assembly, microcontroller programming, data collection and analysis, and scientific report writing. Successful execution of a near-space HAB flight requires extensive teamwork and collaboration. At least one all-day off campus field excursion is required for this course. Whenever possible students in this class will collaborate with students of other courses, colleges,and K-12 schools. Collaboration in this case may involve presenting technical and science topics to other CLC and to K-12 students, and helping others with experimental design and construction, and interpreting data.

ESCI 1461 Honors Exploring the Edge of Space 4 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+In this course students will work as a team to plan and successfully conduct a near-space high-altitude balloon flight (HAB). Such flights involve learning Earth surface and atmospheric structure and dynamic processes, hypothesis writing, experimental design and construction, electronics testing and assembly, microcontroller programming, data collection and analysis, and scientific report writing. Successful execution of a near-space HAB flight requires extensive teamwork and collaboration. At least one all-day off campus field excursion is required for this course. Whenever possible students in this class will collaborate with students of other courses, colleges,and K-12 schools. Collaboration in this case may involve presenting technical and science topics to other CLC and to K-12 students, and helping others with experimental design and construction, and interpreting data. 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.

ESCI 1480 Flight to Edge of Space: Learning and Experimentation 2 Accuplacer Reading 56+, or Next Gen Reading 237+

In this course students will work as a team to plan and successfully conduct a stratospheric balloon flight. Activities include hypothesis writing; experimental design, construction, and execution; data collection and analysis; and scientific report writing and presentation. Successful execution of a stratospheric balloon flight requires extensive teamwork and collaboration. Content topics in this course include Earth atmospheric structure and dynamic processes, and contemporary topics in atmospheric pollution, and societal issues involving the atmosphere. A companion physics course is required which will involve topics in atmospheric physics and geophysics, as well as electronics assembly and testing, and acquiring a working proficiency with navigational systems. The balloon flight will involve at least one all-day field excursion, and is required for this course. This is one of two courses in a learning community. The other is PHYS 1480 Flight to the Edge of Space: Electronic, mechanical, and navigational systems. Both courses must be taken concurrently. Expect extensive collaboration, communication, and transfer across the two courses.

ESCI 2581 Topics in Earth Science 1-3 none

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

ECON 1450 The American Economy 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ECON 1451 Honors American Economy 3 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+This course is an introduction to and a descriptive survey of the modern American Economy. Concentration is on the major forces affecting the world economy, with special attention given to the role and responsibility of the United States government in national and world economic affairs. The course will require attendance at the 2016 Nobel Conference in St. Peter, MN, and will include multiple topics related to the conference theme, In Search of Economic Balance.Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.

ECON 1598 Topics in Economics 1-3 none

This course will examine selected topics of interest in Economics. Offered on demand.

ECON 2401 Principles of Economics-Macroeconomics 3 none

his course provides the basic principles behind the economic process, nature of the free-enterprise system, money and banking, national income, monetary and fiscal policy, and other macroeconomic concepts. Although not required, it is recommended that students complete ECON 1450 prior to taking this course.

ECON 2402 Principles of Economics-Microeconomics 3 ECON 1450 or sophomore standing 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.

ECOT 1100 Introduction to Ecotourism 1 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ECOT 1120	Environmental Wisdom of the Elders	3	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.

ECOT 1130	Global Environmental Travel	3	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.

ECOT 1350	Ecotourism Internship	1-6	consent of instructor

This course is designed to provide students with an opportunity to work in some aspect of Ecotourism.

ECOT 2160	Ecotourism Travel Plan Development	3	instructor's consent

This is a capstone course for the AAS degree in Ecotourism. The student will design a trip, including marketing, pricing, arrangements, etc., ensuring that the trip is in fact sensitive to the environments and cultures found in the location.

ENVR 1120	Indigenous Environmental Knowledge	3	none

Studying indigenous peoples' way of life can give us a key to how to insure the future survival of all people on this planet. Modern Society is beginning to realize the value of what is called traditional or indigenous environmental knowledge. This knowledge is the way in which indigenous people relate to their environments. This knowledge is founded on spiritual-cultural instruction from ancient times and on generations of careful observation within an ecosystem of continuous residence. This course will help the student understand indigenous societies living in a sustainable manner.

ENVR 1400	Introduction to Environmental Studies	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course involves developing an understanding of the complexities of our environment. From the Galaxies our Universe and forces that hold it together to the various systems and process that are part of our planet and an understanding of how everything is tied together. This course will bring us a kaleidoscope of knowledge from the videos of NOVA on the Elegant Universe, to information from our 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.

EMTS 1503	CPR	1	none

This course in cardiopulmonary resuscitation is a combination of artificial respiration and artificial circulation. The student will learn to recognize respiratory and cardiac arrest and provide basic life support, with use of an AED (automated external defibrillators) until advanced life support is available. American Heart Association Certification will be given on successful course completion. Course is offered on demand.

EMTS 1504	Emergency Medical Technician	6	EMTS 1503 or CPR certification

This course will prepare the student to participate in the Emergency Medical System at the entry level. This 160 hour course teaches the skills required to determine the severity of a traumatic and/or medical emergency along with basic life support treatment. The classroom experience includes lecture, practical experiences, online and written assignments. Successful completion of this course qualifies the student to sit for the National Registry of EMT's practical examination and then National Registry of EMT-Basic computer adaptive exam, and. Passing the NREMT exam fulfills the Minnesota EMS Regulatory Board requirements for certification as an Emergency Medical Technician-Basic.

EMTS 1505	Emergency Medical Responder	3	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 fulfills the first aid requirement for law enforcement students and initial first responders. American Heart Association Healthcare Provider CPR Certification will be given on successful course completion. Students may earn National Registry Emergency Medical Responder certification.

EMTS 1512	Emergency Medical Technician Refresher	2	EMT certification

EMT Refresher meets for 24 hrs and reviews the core concepts of the EMT curriculum. This course meets the requirements of Minnesota for recertification as an EMT.

EMTS 1515	First Responder Refresher	1	First Responder certification

First Responder Refresher meets for 16 hours and reviews the core concepts of the First Responder curriculum. This course meets the requirements of Minnesota for recertification as a First Responder.

EMTS 1580	Special Topics	1-6	none

This course will examine selected topics of interest in Emergency Medical Technology Studies. Offered on demand.

ETEC 1120	Immersive Worlds, Second Lives and Avatars	2	must be 18 years or older

This course introduces students to immersive three-dimensional virtual environments. In this introductory course, we will explore Wonderland, Second Life, and massive multi-user gaming worlds. Students will learn how to enter the worlds, travel from place to place, communicate, host a meeting, and in some cases, create objects. Individuals registering must be 18 years or older. Students must have computers that meet these specifications listed at http://secondlife.com/support/sysreqs.php, or be able to work at CLC on designated computers.

ENGR 1500	Introduction to Engineering	2	none

History of engineering achievements, social impact of engineering, critical thinking and engineering problem solving; engineering careers and work opportunities, professional responsibilities and ethics. Introductions to the use of MS Word, Power Point, Excel and Mathematica in engineering.

ENGR 1510	Introduction to Engineering Design	2	none

This course introduces the student to the design processes in engineering. The student will develop problem solving skills through project management - planning, organizing, and designing a project within budget and time. The projects involve working in groups; they require effective teamwork development - professional organization, effective communication, standard documentation, time management, and decision making skills that are essential in working as a team.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ENGR 1560	Digital Logic Design	3	MATH 1470 or concurrent enrollment

This is a course on number systems, Boolean algebra, logic gates, combinational and sequential circuits, MSI based design, programmable logic and memory devices, VHDL synthesis, computer aided analysis, and simulation. The laboratory component reinforces concepts with hands-on design projects.

ENGR 2547	Statics	3	MATH 1478 and PHYS 1411

This course involves rigid-body mechanics and provides a necessary background for the study of the mechanics of deformable bodies. Statics deals with structures in equilibrium such as structures at rest or moving at a constant velocity. It develops the equations of equilibrium and applies them to the analysis of simple engineering structures and machines. Specific subjects include equilibrium of trusses, frames and machines, the analysis of friction forces and topics relating to the center of gravity and mass moments of inertia.

ENGR 2548	Dynamics	3	ENGR 1412, ENGR 2547, MATH 1478

This course is the study of kinematics and kinetics as applied to the analysis of simple engineering structures and machines. Kinematics is the study of motion of particles and extended rigid bodies without reference to the causes of the motion. Kinetics is the study of the relationship between motion and the forces that cause the motion. Specific topics include motions in 1-, 2-, and 3-dimensions, relative motion of connected bodies, work, energy, momentum, and introduction to vibrations.

ENGR 2549	Mechanics of Materials	3	ENGR 2547

This course presents the study of mechanics of deformable bodies. It deals with the analysis of the stresses and of the corresponding deformation in various structural members. Axial, torsional, pure bending and transverse loadings will be considered. Analytical and computer solutions to problems will be employed. The course will also include laboratory determinations of stress-strain relationships. Multivariable calculus and Mathematica will be used to determine moments of inertia.

ENGR 2569	Circuit Analysis I	4	ENGR 1412 or MATH 1478

This course covers the linear circuits and their responses under some input and output conditions. The Ohm's Law, Kirchhoff's Current Law, and Kirchhoff's Voltage Law are used for analysis. The basic elements and networks containing dependent and independent sources are analyzed using standard circuit analysis techniques including the nodal analysis, mesh analysis, Thévenin's Theorem, Norton's Theorem, and the principle of superposition. Applications of operational amplifier are analyzed. The behavior of the inductor and capacitor are investigated as energy storage devices. Methods of analysis for first and second order circuits are investigated. Circuit analysis methods, including analytical and computer based solutions are employed. A lab supplements the analytical course material.

ENGR 2570	Circuit Analysis II	3	ENGR 2569

This course covers the following topics: sinusoidal sources, phasors, impedance and admittance, sinusoidal steady-state analysis, average power, RMS values, apparent power, complex power, mutual inductance, transformers, complex frequency, Laplace transforms, circuit analysis in the s-domain, poles, zeros and diagrams, filters, and two-port networks. The student is given simulated laboratory experience through the use of computer-aided analysis. The laboratory component reinforces concepts with hands-on design projects.

ENGR 2580	Topics in Engineering	1-3	instructor's consent

This course will examine selected topics of interest in Engineering. Offered on demand.

ENGL 1410	Composition I	4	Accuplacer Reading 78+ or successful completion of READ 1500 or ENGL 1596; or Next Gen Reading 250+, or completion of or concurrent enrollment in READ 1505

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.

ENGL 1411	Composition II	4	ENGL 1410 or ENGL 1420

Composition II focuses on research-based writing and information literacy. Students will learn and employ rhetorical strategies such as analysis (of ideas or human situations into comparable or constituent parts), cause and effect reasoning, inductive/deductive reasoning, and argument/persuasion. Subjects may include reaction, evaluation, and interpretation of literature and/or socio-cultural phenomena. Students will learn the principles of the academic research process such as developing a topic, understanding and applying outside sources, and defining and supporting a critical lens. During that process, students will learn how to locate, access, evaluate, and synthesize traditional and online library resources. Throughout the course, students will demonstrate a command of the writing and revision process and the APA (American Psychological Association) and the MLA (Modern Language Association) formats. Students will demonstrate these skills through formal papers written in edited Standard English, which will result in a total of at least 5,000 words.

ENGL 1420	Honors Composition I	4	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+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.

ENGL 1421	Honors Composition II	4	ENGL 1410 or ENGL 1420

Honors Composition II is a research-based writing-intensive course that teaches students how to write in a professional and public capacity through frequent writing experiences similar to the writing which they are likely to encounter in community or work situations. Through practice, students will master the research process and explore ways to share the results of their research with various audiences. For example, students will learn how to locate, access, evaluate, and synthesize traditional and online library resources and shape the results into a cohesive argument. Throughout the course, students will develop a command of the writing and revision processes and the APA (American Psychological Association) and the MLA (Modern Language Association) formats. Students will learn the foundational elements of argumentation and will develop researching, critical thinking, and collaborative writing strategies as they draft and revise multiple documents for multiple audiences. Students will demonstrate these skills through formal papers written in edited Standard English, which will result in a minimum of 5,000 words. The results of student learning will extend beyond the college classroom, reflecting common forms of civic engagement that exist in diverse and pluralistic societies. The capstone project for the course will include a presentation in public forum.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ENGL 1422	Practical Writing	3	Accuplacer Reading 56+, or Next Gen Reading 237+

Students will learn to structure business correspondence, including memos, letters, executive summaries and e-mails. Longer reports will include proposals, mechanism reports, and multi-step, collaborative reports. Students will learn to represent information for different audiences, such as co-workers, the public and upper-level administration, and they will use media such as power point presentations to enhance their messages. Because writing is often collaborative, the course will emphasize working in groups, treating group members ethically, developing time lines for projects and dividing work within the group.

ENGL 1450 Introduction to Humanities 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ENGL 1452 Classical Mythology 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ENGL 1454 Film Appreciation 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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

ENGL 1456 Environmental Literature 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This survey course explores a wide range of environmentally-focused themes through fiction, non-fiction, poetry, legislative and judicial actions, technical reports, and film. By studying classic and contemporary works, students will gain an appreciation of environmental literature and a heightened awareness of the interconnectedness of humans and their environment. Students will engage in writing activities throughout the course that allow them to discover and apply theoretical and practical lessons in their own writing.

ENGL 1460 Honors Literature: The Great Books 3 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

Honors Literature is a seminar course of the great books and literature of non-Western and Western writers and includes canonical, authoritative, and acclaimed texts across the ages such as epics, tragedies, novels, dramatic works for the stage, and poetry. The class will expose students to writers of genius, authors who have dreamed literature in all centuries and across all borders. It will invite students to inhabit verse and prose that represent values, systems of belief, and culture. Students will be called on to become readers, writers, discussants, and wonderers. Though literature is sometimes a mirror that works badly, the ultimate subject of this class is the students themselves, and it is up to them to name and understand the relationship between these extraordinary texts and our human condition.

ENGL 1463 Introduction to Literature 3 Accuplacer Reading 56+, or Next Gen Reading 237+

Introduction to literature is a survey course of great, creative literature, specifically prose, drama, and poetry. In addition to developing personal responses to the selected works in the course, students will become adept at discussing and analyzing literature and will develop fluency in literary concepts (plot, point of view, characterization, setting, symbolism, theme, tone, figurative language, stream-of-consciousness, Realism, et. al.). For students wishing to continue study in poetry, drama, American, or world literatures, this course is a necessary starting point. Students who wish to expand their reading experience, develop a deeper appreciation for creative literature, and learn techniques for literary interpretation will also benefit greatly from this course.

ENGL 1468 Poetry 3 Accuplacer Reading 56+, or Next Gen Reading 237+

A course designed to develop a deeper understanding and appreciation of poetry through reading, discussion, and critical analysis of selected poets ranging from Shakespeare to the present. A Minnesota poet may visit to read his/her poetry following a study and discussion of the poet's writings.

ENGL 1470 Introduction to Science Fiction and Fantasy Literature 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

ENGL 1477 Authors in Focus 1-3 Accuplacer Reading 56+, or Next Gen Reading 237+

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

ENGL 1478 Authors in Focus 1-3 Accuplacer Reading 56+, or Next Gen Reading 237+

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

ENGL 1501 Writing Fundamentals for Healthcare Professionals 1 Accuplacer Reading Score of 56

This course offers the student instruction leading to writing improvement through a better understanding of sentence-level grammar. The course emphasizes language structure, conventions, and the application of these to writing sentences, paragraphs, and program-specific documents. The primary goal of the course is to transform students who are competent readers and writers into subject matter experts in language mechanics and in so doing prepare students for success in the professional, increasingly technological, and text-focused workplace. In addition, the course offers students the opportunity to review the writing process and practice the most common editing and proofing techniques in order to generate documents that are free of errors, concise, and reflective of their intended meaning.

ENGL 1510 English for Academic Purposes 3 none

This course focuses on intermediate integrated English language skills (reading, writing, listening, and speaking) for academic purposes through culture using authentic language situations such as reading authentic academic language texts, writing authentic academic papers, listening to authentic lectures and participating in discussions, and asking questions. For non-native English speakers.

ENGL 1520 Language Fundamentals 1 none

This course offers the student instruction leading to writing improvement through a better understanding of sentence-level grammar. The course emphasizes language structure, conventions, and the application of these to writing sentences, paragraphs, and program-specific documents. The primary goal of the course is to ensure students can communicate effectively and thus prepare them for success in our increasingly technological, and text-focused workplace. The course will also review the editing process and explore the relationship between language structure and its meaning.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
ENGL 1522	Writing Fundamentals for Diesel & Heavy Equipment Technicians	1	none

This course offers students the opportunity to study the writing process and practice in preparation for reading, understanding, communicating, and generating the most common writing documents. The course will utilize the writing process focusing on audience, purpose, and method in order to generate documents such as letters, proposals, email, memoranda, reviews, service logs, formal and informal reports, audits, and other intra- and inter-office communications. The course will also explore communicating with partners in alternative formats such as video conferencing, webinars, blogs, and ITV.

ENGL 1580 Topics in Humanities 1-3 none

This course offers the opportunity for focused study in one or more areas in the humanities.

ENGL 1596 Writing II 3 successful completion of READ 0591 with grade of C or better, Accuplacer scores of 78 or higher, or instructor approval

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).

ENGL 2450 World Literature 3 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.

ENGL 2451 Women in Literature 3 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.

ENGL 2455 Native Indian Literature 3 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.

ENGL 2460 Survey of American Literature 3 none

This survey course dives into the historical and literary movements that shaped North American literature. From the early writings to contemporary, diverse voices that ask us What does it mean to be an American?, the experience transforms the reader into a literary historian. Genres include (but are not limited to) short story, poetry, non-fiction (oral narratives, historical writing, essays, letters, autobiographies). The course explores the following literary movements: Native American oral and written traditions, Puritan literature, American Romantic movement, Realism, Naturalism, Regionalism, Modernism, and Post-Modernism.

ENGL 2470 Creative Nonfiction 3 none

This course is an introduction to creative nonfiction, a fast-growing literary genre dedicated to the art of telling true stories vividly and memorably. In addition to examining various models of creative nonfiction, students will be immersed in the process of imaginative writing as they learn about voice, scene, dialogue, point of view, theme, research, accuracy, imagery, and other elements commonly used in the genre. Memoir, humor writing, personal narrative, literary journalism, nature writing, and travel writing are different forms of writing that students will explore in this course. Assignments and writing prompts will lead to the creation and revision of drafts, giving students an opportunity to end the course with a portfolio of polished material.

ENGL 2483 Creative Writing 3 Accuplacer reading comprehension score of 78

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.

GEOG 1400 Physical Geography 3 Accuplacer Reading 56+, or Next Gen Reading 237+

In this course students will examine the earth as a set of subsystems working together to sustain life. Included are studies of the earth as a planet, weather patterns, climates and the resulting distribution of vegetation and soils, as well as plate tectonics, landforms, weathering, and glaciers.

GEOG 1410 Maps and Places 3 Accuplacer Reading 56+, or Next Gen Reading 237+

Basic geographic literacy is essential for the modern world citizen. We study the world's regions, countries, capitals, mountains and rivers so we know where places are. We also study and make many types of maps to see the ways they can be used, the kinds of information they can convey and how to create the best maps for given purposes.

GEOG 1421 World Regional Geography 3 Accuplacer Reading 56+, or Next Gen Reading 237+

World Geography is the study of the world's unique regions. Explore Europe, Russia and neighboring countries, Africa, Asia and Latin America through their natural landscapes and resources, cultures, economies and levels of development and their geopolitical importance. Globalization and the global importance of and connections between world regions are emphasized.

GEOG 1430 Introduction to Geographic Information Systems 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

GEOG 1459 Cultural Geography 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
GEOG 1460	Honors Cultural Geography	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

Cultural geography is the study of cultural phenomena and institutions and their interactions in space. The course will examine human population patterns and migration, religion, agriculture, politics, economic development and urban patterns. This honors course will feature an increased emphasis on the theoretical basis for cultural geography. This will be accomplished in part through the recognition of a variety of cultural groups and the unique landscapes they create. We will examine the ways in which those landscapes reflect and reinforce cultural identity. Students enrolled in this honors course will be required to read additional (topical) literature, participate in team projects, and complete a capstone project. Activities may include (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation. At least one extended field trip may be required.

GEOG 1598	Topics in Geography	1-2	none

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

GEOG 1599	Topics in Geography	1-2	none

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

GLST 1401	Introduction to Global Studies	3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

GLST 1421	Honors Global Studies: Nobel Conference Experience	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

This course can be part of the Honors Program experience for students looking to explore research and engage their communities, leveraging the skills, goals, and mission of the CLC Honors program. Students will experience, discuss, define, and develop informed world views on global conversations and transpose them to their local communities as they seek to resolve and/or address local challenges. Attending the Nobel Conference is required. Students taking this course will complete a project that culminates in presenting results of independent inquiry related to the conference topic. Presentation may be in the form of a publishable article, poster, public forum, etc., at instructor's discretion. Courses in the Honors Program emphasize independent inquiry, informed discourse, and direct application within small, transformative, and seminar-style classes that embrace detailed examinations of the material and feature close working relationships with instructors. In addition, students learn to leverage course materials so that they can affect the world around them in positive ways.This course is repeatable.

GLST 1421	Global Studies Capstone	1-3	GLST 1401 amd permission of instructor

This course serves as the culminating academic experience for the Global Studies Certificate. Students expand, sharpen, and coordinate their comprehension by reviewing and discussing selected advanced readings in the field of Global Studies. Interdisciplinary perspectives and contemporary problems will be stressed. Students will be expected to draw upon and synthesize the knowledge they have acquired from their global experience. In addition, students in the capstone course will complete a research project using primary-source material. This research project will serve as the capstone experience project required of all students completing the Global Studies Certificate. These projects should address the principal factual data, historical events, problems, and ongoing challenges and concerns relevant to the subject selected. Students are also required to prepare and present a portfolio of their experience and research to CLC faculty, staff, students, friends, and family.

GLST 1491	Global Studies Experience - International Travel	1-4	Accuplacer Reading 56+, or Next Gen Reading 237+

Students in this course will have the option to participate in a travel-study trip. Topics of study may include art, culture, natural history, geoscience, and geography of the country of focus. Classroom time prior to trip will involve basic lessons and preparation for travel. Post-trip classroom meetings will emphasize a shared reflection of travel experience and learning. NOTE: The travel-study trip is optional. Travel expenses are the responsibility of students who elect to travel. Students who do not travel will be given an alternate method of participation and/or research assignment with a cultural/language component related to the country of focus.

GLST 1492	Global Studies Cultural Immersion Experience	1-3	Accuplacer Reading 56+, or Next Gen Reading 237+

The purpose of this course is to provide the student with an opportunity to see the world through a cultural lens different from their own and, in doing so, to have a better understanding of the diversity of human experience. Students immerse themselves in a culture other than their own within Minnesota. A different culture than one's own, as used here, refers to a context in which the beliefs and knowledge that inform fundamental aspects of behavior in a community are different from one's own. This includes intensive interactions with individuals of racial, ethnic, socioeconomic or religious identity different from one's own. The intent of this cultural immersion experience is to provide participants with information about Ojibwe, Latino, Somali, Hmong, and other cultures from scholarly presentations, readings, observation and interaction. An awareness of how learners' race, background knowledge and experiences, culture, religion, and gender impact society.

GDES 1105	Concepts of Design	3	none

This course covers the principles and elements of design in the media industry.

GDES 1120	Publication Design	3	none

Students will develop an understanding for the set-up and layout of multiple page publications. They will create designs from concept to completion for magazines, newsletters, books, and brochures by presenting information that is unified across the full range of pages. The proper use of appropriate software programs for publications will be developed. Industry production planning and process will be applied.

GDES 1122	Graphic Design Production	3	GDES 1105, GDES 1140, GDES 1142, GDES 1144

In this course students will learn advanced skills using Adobe Illustrator, Photoshop, and InDesign. Combining elements from all three software programs to create real-world publications. Students will develop production skills for various advertising media to be produced on several types of printing technologies.

GDES 1124	Corporate ID	3	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.

GDES 1126	Introduction to Adobe Creative Cloud	3	none

This course covers the basic levels of Adobe PhotoShop, Illustrator and InDesign software tools and techniques.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
GDES 1134	Typography	3	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.

GDES 1140	Adobe Photoshop	3	none

This course covers the basic to intermediate levels of Adobe PhotoShop software tools and techniques.

GDES 1142	Adobe Illustrator	3	none

This course covers the basic to intermediate levels of Adobe Illustrator software tools and techniques.

GDES 1144	Adobe InDesign	3	none

This course covers the basics to intermediate levels of Adobe InDesign software tools and techniques.

GDES 1146	Video Graphics	3	none

This course covers the integration of Adobe programs with the main emphasis on the use of Photoshop. We will be covering some design concepts using the design elements, principles and the use of typography for digital media display.

GDES 2100	Graphic Design I	3	GDES 1105, GDES 1140, GDES 1142, GDES 1144

This course continues the process and purpose of graphic design. Students will develop an understanding of the creative process and how to generate ideas, problem solving methodologies and implementation of design principles and elements while designing across all medias. Students will develop personal styles and approaches toward design and produce professional work in all forms of media.

GDES 2102	Graphic Design II	3	GDES 2100

Students will continue to develop personal styles and approaches toward creating original designs. The goal will be to produce professional personal work for a consistent brand. Students will demonstrate an understanding of the business of graphic design and the careers that are available within the industry. Working together as a creative team and understanding giving and receiving constructive criticism will be applied. Students will create products to be displayed in their portfolios.

GDES 2113	Art Direction	3	GDES 1105, GDES 1140, GDES 1142, GDES 1144

This course provides insight on working as an art director. Students will demonstrate advanced concept formulations as well as practice working under the direction of an art director to create requested requirements. These techniques will be applied to large graphic design projects where students will work as teams to create marketing campaigns and act as art directors. Students will also work directly with a photographer to art direct a photo shoot. Effective communication and learned skills will be demonstrated.

GDES 2120	Packaging	3	GDES 1105, GDES 1140, GDES 1142, GDES 1144

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.

GDES 2124	Portfolio Production	3	none

The purpose of this course is to assemble and demonstrate design abilities by producing a portfolio and a resume to showcase skills. The portfolio may take a variety of forms from two dimensional to digital. Students will be required to participate in professional portfolio reviews. Planning for the graphic design business and job hunting will also be discussed.

GDES 2126	Video in Social Media	2	none

Students will manage a host site and work with multiple video formats prepared for the web. Students will prepare a multiple social media presence and keep them updated with promotional posts of videos and blogs. Students will design and implement their site using templates that will be created with image manipulation and typography.

GDES 2130	Motion Graphics I	3	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 in lighting, shadows, and special effects with typography, photographs, graphics, and video footage.

GDES 2132	Designs in Social Media	3	none

This course covers the basics of web site construction and maintenance. Using Adobe Muse software, students will design and implement web sites. Image manipulation, mobile devices, FTP software, and basic animation will also be covered.

GDES 2134	Motion Graphics II	3	none

This course continues working with special effects and templates to build cross-over video effects and motion graphic titles to video editing software.

GDES 2350	Internship	1-6	instructor's consent

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.

GDES 2352	Shop Internship	1-12	instructor's consent

Students will work in a graphic design/print shop through Central Lakes College. They will work as a customer service representative, a designer, a job tracker, data entry specialist, billing specialist, a print broker and production specialist in the communication industry.

GDES 2399	Special Topics	1-4	none

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

HLTH 1501	Personal Health and Wellness	3	none

This course is designed to assist the student to establish a wholesome attitude toward the principles of healthful living and an interest in personal and community health. The students will evaluate health information correctly and work out solutions to immediate health problems to formulate a suitable program for daily living.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
HLTH 1507	Drug Awareness	3	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.

HLTH 1510	Intro to Massage	2	none

This course presents basic Swedish technique for a full body massage and includes an overview of the history of massage.

HLTH 1520	Principles of Nutrition	3	PREQ

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.

HLTH 1531	Women's Health	3	none

This course approaches healthful living that is specifically related to women. Traditional health topics such as nutrition, exercise, drugs, medical care and environmental health will be covered. Additional topics that have a major impact on women will be covered such as birth control, menstruation, childbearing, menopause and aging, sexuality, body image and violence toward women.

HLTH 1541	Human Sexuality	3	none

A study of human sexuality as it encompasses the physical, mental, emotional, social and spiritual aspects of one's health, relationships and lifestyle. Topics include sexual anatomy and physiology, relationships, gender issues, fertility management, STI's, sexual dysfunction, sexual coercion and commercial sex, as well as healthy sexual expression. Explanation of norms and beliefs will offer opportunities to explain personal values and choices.

HLTH 2550	Internship in Health	1-4	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.

HLTH 2570	Topics in Health	1-4	none

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

HINS 1120	Health Information Privacy and Security	1	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.

HINS 1142	Healthcare Information Systems	3	none

With the implementation of electronic health records (EHRs), there is a wealth of health data and information available. This course will focus on how health information data is an asset to healthcare facilities and ultimately to patients. This course will review the basics of electronic health records (EHR), general healthcare computer systems, and data retrieval. The course will explore how these systems and issues affect and are affected by the individuals working with health information.

HINS 1144	Pharmacology for Healthcare Admin	1	BIOL 1404 and HINS 1360

This course is designed for health information and administrative professionals and will cover drug terminology, pharmacology names, drug classifications, and medical uses of medication.

HINS 1150	Introduction to Diagnosis & Procedure Coding	3	BIOL 1404 or BIOL 1510

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.

HINS 1152	Medical Insurance and Billing	2	none

This course focuses on the revenue cycle and how the rules and guidelines of medical insurance affect patient billing and the healthcare facilities bottom line. The course will cover the importance of medical practice in billing both patients and payers, how to manage both patient records and the billing/collections process, and the importance of clean claim submissions. Emphasis will be placed on applying the rules of Health Insurance Portability and Accountability Act (HIPAA) and Health Information Technology for Economic and Clinical Health Act (HITECH) to ensure compliance, maximum reimbursement, and the electronic exchange of health information.

HINS 1154	Introduction to Health Data Analysis	3	none

This is an introductory course provide you with the foundation and knowledge of healthcare data analysis. This course will cover how to manage, analyze, and present data. The course cover how to identify problems and create recommendations from the data that can be used by healthcare organizations to make effective decisions.

HINS 1156	Interpersonal Skills for Healthcare Professionals	1	none

A career in healthcare has its own unique pressures to uphold standards, follow procedures, and work with a diverse group of individuals who are experiencing a variety of emotions concerning their own health or a family members health; this course will help improve your interactions with patients, providers, and colleagues by focusing on self-management, interpersonal skills, communication skills, and emotional skills. This course will provide you the information and tools to help you take responsibility for your own success in the industry/workforce beyond the technical skills required to complete job tasks.

HINS 1163	Medical Office Procedures	2	none

This course covers specific administrative responsibilities in the medical practice. The course covers office communication, scheduling, basics of managing health information, basics of insurance and patient billing. The course uses simulations to expose students to a clinic scenario to include patient interaction, third-party payer interaction, and provider interaction.

HINS 1165	Medical Records Management	3	none

This course builds the foundation for managing medical records. This course will emphasize the various patient record formats and required content, the maintenance of the patient record, and the health data provided in an electronic health record. Students will be introduced to data quality and how the data is used for management decision making and strategic planning.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
HINS 1360	Medical Terminology	3	none

This course will introduce the building of medical words including prefixes, suffixes, combining forms from Greek and Latin word parts, and the rules for connecting them to form medical terms. Definitions and spelling of word roots, prefixes, and suffixes emphasized. Emphasis is placed on spelling and defining medical words. A foundation is created for the continued development of medical vocabulary. Medical abbreviations are also presented for each medical specialty.

HINS 1380	Healthcare Independent Study	1-6	consent of instructor

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.

HINS 2140	Advanced Medical Coding	4	BIOL 1404, HINS 1150, HINS 1360

This course is a continuation of the introductory course and will reinforce the understanding and concepts of the coding rules for International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) coding systems, Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding (HCPCS) Level II. The course will continue the explanation of coding concepts and use case scenarios to further challenge the students understanding and application of the coding systems.

HINS 2142	Medical Coding Certification Prep	3	BIOL 1404, HINS 1144, HINS 1360, HINS 2140

The focus of this class reinforces the principles of medical coding related to the three main code books: Current Procedural Terminology (CPT), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Code Set and Healthcare Common Procedural Coding (HCPCS) Level II. This course is recommended for anyone who is preparing a career in medical coding for a physician's office and strongly recommended for anyone who is preparing for American Academy of Professional Coder's (AAPC) Certified Professional Coder (CPC) Certification examination.

HINS 2144	Legal Aspects of Healthcare	2	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.

HINS 2148	Healthcare Management and Organization	3	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.

HINS 2172	Reimbursement Methodology	2	HINS 1152

This course provides additional training as it relates to medical billing and health insurance reimbursement. The course provides the step-by-step details of how each payment system functions. Topics covered in this course include assessing and using fee schedules, payment classification groups, exclusion lists, market baskets, and wage indexes required for accurate reimbursement. The course will also look at the various methods, plans, and programs of government-sponsored payment systems, commercial insurance, and managed care.

HINS 2190	Professional Practicum	2	permission of instructor

Students will spend approximately 2 weeks/80 hours in a Patient Care Call Center, Scheduling Department and/or Preregistration Department within a local healthcare system. The practicum allows the student to experience the role in an introductory position. The collaborating healthcare system will determine the number of hours spent and student work schedule to be completed during the semester. This will challenge the students knowledge and skills to help prepare them for work in the industry. Student must be enrolled as a Healthcare Administrative Specialist Certificate student.

HINS 2390	Healthcare Internship	1-3	consent of instructor

Internship is an opportunity for students to earn college credit through an individualized occupational experience that recognizes knowledge and skills that can be learned on the job.

HEOM 1101	Safety & First Aid	1	none

This course covers the elements of construction safety needed for heavy equipment operators. Students will receive their American Red Cross First Aid/CPR/AED certification cards.

HEOM 1102	Mechanical Theory	1	none

This course will cover basic mechanical theories; e.g., how engines work, major external component identification, fuel, lubrication, intake, and cooling systems, power trains, basic hydraulic system and drive train fundamentals. Students will learn principles and various applications on construction equipment to expedite accurate maintenance and service. Service and maintenance manuals will be used as reference resources. This course is necessary for the student, in order to fulfill the technical requirement for the diploma option of the Heavy Equipment Operation and Maintenance Program.

HEOM 1107	Tools, Fasteners & Shop Practices	1	none

This course covers the basics of how to identify and use hand tools, identification and use of power tools, fasteners (standard and metric), course and fine thread, hardness grades, fittings (types and threads), O rings and measuring tools. The student will learn general shop practices for completing assigned shop projects.

HEOM 1108	Math/Estimating	2	none

This course covers construction math applicable to the excavation and grading industry. Earthwork volumes, slopes, conversions and geometric calculations are the primary focus. For entry level operations.

HEOM 1110	Preventative Maintenance	5	none

This course is designed to help students develop common practices that will assist in making them better heavy equipment operators and employees. Students will learn maintenance techniques that minimize unscheduled repairs by investigating how and what to look for. This course helps students learn to identify how to maintain operating costs within a budget.

HEOM 1151	HE Welding	1	none

This course covers basic fundamentals of MIG (wire) welding and ARC welding, oxyacetylene cutting and different applications for heavy equipment.

HEOM 1165	CDL	3	Minnesota CDL Permit

This course covers state standards for a commercial driver’s license (CDL) road test.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
HEOM 1200	Introduction to Operations	1	none

This course will give the students a brief introduction to various equipment types, their components and controls, pre-start inspections, basic equipment operation and equipment shutdowns. The focus will be on machine controls, component identification, basic operating technique and safety.

HEOM 1211 Servicing I 3 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.

HEOM 1212 Servicing II 2 HEOM 1211

This course will teach the student the importance and necessity of doing thorough and complete scheduled services according to manufacturers' recommendations and is a continuance of HEOM 1211 Servicing I.

HEOM 1261 General Lab 5 none

Students will work in a shop setting on a variety of equipment repair projects. Type of projects will depend on machine availability.

HEOM 1365 Class A CDL Permit 1 none

Material to be covered will be the three sections required for the CDL permit: general knowledge, air brakes and combination tractor/trailer as per the Minnesota Commercial Driver's Manual put out by MNDOT.

HEOM 2102 Survey/Blueprints 5 HEOM 1108

This course covers the basic skills needed to identify and apply surveying techniques (mainly elevations and cuts and fills) required for the excavation and grading industry. Blueprint reading as it applies to excavating and grading will be taught to an application level.

HEOM 2103 Soils & Compaction 4 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.

HEOM 2110 Backhoe Theory 1 none

This course covers the basic construction and preliminary operation instructions of excavators and tractor-loader-backhoe.

HEOM 2111 Loader Theory 1 none

This course will provide the student the opportunity to learn the values of a high production layout, pit operations, truck operations and loader components.

HEOM 2134 Operations Theory 1 none

This course covers machine types, pre-trip maintenance and common operator mistakes. Lecture, visual aids and hands-on training are used in order to instruct student.

HEOM 2135 Construction Theory 1 none

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.

HEOM 2136 Grading Lab I 5 none

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.

HEOM 2138 Grading Lab II 4 none

This course is the next level of operation for crawler dozers, motorgraders and scrapers. More complex projects are attempted with production and multiple machines on projects. Industry standards for quality and production are goals.

HEOM 2140 Excavation Lab I 3 none

This course covers basic construction and operation of bucket type equipment. Various operating methods, techniques and procedures will be covered.

HEOM 2141 Excavation Lab II 3 none

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.

HEOM 2142 Excavation Lab III 3 none

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 manor and constructing project to within industry standard spec tolerance.

HEOM 2150 Competent Person 2 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.

HEOM 2350 Operator Internship 1-16 instructor's consent I

nternship 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.

HEOM 2370 Special Topics 1-3 instructor's consent

This course will examine selected topics of interest in Heavy Equipment. Offered on demand.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite

HIST 1412 World History I, From the Beginning to 1500 3 Accuplacer Reading 56+, or Next Gen Reading 237+ This course will examine the development of world civilizations from pre_history to 1500, and will compare the religion, politics, economy and culture of various world civilizations. Examples will be drawn from Africa, Europe, Asia and the Americas.

HIST 1413 World History II, 1500 to Present 3 Accuplacer Reading 56+, or Next Gen Reading 237+ 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.

HIST 1472 U.S. History to 1865 3 Accuplacer Reading 56+, or Next Gen Reading 237+ This course will acquaint students with the basic chronological narrative and themes of America's past from native North America through the Civil War. Social, political, economic and cultural developments will be covered. A multi-cultural perspective will be incorporated into the course, taking into account those Americans denied access to positions of political and economic power in the past. Analytical skills focusing on reading, writing and use of primary documents will be emphasized.

HIST 1473 U.S. History Since 1865 3 Accuplacer Reading 56+, or Next Gen Reading 237+ 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.

HIST 1475 Honors U.S. History 1865 to Present 3 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+
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.

HIST 2404 Minnesota History 3 none
This course will survey the history of people who have inhabited the land area we know today as Minnesota. Topics will include: Native North Americans, European exploration and the fur trade, early American settlement, Indian and white cultural interactions, post Civil War settlement, the growth of agriculture and industry, protest politics in the 19th and 20th centuries, and an examination of the People of Minnesota. Minnesota will be a case study in which we will examine many of the historical processes which have shaped the Midwest and indeed much of the United States.

HIST 2411 American Indian History 3 none
This course is a survey of pre-contact Native North America to the present. It will spend time examining the world of Indian peoples before the arrival of Columbus, the invasions of America by Europeans, the fur trade and interactions of Indians and whites during the colonial period, federal Indian policy in the early national period, conflict on the plains, efforts to Americanize the American Indian, twentieth century issues including urbanization and relations with the federal government.

HIST 2420 History of Women in the U.S. 3 none
This course will explore the history of women in the United States from pre-European contact to the present. Our topics will be as diverse as are women themselves. We will explore women's changing roles in politics, the law, the labor force, the family and popular culture. The goal of the course is to acquire not just a richer understanding of women's experiences, but also an enhanced understanding of gender and a radically revised historical perspective. Because women differ from each other nearly as much as they differ from men, we will focus throughout the course on the relationships between groups of women divided by class, by race, and by ethnicity.

HIST 2570 Topics in History 3 none
This course will examine selected topics of interest in History. Offered on demand.

HORT 1103 Ornamental Trees and Shrubs 4 none
This course deals with the identification of trees, shrubs, and vines grown in Minnesota. There will be an emphasis on their culture, care, use and classification.

HORT 1104 Plant Science 4 none
This course is a survey of the biological considerations for growing and caring of plants. This class will cover plant characteristics, classification, and biology; soil considerations, components, uses, and characteristics; propagation types and strategies of woody and herbaceous plants.

HORT 1106 Applied Plant Science Lab 2 none
This course is a survey of the horticulture industry and its practices. Lab time will be spent touring parts of the industry, interacting with guest speakers from the industry, and examining plants, their parts, and their needs.

HORT 1108 Fundamentals of Floral Design 4 none
This course covers floral design principles required to create popular traditional flower arrangements. Mechanics, terms, and basic floral design techniques will be covered. Students will be actively involved in creating floral designs using the principles presented in class. This course also covers the identification, marketable units, handling requirements, and other characteristics of major fresh flowers and greens used in the floral industry.

HORT 1113 Annuals and Perennials 4 none
This course covers the herbaceous and perennial flowering plants grown in the upper Midwest. Particular attention is placed upon identification of the plant materials and the classification of these plants according to cultural requirements and use characteristics. Students will identify the plants by live samples, pressed samples, and photos. A perennial garden and annual garden will be designed.

HORT 1118 Indoor Flowering & Foliage Plants 4 none
This course covers identification, characteristics, cultural requirements, and use of potted flowering plants, and indoor foliage plants. The use and characteristics of materials used for permanent plants and containers will also be discussed. Particular attention is placed upon identification and classification of these materials according to cultural requirements and use.

HORT 1122 Local Food Production 3 none
This course covers the proper growing methods for fruits, vegetables and herbs commonly grown in Minnesota, as well as newer species that show promise for future use. Emphasis is placed on maximizing production while maintaining sustainable practices that result in healthy food for personal and/or commercial use. The value of providing local produce, as well as the methods used to market and sell what has been grown is also stressed in this course.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
HORT 1150	Turf Management	3	none

This course covers the proper establishment and maintenance practices for turfgrasses in the Upper Midwest. Topics include identification of turf, seeding and sodding practices, mowing techniques and equipment, fertilizing, aerating, and proper maintenance of turf.

HORT 1180	Sustainable Landscaping	3	none

This course covers the principles of sustainable living through our backyards. Students will be exposed to landscaping for wildlife, and shoreline protection from a habitat perspective. They will study the creation and management components of living roofs and walls. Sustainable landscape practices including, but not limited to wind breaks, rain gardens, building budgets and edible landscaping and square foot gardening will also be covered. Students will approach water quality from an environmental prospective down through a human recreational standpoint.
H

ORT 1196	Sustainable Greenhouse Management	4	none

This course applies sustainable management and production practices to the controlled environment of a greenhouse. Crops covered include, but are not limited to bedding plants and other floral and food crops with peak production in the winter months. Topics include crop, root media, nutrition, and harvest management decisions as well as monitoring crop development stages. Financial and crop management strategies will be analyzed and put into practice. Greenhouse design, material and equipment selection, and construction will also be a major component of this class.

HORT 1310	Special Project	1-6	instructor's consent

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.

ORT 1345	Internship	1-6	instructor's consent

This course is designed to provide students with an opportunity to work on a full-time basis in some aspect of horticulture.

HORT 1398	Topics in Horticulture	1-3	none

Students will be exposed to many different topics in Horticulture. Some topics will be explored in more depth than they were touched on in other Horticulture classes, some topics are not covered in other Horticulture classes. Most topics will be covered by guest speakers.

HORT 1399	Gardens of the World	4	instructor's consent

This course is a travel experience to selected countries for the purpose of studying the plants, gardens, and culture of those countries. The goal of this experience is to better understand other parts of the world and their influence on the horticulture industry in the United States. Because the horticulture industry is influenced by global production, technology and design trends, this is an opportunity to experience these influences first hand.

HORT 2112	Aquaponics and Hydroponics	5	none

In this course students will learn to design aquaponics and hydroponics systems, to raise fish and plants in those systems, and to monitor and control the quality of all inputs into the systems so that the plants and fish produced will be of such a quality that they will provide healthy, nutritious meals and high quality flower crops to the end-user. Special emphasis is placed on management decisions based on economic, environmental, and social sustainability. Students will spend time in the classroom learning about the systems and also participate in lab activities in the aquaponics and hydroponics greenhouses on campus.

HORT 2116	Integrated Pest Management	4	none

This course is a study of insects and diseases that have an important economic impact in the fields of horticulture, floriculture, and forestry. It provides an introduction to the theory and practice of solving problems that affect many different types of crops. Management methods include detection, scouting procedures, economic thresholds, and cultural and biological control. Emphasis is also placed on assessing insects and diseases that are common to our crops, backyards, and greenhouses.

HORT 2140	Arboriculture	4	none

This course looks at the various aspects of woody vegetation in urban areas. Focus is on the biology and physiology of woody vegetation and the various aspects of field work: pruning, planting, fertilizing, mulching, health evaluation, inventorying and mapping of urban trees.

HORT 2150	Retaining Wall & Fence Construction	4	none

This course presents construction techniques for a variety of retaining walls using several different construction materials. Smaller construction projects such as benches, arbors, and containers will be covered as time permits. Landscape installation and maintenance practices such as mulching, edging, and weed control will also be discussed. Estimating and bidding procedures will also be covered. Practical hands on training will be provided as much as time and weather permit.

HORT 2155	Deck, Patio & Pond Construction	4	none

This course covers techniques for designing, estimating costs, and building patios and walks, wooden decks, and water gardens. Proper planting, edging, mulching and other installation practices will also be covered. As much as time and weather permits, students will practice actual building and landscape installation techniques.

HORT 2165	Landscape Design	4	none

Students will learn to: 1) carefully analyze and integrate client and site information into the landscape design; 2) apply graphic design skills; and 3) develop the ability to assess the visual feel of the design. These skills are developed through the frequent application of graphic and design concepts to landscape design projects. This course is the first of two concentrating on landscape design and is focused on the application of design principles to basic residential and commercial landscape design projects.

HORT 2170	Advanced Landscape Design	4	HORT 2165

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.

HORT 2180	Computer Assisted Landscape Design	4	none

This course will present information on the use of site Designer LANDCADD, Dynascape, and other landscape design software programs used for creating landscape drawings, pricing structures, and business management decisions. Topics include layout and design, estimating projects, and complete presentation packages.

HORT 2310	Advanced Special Project	1-6	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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MTTS 1110	Principles of Machine Operations I	2	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.

MTTS 1111 Principles of Machine Operations II 2 MTTS 1110

n 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.

MTTS 1120 Machine Operations I 3 none

In this course students be introduced to lab operation of the machines used in the industry. Cutting tools will be applied to various materials through machining operations. Students will begin to apply quality analysis skills to products they create. Students will be introduced to milling, grinding, and turning processes throughout the course. In this course, students will also be introduced to industry standard safety practices.

MTTS 1121 Machine Operations II 3 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.

MTTS 1122 Machine Operations III 3 MTTS 1120, MTTS 1121

n 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.

MTTS 1124 Introduction to Engineering Graphics 2 none

tudents will explore the application of solid modeling to create computer renderings up to three-dimensional objects. Students will analyze two-dimensional planes and create 3D computer models. Multiple layered projects will be created with sub-assemblies. Students will generate computer animations of drawing components.

MTTS 1130 Print Reading 2 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.

MTTS 1131 Print Appilcations 2 MTTS 1121, MTTS 1130

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.

MTTS 1134 CNC Operations 3 MTTS 1111

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.

MTTS 1135 CNC Programming and Process Planning 2 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.

MTTS 1140 CAD/CAM I 2 none

Computer-aided manufacturing concepts are introduced through this course. Students will use computer programs to produce drawings, apply coordinates, build tool paths, and create transition documents for use in machining lab. Simulations will be demonstrated to validate accuracy of programs. Students will learn editing functions to increase efficiency or correct programs. Application of safety concepts will be emphasized.

MTTS 1264 Introduction to Machining Processes 2 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.

MTTS 2110 Geometric Dimensioning and Tolerancing 1 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.

MTTS 2112 Metallurgy 1 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.

MTTS 2116 Introduction to Electric Discharge Machining 2 MTTS 1135

Students will be introduced to the complex operations of electric discharge machining (EDM). Students will experience both wire and sink EDM operations and applications of these technologies for efficient production of highly technical processes. Electrical discharge machining, sometimes colloquially also referred to as spark machining, spark eroding, burning, die sinking, wire burning or wire erosion, is a manufacturing process whereby a desired shape is obtained using electrical discharges (sparks).

MTTS 2118 Jigs and Fixtures 1 MTTS 1122

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MTTS 2130	CNC Milling and Turning	4	MTTS 1134, MTTS 1135

Students will begin application of knowledge learned to integrate multiple computerized processes. Applying industry programing 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.

MTTS 2134	CNC Operations Theory	2	MTTS 1130

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.

MTTS 2140	CAD/CAM II	2	MTTS 1140

Building on skills from MTTS 1140, students will introduce multi-dimensional, multi- offset projects to the CAM studio. Programming will include test simulations of complex designs. Advanced jigs and fixtures will be required to manage safe production. Students will be challenged to maximize efficiency and productivity in their program designs.

MTTS 2190	Capstone Project	1-6	instructor's permission

This course will examine selected topics and projects of interest in Machine Tool Technologies. Offered on demand.

MTTS 2190	Internship	1-6	instructor's permission

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.

MGMT 1011	Management Principles	3	none

This course offers a practical look at the management environment, business organizational structure, and the manager's role as planner, organizer, and leader. Topics include a review of the management environment, planning and problem solving tools, staffing, and teamwork.

MGMT 1101	Entrepreneurship	3	none

This course examines the risks and rewards of entrepreneurship with a study of the challenges and opportunities of managing a small business for profit.

MGMT 1108	Quality and Performance Management	3	none

This course is a study of continuous improvement in the quality, productivity, and performance of products and services. A systems approach combining management philosophy, teambuilding, and statistical tools are used to control and improve business processes.

MGMT 1110	Frontline Leadership	3	none

This course is an examination of people as the most valuable asset in any business with an emphasis on understanding the leadership role of management and developing core interpersonal skills to deal effectively with employees on the job.

MGMT 1114	Human Resource Management	3	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.

MGMT 1126	Financial Management	3	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.

MGMT 1150	Entrepreneurship Capstone	1	BUSN 1102, BUSN 1166, MGMT 1101, and MKTG 1011

This course centers on the business planning process--opportunity recognition and business concept development. The Business Plan for a new/existing venture includes four major sections. Management and Organization Plan, Product/Service Plan, Marketing Plan, and Financial Plan. Students gain the knowledge, skills, concepts, and strategies relevant for start-up and early-stage entrepreneurs. The practical, hands-on approach encourages students to immerse themselves in the vision, research, and planning aspects of a new/existing venture. Students collaborate with Small Business Development consultants to produce a business plan.

MGMT 1312	Business Management Internship	1-3	instructor's consent

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.
This course is designed to provide the basic understanding of the theory and operation of two-stroke and four-stroke engines.

MAPS 1103	Basic Engines Lab	4	none

Students will disassemble, test, repair, reassemble, and operate a variety of small engines.

MAPS 1106	Introduction to Electronics	2	none

The focus of this course is a basic understanding of electricity and electronics using electrical instruments and electronic testing.

MAPS 1120	Lawn and Garden	2	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.

MAPS 1130	Marine Outboard I	4	none

This course is an introduction to marine power and the theory and operation of an outboard powerhead.

MAPS 1132	Marine Outboard II	4	none

This course covers advanced theory and repair of the electrical systems, carburetion, and tune-up of the outboard engine.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MAPS 1134	Marine Lower Unit	4	none

This course covers the design and operation of lower units on a wide variety of marine engines. Propellers, rigging, and boat performance are also covered in this course.

MAPS 1136	Industry Certifications I	2	none

This required course allows students the opportunity to earn manufacturer industry certifications in the marine and powersports field. These certificates are required in certain sectors of the industry.

MAPS 1140	Snowmobile Systems and Lab	4	none

This course is designed to provide the student with a growing knowledge of today's modern snowmobile. The emphasis of the course is carburetion, clutches and drive systems, and suspension.

MAPS 1370	Open Lab I	1-6	none

This 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.

MAPS 2133	Advanced Marine	3	MAPS 1130, MAPS 1132 and MAPS 1134

This course introduces the student to marine stern drives, inboard engines, and controls.

MAPS 2134	Advance Marine & Personal Water	3	MAPS 1130, MAPS 1132 and MAPS 1134

This course covers advanced systems in marine such as oil injection, power trim and tilt, steering and remote controls along with an introduction to personal watercraft vehicles.

MAPS 2135	Machine Shop	2	MAPS 1130, MAPS 1132

This course introduces the student to many of the specialized repairs that are done to MAPS engines; i.e., cylinder boring, honing, deglazing, and crankshaft repair.

MAPS 2136	Industry Certifications II	2	none

This required course gives students the opportunity to earn manufacturer industry certifications in the marine and small engine field. These certifications are required in parts of the industry.

MAPS 2143	Diagnostic Trouble Shooting	3	MAPS 1101, MAPS 1106

This course covers diagnostic troubleshooting and repair of fuel, electrical, suspension and drive systems.

MAPS 2162	ATV Motorcycle Systems I	4	MAPS 1101, MAPS 1106

This course introduces the student to the ATV and small motorcycle engine, clutch, and transmission.

MAPS 2164	ATV Motorcycle Systems II	4	MAPS 1101, MAPS 1106

This course covers final drives, suspension, tire repair, balancing, and also mechanical and hydraulic brakes that are used on ATV/motorcycles.

MAPS 2169	MAPS Tune Up	3	MAPS 1130, MAPS 1132 and MAPS 1134

This course allows the student to perform tune-up procedures on marine and powersports equipment that has already been covered.

MAPS 2350	Internship	1-8	Instructor's Permission

This internship provides students with on-the-job experience in the student's career major. A competency-based training plan will be developed for each student in collaboration with the employer. This is a cooperative program between Central Lakes College and a participating organization to allow the student to work in an on-the-job situation.

MATH 0790	Beginning Algebra	3	Accuplacer Arithmetic score of 20-79

Review of the mathematical skills needed for the study of algebra as well as an introduction to algebra. Topics include the arithmetic of integers, fractions, and percents; applications of these arithmetic skills to problems involving measurement; and ratios, proportions, and percents. The introduction to algebra consists of operations on signed numbers, algebraic expressions, solving linear equations and inequalities, an introduction to graphing, and an introduction to polynomials.This is a pre-college level course that is not eligible for Federal Financial Aid.

MATH 0810	Math Pathways	3	Accuplacer Arithmetic score of 65-120, Accuplacer Elementary Algebra score of 52-75, or MATH 0790 or MATH 0800

This course will review several pre-algebra topics and introduce topics from elementary algebra, set theory, counting, probability, and basic statistics. Use of the TI-84 Plus graphing calculator will be emphasized in all topic areas. Successful completion of this course will prepare the student for MATH 1441 Concepts of Math and MATH 1460 Introduction to Statistics.

MATH 0820	Intermediate Algebra	4	Accuplacer Arithmetic score of 80-120, Accuplacer Elementary Algebra score of 52-75, or MATH 0790 or MATH 0800

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.

MATH 1441	Concepts in Mathematics	3	Accuplacer Math 35+, Elem Alg of 76+, ACT Math 20+

This is a college level math course that demands a fundamental algebra background and familiarity with This is a college level math course that demands a fundamental algebra background and familiarity with a calculator. Topics include at least four of the following: geometry, trigonometry, graphs, logic, probability, statistics, finance, numeration systems, and set theory.

MATH 1460	Intro to Statistics	4	Accuplacer Math 35+, Elem Alg of 76+, ACT Math 20+

This course covers descriptive statistics, sampling, probability, probability distributions, normal probability distributions, estimates and sample size, hypothesis testing, correlation and regression, inferences of two samples, and process control.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite

MATH 1461 Honors Introduction to Statistics 4 Accuplacer College Level Math score of 35 or greater, Accuplacer Elementary Algebra of 76 or greater, ACT Math score of 20 or greater; or MATH 0810, or MATH 0820, or MATH 1520
This course covers descriptive statistics, sampling, probability, probability distributions, normal probability distributions, estimates and sample sizes, hypothesis testing, correlation and regression, inferences of two samples, and process control. Much of the content of this course will involve independent learning with classroom lecture involving more in-depth involvement with statistical data. Students enrolled in this course will be required to do additional reading of statistical writings, participate in group projects, present projects to the class, and develop an original survey. Daily assignments will involve use of online homework to accompany the readings from the course. A student must be accepted into the honors program prior to registration.

MATH 1470 College Algebra 3 Accuplacer Math 35+, Elem Alg of 76+, ACT Math 20+
This course covers topics such as functions and graphs, equations and inequalities, polynomial functions, rational functions, inverse functions, exponential functions, logarithmic functions, sequences and series, systems of equations and inequalities, and problem solving. A graphing approach is used and therefore the use of a graphing calculator will be highly emphasized.

MATH 1472 Precalculus 5 Accuplacer College Level Math score of 63 or greater, ACT Math score of 22 or greater; or MATH 1470
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.

MATH 1477 Calculus I 5 Accuplacer College Level Math score of 86 or greater, ACT Math score of 24 or greater; or MATH 1472
Review of the concept and properties of a function. Emphasis on the graphing and behavior of a function. Limits are introduced and developed. The derivative of a function is defined and applied to algebraic and trigonometric functions. Anti-differentiation and elementary differential equations. Definite integral as a limit of a sum and as related to anti-differentiation via the Fundamental Theorem of Calculus. Applications to maximum, minimum and related rates. Differentiation and integration of exponential and logarithmic functions.

MATH 1478 Calculus II 5 MATH 1477 or MATH 1480
Math 1478 is a second course in the Calculus of one variable. Topics include differentiation and integration of inverse trigonometric function and hyperbolic function. This course also includes slope fields and first order linear differential equations. Applications of integration will be used to calculate the area between curves, volume using the disk and shell method, arc length and surfaces of revolution, work, moments and centers of mass. It incorporates integration by parts, trigonometry integration, trigonometric substitution, partial fraction, indeterminate forms, L'hopital's Rule and improper integrals. Math 1478 also works with Infinite series, p-series, test for convergence and divergence, Taylor Polynomials and the representation of functions by power series and applications of calculus to parametric and polar equations.

MATH 1480 Honors Calculus I 5 Accuplacer College Level Math score of 86 or greater, ACT Math score of 24 or greater; or MATH 1472
This honors course is a first course in calculus, covering topics with greater depth than the traditional course. Course topics include: the definition of a limit and processes for determining limits; the definition of the derivative; rules of differentiation using algebraic, trigonometric, exponential and logarithmic functions; applications of the derivative; anti-differentiation, elementary differential equations, and the Fundamental Theorem of Calculus. Students enrolled in this course will be required to do supplementary reading of articles pertaining to calculus, study substantial problems involving calculus theory and/or application, and present the results of their investigations to the class. Communicating mathematically, whether through in-class presentation, tutoring on-campus, or tutoring in the wider community, will be strongly encouraged.

MATH 1500 Applied Mathematics 3 none
This course provides an overview of foundational topics in mathematics. These topics include at least six of the following: numerical properties, percent calculations, calculator usage, problem-solving, estimation, data conversions, real number system, geometry, ratios and proportions, statistics and trigonometry.

MATH 1510 Math for Elementary Teachers I 3 none
This is the first of two math courses providing a background for teaching in the elementary school. It emphasizes the use of mathematics manipulatives for modeling the basic operations. Topics will include addition, subtraction, multiplication and division of whole numbers, number theory related to fractions, fractions, decimals, and integers.

MATH 1512 Math for Elementary Teachers II 3 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.

MATH 1520 Introduction to College Algebra 3 Accuplacer Elementary Algebra score of 76 or greater, Accuplacer College Math score of 35-49, ACT Math score of 20; or MATH 0820 Intermediate AlgebraThis course is intended for students who have completed Intermediate Algebra but are not fully prepared for College Algebra, or whose placement test score is in the top range for Intermediate Algebra. It includes introductory college-level topics, but not at the rigor, pace, and depth of College Algebra. Many of the topics from Intermediate Algebra are reviewed within the coverage of these college-level topics.

MATH 1580 Topics in Math 1-3 none
This course will examine selected topics of interest in Math. Offered on demand.

MATH 2457 Linear Algebra 3 MATH 1477 or MATH 1480
This course covers systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors.

MATH 2458 Multivariable Calculus 4 MATH 1477 or MATH 1480
This course covers vectors, dot and cross products, surfaces; vector-valued functions and curves; functions of several variables, partial and directional derivatives, double and triple integration, line and surface integrals; and applications to extrema, area, volume, moments, and centroids.

MATH 2459 Differential Equations 4 MATH 1477 or MATH 1480
This course covers existence and uniqueness theorem; ordinary first order differential equations, linear equations of higher orders, and initial value problems; systems of differential equations, LaPlace transforms, and power series methods applications.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MEDA 1100	Body Structure and Function I	3	none

This course is an introduction to the structure and function of the human body from its chemical structure to the organization of the whole body. Focus will be on the study of each individual organ system and the interaction of each system with the rest of the body. Understanding the medical terminology related to the human body is important. The body systems that will be studied include the integumentary, skeletal, muscular, nervous, sensory, and endocrine systems. Such knowledge is basic to understanding common disease processes. Causes, signs and symptoms of various diseases related to each body system will be studied.

MEDA 1105 Body Structure and Function II 3 MEDA 1100

This course is a continuation of Body Structure and Function I. It will cover the circulatory, lymphatic, respiratory, digestive, urinary and reproductive systems, including the interaction of each system with the rest of the body. Such knowledge is basic to understanding common disease processes. Causes, signs and symptoms of various diseases related to each body systems will be studied.

MEDA 1110 Clinical Procedures I 3 CPR certificate

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.

MEDA 1115 Clinical Procedures II 3 MEDA 1110

This course covers clinical duties that are performed by the medical assistant. Emphasis will be on assisting with ambulatory surgery, assisting with specialty examinations, medication administration, providing patient education, assisting in primary care areas of family practice, internal medicine and obstetrics and gynecology. Students will learn how to obtain appropriate information through effective communication.

MEDA 1120 Laboratory Techniques I 3 none

This course will focus on safety and regulations in the medical laboratory, introduction to the laboratory, special laboratory tests and urinalysis testing. Students will be responsible for obtaining specimens, testing, and learning to prepare specimens to be sent to an independent laboratory. It is important for medical assistants to be qualified to perform laboratory procedures accurately.

MEDA 1125 Laboratory Techniques II 3 MEDA 1120

This course builds on laboratory skills learned from Laboratory Techniques I. Emphasis will focus on basic microbiology, including setting up slides for microscopic analysis of urine and blood, streaking culture plates, performing complete hematology tests. Students will be responsible for obtaining specimens, testing, and learning to prepare specimens to be sent to an independent laboratory. It is important for medical assistants to be qualified to perform laboratory procedures accurately.

MEDA 1128 Medical Terminology 1 none

This course teaches students to recognize and build medical terms after learning the meaning of word parts. The course is based on a systems approach.

MEDA 1130 Ethics and Issues 2 none

This course will cover legal and ethical issues as they relate to the medical field. The importance of legal knowledge to medical office personnel, standard of care, HIPPA, negligence, malpractice, and informed consent represent some of the topics that will be discussed.

MEDA 1132 Phlebotomy 2 Concurrent enrollment with MEDA 1110 and MEDA 1120

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.

MEDA 1134 Phlebotomy Technician Internship 1-6 consent of instructor

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.

MEDA 1135 Administrative Procedures I 3 none

This course covers administrative duties that are performed by the medical assistant. Emphasis will be on understanding the facility environment, computers in the ambulatory care setting, telecommunications, patient scheduling, medical records management, written communications, and medical documents, including electronic medical records.

MEDA 1137 Administrative Procedures II 2 MEDA 1135

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.

MEDA 1141 Disease Conditions 2 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.

MEDA 1142 Pharmacology 2 none

This course develops the students' awareness of basic pharmacological concepts. It covers drug laws, standards and safe medication administration. Students learn about the actions of medications in the body; i.e., absorption, biotransformation, metabolism, and excretion. The various classifications of medications are discussed, along with how to use medication references.

MEDA 2150 Medical Assistant Internship 1-6 instructor's consent

This course will provide on-the-job experience to students. The students will be assigned to work in a physician's office for a total of 225 clock hours. The students will work under the supervision of clinic and clinic office personnel doing tasks related to the student's program curriculum. The students will be required to attend an eight hour in class review day in July to review what they learned on their internships and to prepare for either the CMA or RMA National Certification Exams.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MUSC 1403	American Popular Music	3	none

From its beginnings in the blues, to modern rock and popular music, this course will study characteristics of the music and the artists who create it. From class lectures, demonstrations and listening examples, students will demonstrate the ability to identify and describe musical examples. Each student will demonstrate knowledge of the diverse cultural backgrounds represented by the musical examples.

MUSC 1405 Central Lakes Jazz Orchestra 0-1 none
This performing ensemble encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a Jazz Big Band setting. The ensemble prepares and performs traditional and contemporary Jazz literature in public performance with one concert per semester and other public performances as opportunities present.

MUSC 1408 Central Lakes Wind Symphony 0-1 none
This performing ensemble encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a classical symphonic band setting. The ensemble prepares and performs traditional and contemporary band literature in public performance with one concert per semester.

MUSC 1415 Brass Ensemble 0-1 none
This performing ensemble encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a brass ensemble setting. The ensemble 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.

MUSC 1418 Woodwind Ensemble 0-1 none
This performing ensemble encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a woodwind ensemble setting. The ensemble prepares and performs traditional and contemporary woodwind ensemble literature in public performance with one concert per year plus public performances in varying venues as opportunities arise.

MUSC 1419 Percussion Ensemble 1 none
This performing ensemble encompasses age levels from high school to adult and musicianship levels from intermediate to expert in a percussion ensemble setting. The ensemble prepares and performs traditional and contemporary percussion ensemble literature in public performance with one concert per year in addition to public performances in varying venues as opportunities arise.

MUSC 1421 Cantare' Concert Chorale 1 none
Cantare Concert Chorale is a mixed choral group that rehearses and performs diverse styles of music such as classical, jazz, multicultural, musical theater, and more. Achieving vocal excellence and choral blend, collaborative group participation, successful and inspiring concert performances, and a love for singing are the objectives of this course.

MUSC 1431 CLC Choir 1 none
Central Lakes College Choir is open to all students, regardless of prior vocal experience; there is no audition required. CLC Choir is a mixed choral ensemble that rehearses and performs various styles of choral music such as Classic Choral repertoire, Jazz, American Pop, Multicultural, Spirituals, Folk Songs, Musical Theater, Rock-n-Roll, Chamber Music, Madrigals, and many more. Achieving vocal excellence and choral blend, productive group rehearsals, and participation in one or more public performances per semester are the objectives of this course.

MUSC 1441 Applied Music Lessons - Guitar 1 none
These courses provides 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

MUSC 1450 Music in World Cultures 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

MUSC 1452 Intro to Music Industry 3 Accuplacer Reading 56+, or Next Gen Reading 237+
his class focuses on the study of the music industry including music in the marketplace, songwriting, publishing, copywriting, licensing, merchandizing, recording, music management, agents, unions and guilds, television, radio and career development. In addition, it focuses on the ethical questions inherent in each of these areas such as intellectual property rights, (illegal downloading) artistic responsibility (effects of content on listeners), artistic restrictions, (Wal-Mart effect, censorship), industry monopolies (Clear Channel Radio, corporate ownership of public media).

MUSC 1453 Audio Recording I 3 Accuplacer Reading 56+, or Next Gen Reading 237+, and basic music reading and computer skills 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.

MUSC 1455 Voice Training 2 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.

MUSC 1457 Music Appreciation 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

MUSC 1459 Musicology 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This course covers the basics of music theory, aural perception, and sight singing all in the context of primarily western music history. Emphasis is placed on rhythmic exercises, notation, tonality, phrase structure, simple form, fundamental harmony, and basic keyboard facility.

MUSC 1464 Applied Music Lessons - Brass 1 none
hese courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
MUSC 1475	Applied Music Lessons - Woodwind	1	none

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

MUSC 1477 Applied Music Lessons - Bass Guitar 1 none

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified. Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester. This course is repeatable.

MUSC 1481 Applied Music Lessons - Piano 1 none

These course provides 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

MUSC 1485 Applied Music Lessons - Percussion 1 none

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

MUSC 1491 Applied Music Lessons - Voice 1 none

These courses provide 30 minute private lessons with the instructor once a week covering basic music knowledge and performing skills on the medium specified (brass, woodwind, instrumental, piano, voice, guitar). Skills and literature will be specific to the instrument and individual level of the student. One studio recital performance per semester.

MUSC 2401 Evolution of Jazz 3 none

This course is a survey of the history of Jazz from its roots to today including musical styles, musicians, historical and social contexts of the various styles and times. Included in this are pre-jazz elements, New Orleans Dixieland, Chicago Dixieland, Swing, Bop, Cool, Hard Bop, Free Jazz, Fusion and Avant-Garde and the present day manifestations of these styles, the social, racial and historical relations between the music and the times.

MUSC 2580 Topics in Music 1-3 none

This course will examine selected topics of interest in Music. Offered on demand.

NATR 1106 Intro to Natural Resources Law Enforcement 2 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.

NATR 1112 Land Measurement 3 none

This course develops skills in legal descriptions, pacing, and chaining, using compasses, maps, aerial photos, and connects to our Introduction to GPS/GIS class. It involves field-work each week to develop these skills and includes learning to read and write legal descriptions from plat maps, as well as learning to use topographic maps, aerial photos, and creating maps, both by hand and computer. Differential leveling using old style transits are discussed, demonstrated and practiced along with chaining techniques used in measuring parcels of land. With the transit, learning to read the leveling rod as well as the horizontal and vertical verniers are also a part of this process. Some plot work that ties in with dendrology, plant taxonomy and other classes may also be done to help the students further develop their skills in compassing pacing and reading legal descriptions, as well as their overall understanding as to how all of this relates to any particular Natural Resource occupation.

NATR 1115 Plant Taxonomy 2 none

This course involves learning to identify vascular plants as well as develop an understanding for their morphology through dissection. The course will discuss botanical nomenclature, vegetative terminology, botanical descriptions, collecting and preserving, and a survey of vascular plant families. We will also discuss the use of keys.

NATR 1120 Dendrology 3 none

The course focus is on the characteristic features of trees and shrubs and the purpose of these features. Students will be able to readily identify 60 to 70 species of trees and shrubs by Latin (family, genus and species) and Common names found within the U.S. They will learn to use various keys to identify trees and shrubs with. Key features for study will include: leaves, twigs, buds, flowers, fruit, stem and bark. Most of our studies will be of trees in Minnesota, and the Eastern U.S. However, we will discuss Southern and Western species as well.

NATR 1125 Ichthyology 3 none

This course will review the biology, ecology, and identification of fish, with special emphasis on Minnesota fish. Students will explore taxonomy and evolutionary relationships of fish, anatomy and physiology, life history, diversity, behavior, and ecology of fish. Lab sessions will introduce students to the more than 150 species of fish native to Minnesota with emphasis on taxonomy and identification.

NATR 1130 Mammalogy 3 none

This course covers the identification and biology of mammals. Students learn taxonomic relationships, evolution, basic anatomy and life history. Labs focus on identification by pelage and skull characteristics, age and sex criteria, and small mammal trapping and handling.

NATR 1135 Ornithology 3 none

This course covers the identification, biology, and ecology of birds in Minnesota. Students will learn basic anatomy and life history, as well as family and species characteristics and songs. Labs emphasize identification of Minnesota birds.

NATR 1140 Limnology 3 none

This course develops basic knowledge in the study of freshwater systems. It discusses the physical, chemical and biological characteristics of streams and lakes; as well as the influence of water in our environment and the ecology related to organisms and ecosystems through which it flows. The importance of aquatic productivity is also considered.

NATR 1150 Aquatic Invertebrate Ecology 3 none

This course will review the taxonomy, diversity and life histories of aquatic macro-invertebrates in the upper Midwest. Ecological relationships of aquatic invertebrates with water quality and fisheries will also be investigated. Measures and metrics for determining the health of macro-invertebrate communities and ecological health will be covered.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
NATR 1152	Field Methods in Freshwater Studies	2	NATR 1140 or NATR 1150 or NATR 1125

This course will place students directly in the field collecting and interpreting aquatic data. Through this course, students may collect water samples, inventory aquatic vegetation, assess aquatic invertebrate communities, or map watersheds. Students will also work with cooperating agencies, lake associations, or LUGs to schedule sampling, present results, or provide other elements of customer service.

NATR 1200	Introduction to Natural Resources	3	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.

NATR 1280	Introduction to GPS & GIS	2	none

The objective of this class is to provide students with an introductory understanding of GIS software (ArcGIS 10.0) and GPS technology. The main emphasis will be on learning practical applications for the software. Lectures will provide examples of GIS techniques, how the processes work and the applications for which they may be used. The laboratory will provide hands-on training to learn various GIS processes which will focus on collecting, organizing, managing, analyzing, and presenting spatial data.

NATR 1300	Summer Field Experience	3	none

This course is a trip type of experience mainly for Natural Resource Students and Environmental Science Students. It involves presentations from DNR personnel and other agencies as well as camping, canoeing and backpacking at various locations from Mille Lacs Kathio to Lake Superior, and the BWCA from Ely to Grand Maris.

NATR 1302	Fall Field Experience	1	none

This is an elective course mainly for students in the Natural Resources program, but is open to other students. The course will involve chainsaw safety and certification, along with 10 hours of service learning/natural resource work. Six hours will be through The Nature Conservancy and the other four hours will be during a camping trip to Itasca State Park. The service learning work will include trail maintenance, fire prevention, seed collection, budcapping, and plant survival checks.

NATR 1305	Winter Field Experience	1	none

This course helps the student develop an understanding for working outdoors in adverse conditions; and the importance of working as a team. It develops an understanding for hypothermia and knowledge of winter first aid. The course discusses preparing for and spending a night out in the field; going over equipment, clothing, food and water, and how to pack and pull a sled. And – most important – having a good time and enjoying the Winter Environment.

NATR 1310	Internship	1-8	none

This course is designed to provide students with an opportunity to work on a full time basis in some aspect of environmental management.

NATR 1315	Basic Wildland Fire S-130, S-190	2	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.

NATR 1340	Special Project	1-4	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.

NATR 1341	Seminar	1	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.

NATR 1350	Independent Study	1-4	none

This student-generated course is an opportunity to study particular areas of interest not covered in the general curriculum.

NATR 1360	Animal Behavior	3	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.

NATR 2110	Herpetology	2	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.

NATR 2120	Wetland Ecology	3	BIOL 2416, NATR 1140

This course covers the biological, physical, and chemical interactions in wetlands. It includes delineation, classification systems, and plant and animal identification.

NATR 2130	Wildlife Management	3	none

he 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.

NATR 2140	Fisheries Management	3	NATR 1125, NATR 1140

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
NATR 2155	Soil Science	3	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.

NATR 2160	Watershed Management	3	NATR 1280

This course will review the role watersheds play in water quality in lakes and rivers. The effects of land use practices, hydrology, infrastructure development, and development will all be explored. The roles various governmental units play in the watershed will also be investigated. Students will utilize GIS and GPS applications in exploring watershed influences in lab activities.

NATR 2161	Ecosystem Management	2	NATR 1140, NATR 1200, NATR 2120

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.

NATR 2170	Advanced GPS/GIS	2	NATR 1280

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.

NATR 2201	Introduction to Parks & Interpretation	2	NATR 1200

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.

NATR 2235	Silviculture & Forest Management	3	NATR 1120, NATR 1112

This course is a combination of lecture and lab designed to familiarize students with basic silvicultural techniques and forest management considerations needed to take care of today's forests. Topics include cultural techniques used in harvesting, thinning, TSI (Timber Stand Improvement) and regeneration. Management considerations for wildlife, watershed, and recreation will be discussed as well. Other topics of discussion will include yearly management and allowable cut information.

NATR 2321	Ecological Classification of Native Plant Communities	2	NATR 2155 and NATR 1115

This course will train students in the use of soils and herbaceous vegetation to identify native plant communities for use in land management, surveying, or research. Extensive field trips will be taken throughout the course to identify different plant communities across Minnesota and investigate the ecological succession of these communities. Students will also use the natural history of native plant communities to develop forest management guidelines.

NURS 1540	Professional Nursing Fundamentals	3	Admission to Nursing Program

Professional Nursing Fundamentals provides an introduction to the theoretical foundation for client assessment and nursing skills. An introduction to the nursing process provides the student with a beginning framework for decision making. The key concepts of client-centered care, teamwork and collaboration, evidence based practice, quality improvement, safety and informatics, professional identity / behavior, nursing judgment, managing care of the individual client are introduced. Basic pathophysiology will include nutrition, elimination, sensory perception, mobility, sexual health, sleep and rest, skin integrity, oxygenation, circulation, and fluid electrolyte balance. Application of the content will be made in Professional Nursing Fundamentals Lab.

NURS 1541	Professional Nursing Fundamentals Lab	2	Admission to Nursing Program

This course is designed to allow for the application of concepts learned in the Fundamentals Course. Fundamental RN 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 client safety and quality in the performance of nursing psychomotor skills. The goal is to provide exposure to situations that will promote confidence and the ability to provide safe, quality, client-centered care in the clinical setting as the student begins their journey in the RN role. This course focuses on hands on application of nursing clinical reasoning and nursing psychomotor skills.

NURS 1542	Medication Administration Concepts	1	Admission to Nursing Program

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, intravenous solutions, and advanced intravenous titration of medications. Application will be made through subsequent nursing courses.

NURS 1544	Professional Nursing Concepts I	4	NURS 1540, NURS 1541, and NURS 1542 or NURS 2522

The beginning course in a three-semester sequence which emphasizes use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual and developmental integrity. Teaching and learning principles for 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: Nursing Process, Teaching and Learning, QSEN, Evidence Based Practice, Pharmacology, Pediatrics, Gerontology, Surgical Nursing and Musculoskeletal System.

NURS 1545	Professional Nursing Practicum I	2	NURS 1540, NURS 1541, and NURS 1542 or NURS 2522

The first course in a three-semester clinical sequence that focuses on application of the nursing process, including assessment, planning, intervention, and evaluation with adults experiencing chronic illness.Clinical application of communication skills, teaching and learning principles, and various nursing psychomotor skills is emphasized in order to provide safe, quality client-centered care and promote human flourishing. The clinical site will be in a long-term care setting.

NURS 1547	Professional Nursing Role Transition	4	Acceptance into Advanced Standing Nursing Program

This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing Program. Content includes scope of practice, nursing process, assessment, communications skills, critical thinking and nursing judgment, and the educator role. Selected nursing psychomotor skills will be reviewed 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. Content will also include gerontology, pediatrics, surgical nursing, and musculoskeletal system. This course focuses on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, and audio presentations.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
NURS 2500	Professional Nursing Leadership	2	NURS 2501, NURS 2513, NURS 2520

This course examines the complexity and nursing judgment required of the professional nursing role. The course focuses on leadership and management, delegation and supervision, teaching, ethical and legal concepts and the use of informatics in the provision of evidenced-based nursing practice, and the processes of critical thinking and synthesis. This course focuses on the many roles of the professional nurse and builds on all previously learned concepts as the student develops their own art and science of nursing and professional identity. Current trends and issues in nursing will be researched and shared.

NURS 2501 Professional Nursing Concepts Through the Lifespan I 6 admission to ADN Program

This is the beginning course in a two-semester sequence which emphasizes the use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to surgical nursing, teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health, and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: Nursing Process, Teaching and Learning, Pharmacology, Nutritional-Metabolic Pattern: Fluid and Electrolytes, Elimination Pattern: Renal and Urinary Tract Function, Activity-Exercise Pattern: Cardiovascular, Circulatory and Hematological Function, Activity-Exercise Pattern: Gas Exchange and Respiratory Function, and Normal and High Risk Ante/Intra/Postpartum and Newborn Care.

NURS 2502 Professional Nursing Concepts Through the Lifespan II 6 NURS 2501, NURS 2513, NURS 2518, NURS 2519

This is the second course in a two-semester sequence in which complexity, application of knowledge, and evidence-based practice will be emphasized. There will be continued focus on use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality, patient-centered care and human flourishing for individuals, families, and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Concepts related to teaching/learning needs in the RN role in providing education to prevent, preserve, and restore health and human flourishing are integrated. Content includes caring for clients across the lifespan. This course focuses on the pathophysiology and RN role for the following concepts: Cognitive-Perceptual Pattern: Mental Health, Pediatrics, Nutritional-Metabolic Pattern: Immunologic Function, Nutritional-Metabolic Pattern: Oncology, Nutritional-Metabolic Pattern: Endocrine Function, Cognitive-Perceptual Pattern: Neurologic Function, Nutritional-Metabolic Pattern Skin/Integrity: Integumentary, Cognitive-Perceptual Pattern: Sensorineural Function, Nutritional-Metabolic Pattern: Digestive and Gastrointestinal Function, Nutritional-Metabolic Pattern: Metabolic Function, and Activity-Exercise Pattern: Musculoskeletal.

NURS 2513 Professional Nursing Practicum I 3 admission to AND Program

This course is the clinical lab component that focuses on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process, including assessment, planning, intervention, and evaluation with individuals across the lifespan experiencing acute and chronic illness in order to provide safe, quality, patient-centered care and promote human flourishing. Clinical sites may include acute and long term care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading.

NURS 2514 Professional Nursing Practicum II 3 NURS 2501, NURS 2513, NURS 2518, NURS 2519

This course is the clinical lab component that focuses on integration of knowledge, skills, and theoretical principles, with continued emphasis on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process while caring for individuals across the lifespan experiencing acute and chronic illness and families experiencing childbearing in order to provide safe, quality, patient-centered care and promote human flourishing. Additional course emphasis includes the application of leadership skills, including prioritization, delegation, supervision, and the management components necessary to promote professional development and a spirit of inquiry in the transition to the graduate AD registered nursing role. Clinical sites may include acute care settings, clinics, and/or various community service agencies. Satisfactory/Unsatisfactory grading.

NURS 2518 Clinical Reasoning & Skills Lecture 1 admission to ADN Program

This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking and nursing judgment, educator role, and nursing leadership and management skills are integrated. This course focuses on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, and audio PowerPoints. The theoretical concepts taught in this course will be applied in NURS 2519.

NURS 2519 Clinical Reasoning & Skills Lab 1 admission to ADN Program

This course is designed to build on concepts, clinical reasoning and psychomotor skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking, educator role, and nursing leadership and management skills are integrated. Students entering the course will have basic nursing competencies upon which this course will build. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student transitions to the RN role. This course focuses on hands on application of clinical reasoning and skills through skills test out and simulation. Pass/Fail Grading.

NURS 2520 Concepts in Role Transition for the Professional Nurse 1 admission to ADN Program

This course is designed to build on concepts, clinical reasoning and skills attained in a Practical Nursing curriculum. Role differences between the LPN and RN, including scope of practice, advanced communications skills, critical thinking and nursing judgment, educator role, and nursing leadership and management skills are integrated. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student transitions to the RN role. This course focuses on hands-on applications of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, audio power points, skills test out and simulation.

NURS 2522 Medication Admin Concepts 1 admission to ADN Program, PNUR 1134 or PNUR 1140 or LPN license

This course offers a basic review of math and dimensional analysis as applied by healthcare professionals. Topics include the metric system, preparation of solutions, pediatric dosage, I.V. solutions, and advanced I.V. titration of medications. Application will be made through subsequent nursing courses.

NURS 2525 AD Progression Proficiency 1 admission to ADN Program

This course is designed for students needing AD Nursing course work remediation to meet proficiency expectations for program re-admission and progression. This includes all topic content from NURS 2501, NURS 2518, and NURS 2519. It is expected that the student will prepare and remediate independently all of the topics and skills prior to testing out. To successfully pass this course, the student must complete all unit exams, receive 80% on NURS 2501 final exam and pass all skills proficiency testing at a satisfactory level.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
NURS 2540	Professional Nursing Concepts II	6	NURS 1544, NURS 1545

The second course in a three-semester sequence which emphasizes use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality care and human flourishing for individuals, families and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Teaching and learning principles for 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: Mental Health, Fluid and Electrolytes, Renal and Urinary Tract Function, Cardiovascular, Circulatory and Hematological Function, Normal/Intra/Postpartum and Newborn Care, and High Risk Ante/Intra/Postpartum and Newborn Care.

NURS 2541	Professional Nursing Practicum II	3	NURS 1544, NURS 1545

The second course in a three-semester clinical sequence 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, and families experiencing childbearing. Clinical application of communication skills, teaching and learning principles, and various psychomotor skills is emphasized in order to provide safe, quality client-centered care. Clinical sites include acute care settings, as well as clinics and various community service agencies.

NURS 2542	Advanced Skills for the Professional Nurse	1	NURS 1544, NURS 1545

This course is designed to build on concepts, clinical reasoning, and skills attained in a fundamentals nursing courses or a Practical Nursing Program. Content includes application of RN roles including therapeutic communications skills, education, nursing judgment, clinical decision making, management of care, and leadership skills. Selected RN psychomotor skills will be taught and evaluated in a realistic, simulated learning environment with an emphasis on the application of the nursing process and use of evidenced-based practices that promote patient safety and quality in the performance of psychomotor skills. The goal is to provide exposure to actual clinical situations that will promote confidence and the ability to provide safe, quality, patient-centered care in the clinical setting as the student continues to develop and transition in the RN role. This course focuses on hands on application of clinical reasoning and psychomotor skills through quizzes, worksheets, exams, videos, audio PowerPoints, skills test-outs, and simulation.

NURS 2545	Professional Nursing Concepts III	6	NURS 2540, NURS 2541, NURS 2542

The third course in a three-semester sequence in which complexity, application of knowledge and evidence-based practice will be emphasized. There will be continued focus on use of the nursing process and nursing judgment to assess, plan, and implement nursing interventions to promote safe, quality patient-centered care and human flourishing for individuals, families and groups experiencing alterations in physiological, psychosocial, sociocultural, spiritual, and developmental integrity. Teaching and learning principles for 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: Gas Exchange and Respiratory Function, Immunologic Function, Oncology, Endocrine Function, Neurologic Function, Integumentary, Sensorineural Function, Digestive, Gastrointestinal, and Hepatic and Reproductive Function.

NURS 2546	Professional Nursing Practicum III	3	NURS 2540, NURS 2541, NURS 2542

The third course in a three-semester clinical sequence that focuses on integration of knowledge, skills, and theory principles with continued emphasis on the use of nursing judgment, evidenced-based practice, and informatics in the application of the nursing process while caring for individuals across the lifespan experiencing acute and chronic illness. Clinical application of communication skills, teaching and learning principles, and various psychomotor skills is emphasized in order to provide and promote safe, quality client-centered care. Additional course emphasis includes applying leadership skills including prioritization, delegation, supervision, and management components necessary to promote professional development and quality improvement in the transition from Associate Degree Nursing Student to the Registered Nursing role. Clinical sites include acute care settings, as well as various rural health community service agencies.

NURS 2547	Professional Nursing Leadership	2	NURS 2540, NURS 2541, NURS 2542

This course examines the complexity and nursing judgment required of the professional nursing role and focuses on leadership and management, delegation and supervision, teaching, ethical and legal concepts and the use of informatics in the provision of evidenced-based nursing practice, and the processes of critical thinking and synthesis. This course focuses on the many roles of the professional nurse and builds on all previously learned concepts as the student develops their own art and science of nursing and professional identity. Current trends and issues in nursing will be researched and shared. Plan and initiate preparation for NCLEX RN.

NSGA 1110	Nursing Assistant	3	none

The Nursing Assistant course introduces concepts of basic human needs, health/illness continuum and basic nursing skills. Skills are demonstrated and practiced in a supervised laboratory setting environment. This course also allows for practical application of skills developed and practiced in the nursing laboratory setting. Students will demonstrate learned skills under the supervision of their instructor in a nursing care setting. This course meets State and Federal requirements for placement on the State and Federal requirements for placement on the State Registry. Students must complete with a grade of C or better to pass this course. Attendance is mandatory, no more than 4 hours may be missed.

NSGA 1115	Home Health Aide	1	NSGA 1110

This course introduces the skills and knowledge required of the Home Health Aide-Homemaker.

OSKL 1103	Topics in Occupational Skills	1-3	none

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

OSKL 1142	Communication I	3	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.

OSKL 1144	Critical Reasoning Skills I	4	none

Students learn about decision making and problem solving skills used in the workplace and in their personal life. Topics covered include accessing community services, personal safety and maintenance skills, responding to emergencies and workplace safety, budgeting/consumer skills and citizenship, nutrition and meal preparation. Students will also be required to participate in a minimum of 5 hours of Service Learning, as well as a student club or organization.

OSKL 1146	Critical Reasoning Skills II	3	OSKL 1144

Students learn about decision making and problem solving skills used in the workplace and in their personal life. Topics covered include: relationship choices and dynamics, Stress and anger management techniques, goal setting, time management and development of personal filing system. Students will also be required to participate in a minimum of 5 hours of Service Learning, as well as a student club or organization.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
OSKL 1148	Employability Skills I	3	none

Students learn skills needed to seek and maintain entry-level competitive employment. Skills covered include: self advocacy skills at work, development of interpersonal skills with employer, co-workers and customers, adapting to the worksite and demonstrating personal accountability at the worksite and exploration of entry-level job opportunities to solidify job goals.

OSKL 1150	Employability Skills II	4	OSKL 1148

Students learn skills needed to find, secure and maintain employment. Topics covered include how to find employment, successful job application and interviews, and adapting to employer needs while maintaining the job. Students participate in job club at the end of the semester to assist with the job seeking process.

OSKL 1154	Supervised Pre-Internship I	4	none

This course utilizes a college or community worksite to perform job skills needed to maintain entry-level employment. Students will secure employment or participate in a paid or non-paid experience established by OSP department or employment secured by student with OSP department approval. Limited (1-2 days) job coaching is available for students enrolled in this course. Specific training goals are developed for each student with the employer based on student needs.

OSKL 1156	Supervised Pre-Internship II	4	none

This course utilizes a college or community worksite to build on the skills learned in Employability Skills I. This course utilizes a college or community worksite to perform job skills needed to maintain entry-level employment. Students will secure employment or participate in a paid or non-paid experience established by OSP department or employment secured by student with OSP department approval. Job coaching is available as needed for students enrolled in this course. Specific training goals are developed for each student with the employer based on student needs. Students work 12 hours per week.

OSKL 1162	Study Skills I	1	none

Students learn skills related to manage their time and improve organizational skills at the worksite and in the community. Skills taught include time management, personal planner usage, and using task lists. Students also work in groups with a tutor to clarify assignments given in other OSP courses.

OSKL 1164	Study Skills II	1	OSKL 1162

Students learn skills related to manage their time and improve organizational skills at the worksite and in the community. Skills taught include time management, personal planner usage, and using task lists. Students also work in groups with a tutor to clarify assignments given in other OSP courses.

OSKL 1166	Communication II	3	OSKL 1142

Students are exposed to experiences focusing on diversity, verbal, written, electronic and non-verbal communication skills utilized on the job and in the community.

OJIB 1401	Beginning Ojibwe I	4	Accuplacer Reading 56+, or Next Gen Reading 237+

This is an entry level Ojibwe language course. Emphasis will be placed on linguistics and phonetics to familiarize the student with the language. Graded level readings are used for comprehension and paired activities and role-play are implemented for beginning conversational interaction. Written and oral skills, non-linguistic aspects of the cultural background and surroundings are also explored.

OJIB 1402	Beginning Ojibwe II	4	OJIB 1401

This course is a continuation of OJIB 1401. Emphasis is placed on linguistics and phonetics to familiarize the student with the language. Graded level readings are used for comprehension and paired activities and role-play are implemented for conversational interaction. Written and oral skills, non-linguistic aspects of the cultural background and surroundings are also explored.

OJIB 1598	Topics in Ojibwe	1-3	none	This course will examine selected topics of interest in Ojibwe studies. Offered on demand.
OJIB 2401	Intermediate Ojibwe I	4	OJIB 1402	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. The second phase of the Ojibwe language sequence which adds a class of verbs to the existing vocabulary, builds speaking and listening skills with more complex sentences, and emphasizes translation from English to Ojibwe and Ojibwe to English.

OJIB 2402	Intermediate Ojibwe II	4	OJIB 2401

This course is a continuation of OJIB 2401 and continues to develop Ojibwe language skills. Emphasis is on strengthening linguistics and phonetics. Cultural background and surroundings are explored. The last phase of the Ojibwe language sequence in the classroom which adds more advanced grammar to the existing vocabulary, builds on speaking and listening skills with more complex sentences, and continues to improve translation from English to Ojibwe and Ojibwe to English.

OJIB 2500	Conversational Ojibwe	3	OJIB 2402

This course is designed to promote oral communication in the language. Grammar review and vocabulary building are structured to the needs of the students.

PHIL 1411	World Religions	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This philosophy of religion course offers a comparative framework for understanding the diversity of beliefs found in the modern world. Major religious traditions such as Hinduism, Buddhism, Confucianism, Taoism, Judaism, Islam and Christianity are examined, with special attention paid to historical development, current practices and manifestations, and fundamental beliefs.

PHIL 1415	Philosophy and Popular Culture	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This philosophy 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.

PHIL 1417	Immortality and the Afterlife	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This philosophy course examines concepts of the afterlife, personal survival and immortality from the perspectives of religion, philosophy and science. Examination of afterlife beliefs of major world religions will include detailed investigation of concepts of paradise, physical resurrection, reincarnation, and cosmic unity. Philosophical arguments for and against survival as well as analysis of theories of self and mind as seen from the perspectives of dualism, materialism, hypophenomenalism and functionalism will be examined in terms of their relationship to various types of survival; contemporary views derived from near death experiences, quantum physics and probability will also be considered.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PHIL 1421	Critical Thinking	3	Accuplacer Reading 78+, or Next Gen Reading 250+

This philosophy 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.

PHIL 1422	Honors Critical Thinking	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

The Honors Critical Thinking philosophy course focuses on teaching skills needed for effective evaluation of belief, better decision-making, and precision communication. Course content is divided into three areas: (1) principles of informal logic; (2) psychological pitfalls that distort thought; and (3) uses and abuses of language. Students will learn to construct bias-free, sound, and cogent arguments. Emphasis will be on communication, presenting and defending arguments in class debate, short presentations, and a series of written assignments. Each semester will feature a class-determined investigative project dealing with a single topic such as, for example: the lures of pseudoscience, medical quackery, deception in advertising, and media and institutional bias.

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PHIL 1460	Logic	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This philosophy course is an introduction to the basic concepts, principles, and methods of argument analysis and evaluation, including deductive and inductive reasoning, validity, soundness, truth tables, Aristotelian logic, Venn diagrams, indirect deductive proofs, and principles of induction.

PHIL 2410	Introduction to Philosophy	3	none

This is a first course in philosophy, explaining what it means to be a philosopher and to think philosophically about questions that aren't immediately answerable. Possible topics include the nature of reality, idealism, the difference between a priori and empirical knowledge, values, social philosophy, and the value of philosophy from any answers it may provide.

PHIL 2420	Ethics	3	none

This philosophy of ethics course will include discussion and analysis of what results when one attempts to think philosophically about questions of morality and value. This course will examine issues of moral motivation and responsibility, and explore an array of possible answers to questions of right and wrong, and good and bad by looking at classical and contemporary moral theories. It will involve responding through discussion forums, class activities, and writing assignments or tests.

PHIL 2421	Honors Ethics	3	Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator

The purpose of this philosphy course is to examine a variety of contemporary moral issues from a philosophical standpoint and to explore some of the many approaches and methods that can be used to clarify our thinking about these and other ethical issues, as well as to assist us in making reasoned moral judgments.

PHIL 2422	Medical Ethics	3	Accuplacer Reading Score of 78+

his philosophy 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.

PHIL 2430	Contemporary Moral Problems	3	none

The purpose of this philosophy 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.

PHIM 1114	Digital Darkroom	4	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.

PHIM 1119	Matting & Framing	4	none

Students learn to finish images using folders, frames, matting, lamination, and spray. A variety of skills are used to fit industry needs.

PHIM 1120	Intro to DSLR Cameras	2	none

This focus of this course is the operation of digital single lens reflex cameras. Students will create single and video imagery. Equipment capabilities, HD video, visual storytelling, exposure control, production, and concepts of communication will be discussed in this course.

PHIM 1122	Photo Composition	2	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.

PHIM 1126	Intro to Adobe Creative Cloud	3	none

This course covers the basic levels of Adobe PhotoShop, Illustrator and InDesign software tools and techniques.

PHIM 1128	Business of Media	3	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.

PHIM 1160	Basic Photo & Processing	3	none

The focus of this course is to instruct students in general skill of image capture and output. Single lens reflex cameras, processing and printing variables, black and white and color materials, and practices of quality control are covered. This course provides traditional darkroom experience as well as basic digital photography training.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PHIM 1164	Survey of Photography	2	none

The focus of this course is the study of the imaging industry in general. Students study key players of photography (capture & output), graphics, reprographics, and video to develop a historical perspective of the industry, which corresponds to the current marketplace. An assessment of workplace competencies is given, which provides a starting point for additional instructional assessment, for each individual in the program.

PHIM 1172 Photo Printing Systems 2 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.

PHIM 1174 Studio Photographics 3 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. Profesional lab products and workflow are emphasized.

PHIM 1176 Visual Relationships 3 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.

PHIM 1178 Business Topics 1 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.

PHIM 1284 Digital & Video Photographics 4 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.

PHIM 1310 Portrait Photography 3 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.

PHIM 1315 Photo Inkjet Printing 2 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.

PHIM 1316 Creative Camera/Darkroom 3 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.

PHIM 1368 Image Editing 2 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.

PHIM 1390 Internship 1-3 instructor's approval

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.

PHIM 2110 Color Management Systems 4 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.

PHIM 2111 Art Direction 4 none

The purpose of this course is to provide an opportunity for art directors and photographers to work together to create products. Commercial photography techniques are emphasized. Students will demonstrate learned skills, share information, and provide effective communication.

PHIM 2112 Fine Art Printing 4 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.

PHIM 2175 Photographic Certification and Business 4 none

In this course students will be completing the Certified Photographic Counselor (CPC) and/or the Society of Photofinishing Engineers certification as well as the SkillsUSA Photography assessment. Students apply basic photographic knowledge and skills to advanced exercises such as evaluating camera and printing equipment, developing solutions to color problems, formulating customer service techniques, and analyzing small business set up.

PHIM 2276 Presentations 3 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PHIM 2286	Outdoor Photography	3	none

This is an advanced course in photography which provides students opportunity to photograph in various outdoor lighting situations. Composition and capture skills are practiced and fine-tuned. Aerial photography may be also introduced. Students must have the flexibility to travel and spend additional time in the field and know how to operate output equipment for creating gallery displays.

PHIM 2296 Corporate Communication 4 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.

PHIM 2320 Photography in Social Media 2 none

The focus of this course is to develop introductory picture-taking, computer enhancement, and social media skills. During this process, students will learn how to link their camera exposures with their personal computer devices and share images in various mediums. In addition to single images, basic principles of video capture and output will also be discussed. This class is an elective course.

PHED 1502 Circuit Training 2 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.

PHED 1505 Fitness Walking 2 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.

PHED 1508 Bicycling 2 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.

PHED 1510 Beginning Skiing/Snowboarding 2 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.

PHED 1511 Advanced Skiing/Snowboarding 2 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.

PHED 1512 Beginning Yoga 2 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.

PHED 1513 Aerobic Conditioning 2 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.

PHED 1514 Cardio Sampler 2 none

This course offers an aerobic sampler. We will split up into different sections. Every few weeks the aerobic style will change from traditional step aerobics to resistance aerobics, Boso Ball aerobics, boot camp aerobics, and callisthenic aerobics.

PHED 1516 Yoga for Stress Relief 2 none

This course teaches yoga with an emphasis on gentle and restorative asanas (poses), pranayama (breathing) and an introduction to meditation for any age and fitness level. The American Heart Association, Office of Veterans Affairs, and the American Psychological Association all recommend yoga and/or breathing and meditation as a way to reduce and deal with stress or anxiety.

PHED 1520 Vinyasa (Flow) Yoga 2 none

This course emphasizes putting poses together into a series (vinyasanas) and is for students with some previous yoga experience. Knowledge of basic standing poses and relaxation techniques is recommended. Expertise in strength and flexibility is not required, but students should be generally fit. Students will be encouraged to explore yoga theory and learn the Sanskrit name for each asana.

PHED 1521 Body Conditioning 2 none

This course provides progressive fundamental conditioning of the body for health and strength through systematic use of free weights.

PHED 1522 Weight Training 2 none

This course is an advanced course in body conditioning and training with the use of free weights.

PHED 1523 Strength Training for Women 2 none

This course is an introduction to the weight room and its uses as well as a comprehensive approach to strength training for women of all ages.

PHED 1524 Recreational Sampler 2 none

his 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PHED 1528	Introduction to Exercise Science	3	none

This course is designed to take a broad-based look at the field of exercise science. This course will explore the historical and philosophical foundations of physical education, and the exercise science field. Students will investigate careers in the field of study and related certifications within the field. The purpose of this course is to acquaint students with prospective career paths within the exercise science field and introduce them to professional organizations that provide certification and career enrichment opportunities.

PHED 1534 Beginning Golf 2 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.

PHED 1536 Advanced Golf 2 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.

PHED 1541 Bowling 2 none

This is a course for those interested in learning the fundamentals of bowling. Emphasis will be placed on proper footwork, approach, delivery, and scoring. Rules and etiquette governing play will be stressed.

PHED 1544 Basketball - Coed 1 none

This course provides the basic skills and strategies of competitive basketball. Emphasis will be placed on proper passing, shooting, and defensive techniques, as well as rules of the game. Individual skills and team play will be covered.

PHED 1553 Power Volleyball 2 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.

PHED 1570 Theory of Coaching 2 none

This course presents the theory and techniques of coaching competitive sports. The fundamental concepts and basic trends in the field of coaching will be presented. Coaching history, philosophy, psychology, pedagogy, and physiology, will be examined and analyzed.

PHED 1583 Athletic Training 2 none

This course covers prevention, care, taping techniques of ankles, knees, wrist, fingers etc. and rehabilitation of athletic injuries.

PHED 1594 Fitness for Life 2 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.

PHED 1597 Honors Fitness for Life 3 Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator

This is a course for students of all ages and fitness levels introducing the main components of wellness and of physical fitness – cardio respiratory endurance, muscular strength and endurance, flexibility, body composition, and nutrition. Students will focus on self-evaluation in each component and personal program planning for living a healthier life. Current topics in wellness and/or fitness will be addressed. Students will choose a capstone project which will be either a written or oral research based study, or service learning activity based project.

PHED 1599 Topics in Physical Education 1-3 none

This course will examine selected topics of interest in physical education. Offered on demand.

PHED 2501 Varsity Sports - Football 1 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.

PHED 2502 Varsity Sports - Volleyball 1 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.

PHED 2503 Varsity Sports - Men's Basketball 1 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.

PHED 2504 Varsity Sports - Women's Basketball 1 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.

PHED 2505 Varsity Sports - Baseball 1 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.

PHED 2506 Varsity Sports - Softball 1 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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PHED 2507	Varsity Sports - Golf	1	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.

PHED 2511 Varsity Sports - Football II 1 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.

PHED 2512 Varsity Sports - Volleyball II 1 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.

PHED 2513 Varsity Sports - Men's Basketball II 1 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.

PHED 2514 Varsity Sports - Women's Basketball II 1 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.

PHED 2515 Varsity Sports - Baseball II 1 none

Second season of athletic participation in intercollegiate baseball.

PHED 2516 Varsity Sports - Softball II 1 none

Athletic participation in intercollegiate baseball for a second season. Students practice daily and compete in the Minnesota College Athletic Conference and the National Junior College Athletic Association. Students interested in participating need instructor's approval.

PHED 2517 Varsity Sports - Golf II 1 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.

PHYS 1401 College Physics I 4 MATH 1470 or Accuplacer College Math score of 63 or higher

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.

PHYS 1402 College Physics II 4 MATH 1470 and PHYS 1401

This course is an algebra-based introductory physics. It is a continuation of PHYS 1401. The course topics include: Fluids, thermodynamics, electromagnetism, AC and DC circuit, electromagnetic waves and light, optics, modern physics including atomic and nuclear physics. In addition to the emphases placed in the first semester physics course, an oral presentation of the student project is required. Knowledge of trigonometry is needed for a successful completion of this course.

PHYS 1407 Principles of Physics 3 Accuplacer Math 50+, or Next Gen AAF 250+

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.

PHYS 1411 Classical Physics I 5 MATH 1477 or MATH 1480

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.

PHYS 1412 Classical Physics II 5 PHYS 1411; MATH 1477 or MATH 1480, and MATH 1478

This course is a calculus-based introductory physics. The course is a continuation of the first semester physics course. The topics include ideal gas law, kinetic theory of gases, thermodynamics, electricity, magnetism, AC and DC circuits, electromagnetic waves, optics, and relativity. In addition to the emphases placed in the first semester physics course, an oral presentation of the student project is required.

PHYS 1425 Honors Astronomy/Physics 4 Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

This course introduces concepts in astronomy and physics through demonstration, description, experimentation, and modeling. The topics in physics include motion, gravity as force, energy, properties of matter, heat, electromagnetism, light, relativity, quantum theory, and structure of matter. The astronomy topics include stars and stellar evolution, galaxies, galactic clusters, the structure of the local universe, the laws governing the universe, cosmology, the early universe, and the rationale and evidence for black holes, dark matter, and dark energy. The laboratory activities provide opportunities for developing basic measurement and analysis skills. The student will develop critical thinking skills, apply scientific methods, and learn communication skills through oral presentation and written reports. Students in this course will be required to attend the Nobel Conference as a part of the course activity.
Students enrolled in this Honors course will be required to read additional scientific literature, participate in in-depth discussions, complete a capstone project including but not limited to: (original) research, inquiry based investigation(s), collaboration, or other project types that the instructor deems worthy of the Honors' designation

Course Descriptions

Course Code ***Course Label*** ***Credits*** ***Prerequisite***

PHYS 1430 Concepts of Physics: A Universe of Hidden Charm 3 Accuplacer Reading 56+, or Next Gen Reading 237+This course introduces concepts in physics through demonstration, description, experimentation, and proportional relation. The topics covered include motion, Newton's Laws of Motion, energy, gravity, waves, sound, properties of matter, heat, electricity, magnetism, and light. Selected topics from relativity, quantum theory, and structure of matter are also covered. The laboratory component provides opportunities for developing basic measurement and analysis skills, and conducting experiments in mechanics, heat, waves, sound, electricity, magnetism, optics, atomic structure, and radiation. The student will develop critical thinking skills, apply scientific methods, and learn communication skills through oral presentation and written reports. Mathematics at high school algebra level is used to unveil models of the known physical world.

PHYS 1480 Flight to Edge of Space: Electronic, Mechanical, and Navigational Systems 2 Accuplacer Reading 56+, or Next Gen Reading 237+
In this course students will work as a team to plan and successfully conduct a stratospheric balloon flight that carries their scientific research projects to the near-space. Activities include hypothesis writing, experimental design, construction, execution, data collection, analysis, scientific report writing, and presentation. Content topics in this course include dynamics, atmospheric physics, geophysics, electric and electronic circuits, navigational and electronic control systems. Designing scientific instruments involves breadboarding electronic components, programming microcontroller, testing electronics and experiment module. A companion Earth science course is required which will involve topics in Earth atmospheric structure and dynamic processes, contemporary topics in atmospheric pollution, and societal issues involving the atmosphere. Successful execution of a stratospheric balloon flight requires extensive teamwork and collaboration. The balloon flight will involve at least one all-day field excursion, and is required for this course. This is one of two courses in a learning community. The other is ESCI 1480 Flight to Edge of Space: Learning and Experimentation. Both courses must be taken concurrently. Expect extensive collaboration, communication, and transfer across the two courses.

POLS 1430 Introduction to Political Science 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This course is an introduction to the basic concepts, philosophies, institutions and processes of government and politics. Topics of study include key concepts and facts, including the significant ideologies that influence modern governments. Study will also include comparative governmental systems with special emphasis placed on political leadership, terrorism, and types of warfare between nations. An examination of citizen participation in politics, political behavior, and political ideologies will also be included.

POLS 1435 American Government and Politics 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

POLS 1439 State and Local Government 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This is a general survey course on state and local government. Topics of study include federalism, state constitutions, political parties, interest groups, elections, state agencies, local government, and policy making. The course covers state legislatures and law-making with special emphasis on the Minnesota Legislature. The office of governor is examined as is the Minnesota State Constitution and state government's relationship to Minnesota's local units of government.

POLS 1440 Society and Law 3 Accuplacer Reading 56+, or Next Gen Reading 237+
This course introduces students to the basic concepts of the law and the legal system in American society. Topics include the history of law, court organization, criminal law and procedure, constitutional law, administrative law, contracts and family law. This course examines how the law reflects society's values, why the law is closely connected to the political system and how the laws are enforced. Specific laws are analyzed and discussed.

POLS 2401 Federal Indian Policy 3 none
Surveys the development of United States Indian Policy. Examines the treaties, laws, and institutions that have been the basis of the trust relationship between the Indian people and the federal government. Course is offered on demand.

POLS 2402 Tribal Government 3 none
This course will provide an introduction to regional tribal governments by providing a history of their development, an overview of their structures, functions, powers and procedures. The course will compare and contrast these governments to other local, state and federal government, and discuss the varying approaches different tribal government have taken toward tribal business entities and the use of tribal business proceeds.

POLS 2450 International Relations 3 none
This course is an introduction to the concepts and practice of international relations, especially politics between different nations. Topics of study include globalization; differing national systems, interests and motivations; foreign policy and diplomacy; war and threats to international security; international law and organizations; global economics and technology; and the future of international relations.

POLS 2581 Topics in Political Science I 1-3 none
This course will examine selected topics of interest in Political Science. On demand.

PNUR 1130 Life Span 1 Score of 78 or higher on Accuplacer Reading
This course covers theories of human development and the progressive stages of physical, emotional, intellectual and social development during the life span.

PNUR 1132 Infection Control 1 Score of 78 or higher on Accuplacer Reading
This course covers scientific concepts related to the causes of infectious diseases, transmission of these diseases and methods of controlling their spread. In addition, the student will study how the human body responds and protects itself from these diseases.

PNUR 1134 Pharmacology 2 admission to PN or Medical Assistant program
This course develops the student's awareness of basic pharmacological concepts. It teaches the Practical Nursing students how to calculate medication dosages and perform conversions between measurement systems. It covers drug laws and standards and safe medication administration. Students learn about the actions of medications in the body, i.e. absorption, biotransformation, metabolism, and excretion. The various classifications of medications are discussed along with how to use medication references.

PNUR 1138 Medical Terminology 1 Score of 78 or higher on Accuplacer Reading
This course teaches students to recognize and build medical terms after learning the meaning of word parts. The course is based on a systems approach. Students will also learn to interpret and use common medical abbreviations.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PNUR 1140	Medication Calculations for Health Care Careers	1	Score of 65 or higher on Accuplacer Arithmetic or 52 or higher on Accuplacer Elementary Algebra

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.

PNUR 1149 Clinical I 3 PNUR 1130, PNUR 1140

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 primarly 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.

PNUR 1150 Clinical II 3 PNUR 1132, PNUR 1138, PNUR 1140, PNUR 1149, PNUR 1168, PNUR 1265

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.

PNUR 1151 Clinical Lab I 2 PNUR 1160

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.

PNUR 1152 Clinical Lab II 5 PNUR 1134, PNUR 1151, PNUR 1265

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.

PNUR 1160 Practical Nursing Skills Lab 3 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.

PNUR 1161 Clinical Lab I 1 none

In this beginning clinical laboratory course, the student will take care of selected adult clients at an entry level. This clinical experience will take place in an acute care setting. The student will implement cares and skills that have been learned in prior laboratory and Practical Nursing theory courses. In addition, the student will demonstrate effective communication skills, maintain patient safety, and document cares accurately.

PNUR 1162 Clinical Lab II 4 PNUR 1134, PNUR 1161, PNUR 1265

In this clinical course the student will be expanding upon the knowledge, skills and attitudes necessary to assist individuals experiencing common health care problems that were started in PNUR 1161. The student will demonstrate skill in problem solving through the use of the nursing process as they provide care for a variety of clients throughout the life span and in different stages of the health/illness continuum appropriate to the role of the practical nurse. Observational experiences are provided in selected areas to enrich the clinical experience. Student will work full shifts that may include day and/or evening hours.

PNUR 1163 Clinical Lab III 3 PNUR 1162, PNUR 1166, PNUR 1175, PNUR 1270

In this clinical laboratory, additional skills are performed, including IV therapy and professional responsibilities. Students will work full shifts in a clinical setting demonstrating correlation of theory and skills expected of new graduates. Clinical shifts will include day and evening hours.

PNUR 1166 Gerontological Nursing 2 Admission to the PN program

This course covers aging and the aging process. Students will identify physical, psychosocial and health needs of the elderly population. The course emphasizes the role of the nurse in health promotion of older adults, focusing on maximizing potential and minimizing the effects of aging. Some topics covered include; medication interaction with the elderly, elder abuse, community resources and common illnesses of the elderly.

PNUR 1168 Psychosocial Nursing 3 Admission to the PN program

This course presents general principles of communication in the health care setting. The course will build on the student's basic skills and assist in developing skills in the care of emotional/mental illness, substance abuse, and social problems emphasizing nursing interventions in all health care settings.

PNUR 1175 Maternal Child Health 2 PNUR 1161, PNUR 1134, PNUR 1265

This course describes signs of pregnancy, prenatal care, labor and delivery, and postpartum care. Complications of pregnancy, labor and delivery and postpartum, as well as fundamental nursing care of the neonate will be presented. The pediatric portion of the course describes the child's experience of hospitalization and health care adaptations for child and family. Care of the child with pediatric disease conditions will be presented.

PNUR 1265 Medical-Surgical Nursing I 5 admission to the PN program

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
PNUR 1270	Medical-Surgical Nursing II	6	PNUR 1134, PNUR 1161, PNUR 1265

This course continued on where Medical-Surgical Nursing I finished. In this course selected diseases of the remaining various body systems are discussed within the framework of the nursing process. The role of nutrition in prevention of disease and its application in treatment of disease is included.

PNUR 1303 PN Refresher 3 Must be currently licensed or must apply to MN Board of Nursing for relicensure prior to beginning class

his course is designed to refresh Licensed Practical Nurses who have been inactive or need to re-register their licenses with the Minnesota Board of Nursing. Topics covered in this class are the role of the LPN, the State of Minnesota Nurse Practice Act, legal and ethical issues, modalities in nursing care delivery systems, nursing process, and update in clinical practice with review of body systems and related skills. Clinical experience will be provided in the acute care setting.

PNUR 2360 Independent Study 1-3 none

This student-generated course is an opportunity to study particular areas of interest not covered in the general curriculum.

PSYC 1423 Positive Psychology: The Science of Well-Being 3 Accuplacer Reading 56+, or Next Gen Reading 237+

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.

PSYC 1425 Environmental Psychology 3 Accuplacer Reading 56+, or Next Gen Reading 237+

This course investigates the psychology of environmental problems as an interdisciplinary blend of psychology and environmental science by viewing current environmental issues through eight major psychological approach lenses. This course facilitates student understanding of how human consciousness and behavior contribute to, and result from, environmental threats. Learners will investigate how humans can choose to live in a manner that will ensure a sustainable future and how humanity is related to nature in terms of global interdependence, as well as how agriculturists can produce food sources to sustain a growing global population. Students who are interested in their roles as stewards of the preservation of nature for future generations can explore how psychology and the environment are interrelated. Learners will create individualized self-control projects (Behavior Change Plans) based on the seven aspects of personal lifestyle that most significantly impact the environment. They will describe how they can alter their daily lifestyles to live more responsible, sustainable, and conscious lives.

PSYC 2421 General Psychology 4 none

This class presents a general introduction to psychology as a biosocial science. This survey course will familiarize the student with the basic principles of psychology, show how psychologists employ the scientific method, and equip the beginning student of psychology with a working vocabulary of psychological terminology and critical thinking skills. Areas to be covered include research, the nervous system, learning, personality, memory, psychological disorders and therapy.

PSYC 2423 Honors General Psychology 4 Accuplacer Reading score of 100 or greater, or ACT English score of 24 or greater, or permission of Honors Coordinator

This honors class presents a general introduction to psychology as a biosocial science. This survey course will familiarize the student with the basic principles of psychology, show how psychologists employ the scientific method, and equip the beginning student of psychology with a working vocabulary of psychological terminology and critical thinking skills. Areas to be covered include research, neuroscience and behavior, developmental and social psychology, personality, motivation, thinking and learning, memory, psychological disorders and therapy. Students will be introduced to psychological research and writing.

PSYC 2431 Human Development 3 PSYC 2421

This class presents a general introduction to psychology as a biosocial science. This survey course will familiarize the student with the basic principles of psychology, show how psychologists employ the scientific method, and equip the beginning student of psychology with a working vocabulary of psychological terminology and critical thinking skills. Areas to be covered include research, neuroscience and behavior, developmental and social psychology, personality, motivation, thinking and learning, memory, psychological disorders and therapy.

PSYC 2435 Educational Psychology 3 PSYC 2421

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.

PSYC 2470 Abnormal Psychology 3 PSYC 2421 or PSYC 2423

This course examines psychological disorders, their causes and available treatments. Topics covered include anxiety, mood disorders, substance-related disorders, eating disorders, schizophrenia and disorders of childhood and adolescence. The difference between normal and disordered functioning and relevant social, economic, cultural and historical contexts will also be discussed. Applicable research will be reviewed in terms of cultural diversity implications from both historical and current perspectives.

PSYC 2570 Topics in Psychology 1-3 none

This course will examine selected topics in psychology.

READ 0595 Academic Literacy 5 Accuplacer Reading score of 56 or greater

Academic Literacy provides intensive instruction in critical thinking, reading, and writing in preparation for Composition I and other college courses. Using theme-based readings from a variety of genres, coursework will emphasize independent reading of complex academic texts, critical response to ideas and information in academic texts, writing essays that integrate ideas and information from academic texts, and practice in understanding lectures and preparing for discussions.

READ 1505 Critical Literacy 2 Accuplacer Reading score of 56 or greater

Critical Literacy provides advanced instruction in critical academic discourse to support success in Composition I and other college-level courses. Using theme based readings from a variety of academic disciplines, students analyze complex academic texts, critically respond to ideas and information in academic texts, and construct essays and other written responses that integrate ideas and information from academic texts.

READ 1598 Topics in Reading 1-4 none

This course will examine selected topics of interest in Reading. Offered on demand.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
RAST 1101	Industrial Electronics I	3	Accuplacer Elementary Algebra score of 65 or co-requisite of RAST 1114 or equivalent

This course covers resistance, capacitance, and inductance and their relationships with DC and AC voltages. The course begins with DC theory and covers Ohm's law, series circuits, Kirchhoff's law, series-parallel Circuits and networks. AC generation, RC/RL circuits, rectification and the use of test equipment will also be addressed. Active devices such as diodes will be covered on an introductory level.

RAST 1102 Industrial Electronics II 3 RAST 1101

This course continues where Industrial Electronics I left off by covering resistive, inductive, and capacitive circuits. This course also includes digital electronics by covering numbering systems, logic gates, Boolean Algebra, sequential logic circuits, encoders, decoders, and digital to analog converters.

RAST 1103 Motors and Drives 3 RAST 1101

This course covers electrical safety, commonly used industrial electrical symbols, and industrial electrical design using wiring and line (ladder) diagrams. The course also covers industrial equipment such as: pushbuttons, relays, contactors, motor starters, and variable frequency drives. Preventive maintenance and troubleshooting techniques will also be covered.

RAST 1104 Introduction to Automation 2 none

This course is an introduction to start-up, operation and simple programming of industry standard robots in the robot lab. Additional topics include robot safety, robot types, robot move types, program structure, motion control, decision making, peripheral control, robot control modes, and program examples.

RAST 1105 Blueprint Reading 2 none

This course covers the skills necessary to interpret drawings and make technical sketches. Projection systems, drawing symbols, working drawings, assembly drawings, piping drawings, schematics, block diagrams, cable drawings, wire lists and multipage drawings are studied as they relate to robotics and automation.

RAST 1109 Computers in Industry 2 none

This course covers an introduction hardware and software components of personal computers. Items covered include the development of computers, working with multiple Microsoft operating systems, the use of Microsoft Office products, networking, data transmission, basic replacement of hardware, software installation, and working with peripherals such as floppy/hard/CD drives.

RAST 1110 Introduction to Manufacturing 2 none

This course provides a basic overview of basic manufacturing processes and career opportunities within manufacturing. Students will participate in a manufacturing simulation in which they will analyze the manufacturing process for a product and redesign the process to incorporate a teaming approach. Students will be given an introduction to the critical nature of safety in manufacturing and to the role of the individual in maintaining a safe work environment. This course provides students with an opportunity to develop their interpersonal skills through interactive exercises conducted in a team setting. Debriefing these exercises with all members of the class helps ensure that the exercises translate into personal and interpersonal learning for the participants.

RAST 1111 Industrial Electronics Lab I 2 none

This course covers hands-on skills in basic electronics. A proto-board is used in conjunction with several pieces of text equipment to build and measure circuit parameters. The laboratory exercises reinforce the related concepts covered in the companion theory course. The laboratory procedure teaches the student basic test and measurement techniques.

RAST 1113 Motors & Drives Lab 3 RAST 1111

This course uses electrical safety procedures, electrical drawings, and commonly used symbols for hands on learning. The use of contactors, motor starters, relays, motors, limit switches, solenoids, and indicators will enhance the hands on learning experience and wiring of various circuits. Troubleshooting and repairing techniques will also be covered.

RAST 1114 Math for Industrial Technology 3 none

This course covers topics such as calculator usage, SI unit conversions, algebraic applications of Ohm's & Power Laws, trigonometric functions, & dimensional analysis.

RAST 1120 Introduction to Engineering Graphics 2 none

This course introduces students to parametric modeling using the Solid Works program. Solid Works is prominent in industry and the theory it uses to create models is typical of this type of software.

RAST 1206 Programmable Logic Controllers I 3 RAST 1101, RAST 1109

This course covers the basic concepts of operation common to PLCs. Content will include basic uses of PLC operation, wiring input and output devices, sequencing, timing systems, countering systems, math functions, and programming techniques. This course introduces the Ladder Logic programming environment. Troubleshooting programs along with wiring will be practiced in the lab.

RAST 1212 Industrial Electronics Lab II 2 RAST 1111

This course continues were Industrial Electronics Lab I left off by teaching hands-on skills in measuring and calculating resistive, inductive, and capacitive circuit parameters. This course also includes digital electronics by constructing circuits that demonstrate numbering systems, logic gates, Boolean Algebra, sequential logic circuits, encoders, decoders, and digital to analog converters.

RAST 2101 Application Planning & Layout 2 RAST 1102, RAST 1212

This course covers the specifics of how a robotic application / automated manufacturing cell is designed. Included in the course are robotic placement within cell, types of robot(s) used within the cell, safety devices, electrical interfacing of controls, programming flow charting, developing timelines, fixture design, robot tooling design.

RAST 2105 Transducers 2 RAST 1101, RAST 1104, RAST 1111 This course covers basic sensing terminology, both contact and non-contact sensing devices will be covered in both lecture and lab activities. These include inductive, photo, capacitive, analog, and machine vision. Students will during the lab portion of the class wire and measure sensor parameters using manufacturers data sheets, and sensor software. Included in the labs students will integrate the sensors as they would be used in common automated manufacturing systems. This includes integrating the devices into robot and plc I/O, programming plc, sensors and robots that give learners a practical understanding of how different sensors are used in the automated manufacturing environment.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite

RAST 2106 Industrial Electronics III 2 RAST 1102
This course covers bipolar transistors, voltage/current BJT operation, BJT characteristics, basic uses of BJT, BJT amplifier circuits. FET's, MOS FET's, power FET's, operational amplifiers, optoelectronics, robot I/O types, I/O setups, and configurations.

RAST 2116 Industrial Electronics Lab III 2 RAST 1212
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.

RAST 2120 Offline Programming and Simulation 3 MTRD 1130, RAST 2132
The course will introduce students to offline or virtual programming utilizing a 3-D graphical simulation software platform utilized by a major robotics manufacturer. The student will utilize the simulation software package to virtually model an existing robotic system in order to simulate a robotic process, create and modify robot code, and conduct feasibility studies.

RAST 2121 SCADA Programming 2 RAST 2355
This course will train students in higher programming levels of supervisory computer and data acquisition (SCADA). Students will design and create graphical user interfaces in order to control complex automated processes. Students will monitor multiple processes in order to provide status indication, process control, data collection, and historical data trending. Students will set up industrial network communication in order to read and write data points to and from other processors such as industrial robots, programmable logic controllers, vision systems, and other computer-based operating systems.

RAST 2122 HMI Programming 2 RAST 2132, RAST 2355
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.

RAST 2123 Robotic Vision Programming 2 RAST 2132
The course will train students to design and program machine vision systems in order to integrate them into robotic and automated systems. Students will learn how to acquire data points to identify product, positioning, orientation, size, and various quality assurance measurements. Students will create and set up certain industrial networks in order to communicate required information.

RAST 2124 Lenses, Lighting, and Vision Hardware 2 RAST 2132
This course will aid students in the application and design of machine vision systems. Students will learn different techniques in lighting product using multiple lighting sources, including visible, infrared, and ultra-violet. Students will learn about matching filters to lighting sources and camera lens focal lengths, and will be exposed to various physical camera hardware platforms in both two-dimensional and three-dimensional environments.

RAST 2132 Robotic Programming 3 RAST 1104
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.

RAST 2150 Introduction to Robot Operations 2 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.

RAST 2151 Robotics Integration Lab I 6 RAST 2101
The robotics integration lab course begins the process of student working within application groups implementing the robotic automated manufacturing application designed and developed in RAST 2101 Application Planning and Layout. This will include building electrical control center, building robot end of arm tooling, product fixturing, programming of all programmable devices within the cell which can include multiple robots, programmable logic controllers, sensors and other devices. During the course students will document cell progress, evaluate operation of electrical, mechanical and programmed devices. Applications can be welding, material handling, assembly, CNC machine load unload, and replicate actual automated manufacturing processes in industry.

RAST 2153 Applied Robotic Certification Lab 6 RAST 2101, RAST 2151
This course is designed for students desiring to expand their knowledge of specific advanced robotic applications used in industry. These applications may include vision guided robot applications, robotic welding integration, SCADA, robotic offline programming, robot cell simulations, and HMI (human machine interface). Once students select a specific application area, they will plan, document, program and interface the robot(s) and related software and equipment into a completed, functional robotic cell specific for that application.

RAST 2154 Robot Controller Maintenance 2 RAST 1102, RAST 1212
This course covers normal maintenance and trouble shooting of robot controller components. Included are lab exercises in trouble shooting real and simulated faults within the controller using electrical and software trouble shooting procedures outlined within the manufacturers' manuals. Safe trouble shooting procedures will be discussed in lecture and practiced in the lab.

RAST 2165 Fluid Power 2 PHYS 1401
This course covers fluid power and pneumatic symbols, basic circuits, properties of both fluid and compressed air. Storage, connections, valves, fitting, pressure area volume will be examined and explained. Actuating devices and controlling devices used in common automated systems will be covered.

RAST 2355 Programmable Logic Controllers II 2 none
This course expands on the use of plc's covered in RAST 1106. Included in the course is integration of the plc hardware and programs to control complex robot applications. Included in the course are the use of advanced program functions within the plc software structure, examples include masked memory moves, sub routines, sequencers, math function, data types, data move commands, hardware / software communication parameters, external programming devices. Trouble shooting of both plc hardware, software and program logic will be covered.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
RAST 2370	Topics in Robotics	1-6	none

This course will examine selected topics of interest in Robotics. Offered on demand.

RAST 2390	Robotics Internship	1-6	instructor's consent

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.

RAST 2395	Advanced Robot Controller Programming	2	RAST 1102, RAST 1212

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.

RAST 2399	Independent Study	1-5	instructor's consent

This student-generated course is an opportunity to study particular areas of interest not covered in the general curriculum.

SOCL 1401	Introduction to Sociology	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This foundation course is highly recommended as the starting point from which students may logically proceed to higher level sociology classes. Students will be introduced to the fundamental concepts of the sociological perspective, including culture, socialization, organization, authority, deviance and inequality. Using the scientific method, students will hone their critical thinking skills by interpreting, analyzing, and evaluating the social world.

SOCL 1403	Honors Introduction to Sociology	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

This foundation honors course is highly recommended as the starting point from which students may logically proceed to further study of sociology. Students will be introduced to the fundamental concepts of the sociological perspective, including culture, socialization, organization, authority, deviance and inequality. Students in the honors course will be required to write papers reflecting a substantial understanding of the principle concepts of the sociological perspective.

SOCL 1472	Sociology of the Family	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course examines contemporary issues facing families in the United States. Students will examine key topics in the sociology of families such as marriage, cohabitation, divorce, teen pregnancy and family violence. Attention will also be given to the variations in families by race, class, gender, and sexual orientation. Students will refine their sociological imaginations.

OCL 2405	Criminology	3	none

Students will study the nature and origins of crime, past and present theories of crime, the social construction of criminality, the social costs of incarceration, and cross-cultural strategies for addressing crime issues and decriminalization of consensual crimes.

SOCL 2411	Social Problems	3	

This course is an overview of current social problems using the sociological perspectives. Students will be able to articulate and apply their own ethical views and insights. The course analyzes how problems come to be defined, their ramifications and possible solutions. The course critically analyzes a range of social issues such as poverty and inequality, racism, sexism, family breakdown, crime and violence, and the environment among other emerging structural and systematic processes affecting the survival of peoples nationally and globally.

SOCL 2422	Culture and Environment	3	none

Students will examine environmental issues from a sociological perspective. The focus will be on social, political, and economic factors which encourage or discourage protection of the natural life support systems of earth. What steps are going to be required to restore our damaged resources and create a sustainable society for future generations? Considering the implications of what we have studied, students will be encouraged to develop a personal philosophy.

SOCL 2480	Sociology of Death and Dying	3	none

This course examines death, dying and bereavement from a variety of perspectives (e.g., historical, cross-cultural and social-psychological), but it emphasizes a sociological perspective on death and dying. Among the topics covered are: the social meaning of death, America as a death-denying culture, the dying process, life after death, euthanasia, suicide, hospice care, funerals and body disposition, the American Healthcare system, diversity in death rituals, and the grieving process.

SOCL 2481	Race, Ethnicity & Oppression	3	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.

SOCL 2599	Topics in Sociology	1-3	none

This course will examine selected topics of interest in Sociology. Offered on demand.

SPAN 1401	Beginning Spanish I	4	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is an entry level language class. Beginning level vocabulary groupings (pastimes, family, time, clothing, foods) will be used in elementary conversations. Grammar will include present tense of regular verbs, stem-changers, present progressive, irregulars, reflexives and some idiomatic constructs. Preterite tense of regular verbs will be introduced, time permitting. Graded level readings are used for comprehension and paired activities and role-play are implemented for beginning conversational interaction. Cultural data and correct intercultural communication is introduced by country.

SPAN 1402	Beginning Spanish II	4	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is a continuation of SPAN 1401. Basic vocabulary groupings will be added (town, travel, social issues, as per text) at a more diverse topic level. Short readings related to Spanish-speaking countries are introduced for pronunciation and comprehension exercises. Grammar and vocabulary is practiced through writing and oral class participation. Advanced grammar includes: preterit, conditional, imperative (commands), present tense subjunctive. Cultural activities are an integral piece of each lesson. (SPAN 1401, 1 year of high school Spanish or equivalent recommended.)

SPAN 1597	Topics in Spanish	1-3	none

This course will examine a specialized selected topic related to Spanish language and / or Spanish language cultures. On demand.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
SPAN 1598	Topics in Spanish	1-3	none

This course will examine a specialized selected topic related to Spanish language and / or Spanish language cultures. On demand.

SPAN 2401	Intermediate Spanish I	4	none

This course is a review of the fundamentals in grammar and vocabulary covered in the first year (or years) of Spanish language study, with amplification to more advanced structures and complex language usage. The remaining verb tenses (future, conditional, subjunctives) will be introduced through reading, writing and speaking. Graded level readers are used for pronunciation, comprehension and cultural information, providing topics in art, music, politics and current events. Short essays and conversations complete the language skill practices. SPAN 1402 or equivalent (2-3 years of high school Spanish) recommended.

SPAN 2404	Intermediate Spanish II	4	none

This course follows SPAN 2401 in sequence of grammar acquisition. Review begins with the present subjunctive formation and uses. Continued emphasis will cover: Reflexives, Ser/Estar, passive voice, perfect tenses and finally, the introduction of imperfect subjunctive. Grammar practice and the perfecting of language structures is emphasized. Vocabulary will reflect upper level constructions, idioms, words frequently confused and cultural variances. This course is also designed to promote communication in the target language. Graded level readers provide reading practice, grammar review, vocabulary building and cultural reference. Role play, videos, newspapers, magazines and native speaker guests serve as a basis for class discussion, enhance reading, listening and comprehension skills.

SPAN 2420	Many Faces of Mexico	3	none

This interdisciplinary course explores the cultural, historical and social realities which together form contemporary Mexico. By studying the roots (Aztec, Toltec, Olmec) through the Spanish colonization (Cortés – Santa Anna), U.S. / Mexican relations (The Alamo to THE WALL), we arrive at the present with a better understanding of today's economical, political and sociological interrelationship. What future will we forge between these two neighbors?

SPAN 2425	Cultures of Latin America	3	none

his 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.

SUST 1400	Introduction to Sustainability	3	none

In the past few years, sustainability concerns have come to the forefront. In order for humans to continue, and pass on to future generations a planet that provides for the needs of all, we must change the way we do things. This course will look at what sustainability is, what it is not, and what it needs to be.

SUST 2160	Sustainability Case Studies	2	none

This is a capstone course for a certificate in Sustainability. It can also be used by any student who, after completing the Introduction to Sustainability course, wants to determine if they can provide possible solutions for real world issues regarding sustainability and the future of all life on our planet.

THTR 1442	Improvisation	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course will introduce students to the performance art of improvisation. Through an application of basic improvisation principles and the use of theatre games, students will acquire a basic skill level in spontaneously generating character, situation, dialogue, and story. Students will showcase their work in live performance situations with invited audiences.

THTR 1443	Stage to Screen: Plays that Become Movies	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course will study selected plays and the film versions of those plays. It will focus on a comparative analysis of how the ideas of a script are communicated via the stage versus how those ideas are communicated via the film medium. Students will read plays, view the film versions of those plays, and participate in in-class discussion and submit analytical papers.

THTR 1445	Acting for the Camera	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is for students who want to learn about acting in video, film, television, and other recorded media. Students will have the opportunity to perform in front of the camera and see themselves as the camera records them, revealing their strengths and challenges. Acting techniques specific to working in film and television will be covered along with methods for auditioning, script analysis, character development, acting as communication, and acting styles in film and video. The course is also recommended for those wishing to enhance their on-screen presentational skills, be it in film, video, or online presentations.

THTR 1451	Introduction to Theatre	3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

THTR 1452	Stage Make-up	3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

THTR 1453	Theatre Costuming	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This one credit class is for participating in any of the following technical area of the theatre: i.e. set construction, painting, lighting, sound, make-up, costuming, properties, front of house and stage crew. This course requires 30 hours of work over the course of the semester. Students may take up to four Theatre Production Labs.

THTR 1461	Acting I	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is designed to acquaint the student with the fundamentals of acting through a study of theory and lab experience. Recommended for students pursuing majors or minors in speech, theatre, English, or elementary education.

THTR 1462	Acting II	3	THTR 1461 or instructor's consent

This is an advanced course in acting, taking the Stanislavski acting method and concentrating on in-depth scenework and critiquing.

THTR 1466	Acting Lab	1	instructor's consent

Acting labs are for the rehearsal and performance of plays being presented by the Theatre Department. Rehearsal and performance schedules to be arranged.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
THTR 1471	Theatre Production Lab	1	Accuplacer Reading 56+, or Next Gen Reading 237+

In this one credit class, students participate in any of the following technical areas of the theatre: set construction, painting, lighting, sound, make-up, costuming, properties, front of house, and stage crew.

THTR 1478	Technical Theatre	3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

THTR 1480	The Theatre Experience	1-3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

THTR 1481	The Theatre Experience-New York	1-3	Accuplacer Reading 56+, or Next Gen Reading 237+

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.

THTR 1482	The Theatre Experience-London	1-3	Accuplacer Reading 56+, or Next Gen Reading 237+

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. NOTE: This field trip is optional. Students who do not travel to London will be given an alternate research assignment with a play-going component.

THTR 1483	Honors Theatre Experience	3	Accuplacer Reading 100+, or Next Gen Reading 265+, or ACT English 24+

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.

THTR 1496	Summer Theatre Workshop	3	Accuplacer Reading 56+, or Next Gen Reading 237+

This course is a workshop in acting and/or technical areas of theatre performance and production. Activities and assignments will be determined by the needs of the shows in the summer theatre season.

THTR 1597	Topics in Humanistic Theatre	1-3	none

This course will cover selected topics of interest in Theatre.

THTR 1598	Topics in Humanistic Theatre	1-3	none

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

THTR 2410	Children's Theatre	3	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.

THTR 2441	Directing for the Theatre	3	THTR 1451 or instructor's consent

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.

THTR 2450	Theatre History	3	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.

THTR 2491	Theatre Independent Study	1-3	none

In this course the student will meet with the instructor several times and complete a mutually agreed upon theatre project.

VPRO 1100	Media Script Writing	3	ENGL 1410 or ENGL 1422

This course is designed to develop scriptwriting skills for broadcast, web and corporate film making. All video production incorporates some form of scripting. Students will explore the many different ways a scriptwriter ties the project together. Students will learn to write scripts meant to be 'made' and not just read. Camera angles and cues will be studied. Creative writing skills will be emphasized in conjunction with the ability to communicate in words 'visually' and write 'spatially'. Emphasis is placed on the traditional writing process (brainstorming, outline, treatment, draft and revision. Stylistically, our focus will be on the AV-2-column style. Topical areas include corporate communications, commercials/PSAs, documentary and feature-narrative

VPRO 1110	Video Editing Workflow	3	none

This course consists of entry-level videography skills used to produce motion pictures from conception to completed video. Students will produce commercials, documentaries and fictional narratives from start to finish. The emphasis is on postproduction techniques - namely, editing. However, basic terminology and strategies of all production aspects will be examined. The three main phases of production will be deconstructed to reveal a film's internal development. Students will divide into production teams and immediately begin creating content. Students will complete the course with one or more portfolio videos.

VPRO 1112	Basic Camera	3	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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
VPRO 1114	Camera Operations	3	none

This course will introduce incoming students to professional still and video camera operations. Safe handling of equipment will be emphasized. Instruction will include standard functions critical for professional-level DSLR & video camera operation; focus, color balance, audio, exposure and power. Introductory shot composition and motion picture sequencing will be examined. Students will gain experience in a variety of professional-level cameras.

VPRO 1126	Media Lighting and Sound	4	none

This course is intended to familiarize videography students with the two most significant support services in video production - lighting and audio. Participants will explore the proper use of broadcast lighting equipment. On alternate weeks, students will explore the proper use of sound acquisition equipment and sound manipulation software applicable to enhanced motion picture quality.

VPRO 1128	Business of Media	3	none

Students will explore effective business practices relating to the media industry. The course is designed to assist students in gaining employment. Topics of study include career options, small business development, accounting procedures, marketing techniques, portfolio creation, resumes, cover letters, business plans, and interview techniques.

VPRO 1130	Creative Development	2	none

This course focuses on developing techniques in the development and use of creative content in the preparation of video projects. Students will compose unconventional scripts, employ arresting camera techniques and improvise new editing styles to create innovative videos.

VPRO 1150	Media Graphics	2	none

This course covers basic development and manipulations of raster and vector images for media presentations.

VPRO 1290	Video Production Internship	1-6	instructor's consent

This course provides practical experience in the development, production and distribution of videos through an individualized occupational experience. The internship allows students to demonstrate their knowledge and skills, as well as learning new techniques and enhancing their skills in a job setting.

VPRO 2104	CLC Productions I	4	none

CLC Productions I is part one of a two-course sequence. In CLC Productions I, students will be divided into two groups and follow one of two tracks. Students in Track A will focus on producing 'real-world' corporate/industrial productions for the college community and local non-profit organizations. The objective of this unit is to provide students with hands-on experience in authentic working environments. Concurrently, students in Track B will produce an episodic college news broadcast distributed on-campus and on public access television. The strategy of this unit is to mimic an authentic news and studio environment. Subsequently, all students exchange roles in CLC Productions II during spring semester.

VPRO 2106	CLC Productions II	4	VPRO 2104

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.

VPRO 2110	Advanced Camera	3	VPRO 1110, VPRO 1112

This is a second year course for students who have successfully completed all videography first year classes. Students will apply techniques for capturing complex and artistically advanced motion pictures using a variety video cameras and support equipment. Specialty devices including jibs, floating camera systems and point-of-view cameras. Advanced sequencing will be emphasized. Macro videography, artistic videography and action videography are all explored in this practical application course.

VPRO 2112	Advanced Video Editing	3	VPRO 1110, VPRO 1112

Video production is a business and must be operated with professional standards at all times. This course will prepare students to succeed occupationally in the video production industry. You, or the company you work for will provide a variety of custom video production services. Your services must reflect the specifications of each client or assignment. Each video is a custom product and therefore has its own unique set of criterions. Therefore, you also provide consultant services as you guide your client or supervisor through the process of determining the best-fit video for their needs. All of these considerations are addressed in this course. Students will explore effective business practices designed to gain and retain clients or employment. Business accounting procedures designed to keep a business legal and solvent will be identified. Marketing techniques designed for maintaining and expanding a business or career are investigated. Participants will create samples of work used for portfolios and distribution on social media platforms. Resumes, cover letters and business plans will be included in this curriculum.

VPRO 2120	Interactive Design & Production	3	VPRO 1110

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.

VPRO 2130	Creative Development	4	for 2nd year students only

This course focuses on completing the production cycle for students by offering the opportunity to produce and direct a film of their choice from start to finish. Each student will be required to produce a completed motion picture, using classmates as crew members and sharing all aspects of the production process. Each participant will be responsible for conceiving, budgeting, scripting, directing and editing a film that can be presented as a portfolio finale.

VPRO 2350	Video Production Internship	1-6	instructor's consent

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.

VITI 1105	Molecular Principles in Grade and Wine	4	none

This course puts emphasis on basic chemical fundamentals, organic chemistry, biochemistry, and their focused applications in the grape and wine industry.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
VITI 1110	Introduction to Wine Microorganisms	3	none

This course is designed to introduce students to the basic principles of wine microbiology and to serve as an introduction to the variety of microorganisms frequently encountered in the wine making process. Yeasts, bacteria, and molds play vital roles in the production of wine, both beneficial and harmful. Students will become familiar with the morphology, reproduction, and sensory attributes of wine microorganisms in order to understand their influence on wine making, and a basic understanding of their effective management.

VITI 1111	Intro to Viticulture and Vineyard Establishment	3	none

This course is designed to introduce students to current practices for establishing a commercial vineyard and maintaining its health and productivity once established.Topics covered include varietal selection, site preparation, equipment, site selection, first season establishment, vine growth development and training, trellis systems, vine propagation, weed control and vine disease control. Field practicum sessions consisting of 16 hours of hands-on experience will be scheduled in area vineyards.

VITI 1112	Botanical Viticulture	4	none

This course is designed to provide students with an overview of the plant kingdom and to examine grapevine form and function from a botanical perspective. Topics to be covered include the specific characteristics of plants that distinguish them from other forms of life, divisions within the plant kingdom with representative members of each, and plant classification. Plant cells, tissues, life cycles, structures and functions, especially as applied to grapevines will also be discussed, along with various aspects of plant and grapevine physiology, such as photosynthesis, respiration, nutrition, cold acclimation and hardiness, and dormancy.

VITI 1113	Winter Viticulture Technology	2	VITI 1111

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.

VITI 1114	Spring Viticulture Technology	2	VITI 1111

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.

VITI 1115	Summer/Fall Viticulture Technology	2	VITI 1111

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.

VITI 1117	Cold Climate Viticulture	1	none

This course offers a practical understanding of the obstacles and promise of growing grapes and making wine in cold climates. Topics relating to cold climate production include history, physical limits of grapes, successful varieties, viticulture, and enology methods for producing quality cold climate wine, the state of cold climate research, a review of resources, and marketing strategies in cold climate regions.

VITI 1130	New Wine Business Feasibility	3	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.

VITI 1132	Entrepreneurial Finance for Vineyard and Winery Business	3	none

This course focuses on the financing decisions faced by entrepreneurs. During the first section of this course students will learn the basics of financial accounting and planning, including financial statements and pro forma preparation and analysis. In the second section, students are introduced to the concepts of financial management, including the time value of money, profitability and break-even analysis, capital budgeting and management, and cash flow analysis. The third section of the course focuses on analyzing capital funding and financing options and needs, including business valuation models and raising capital through debt, equity, and community resources.

VITI 1146	Intro to Enology	3	Students must be of legal age to drink alcohol

VITI 1146 is a 15-week course based on the fundamentals of the science and technology of winemaking. Introduction to Enology targets the home winemaker and those interested in exploring winemaking as a career, either as a cellar worker or as a new winery owner. During this course, students will build a basic understanding of winemaking, including making wine from a kit. This course is part of VESTA's viticulture and enology program with emphasis on the practical aspects of winemaking.

VITI 1147	Introduction to Fruit Wine Production	2	VITI 1146

This course is a 12-week course based on the fundamentals of the science and technology of fruit winemaking. Introduction to Fruit Wine Production targets the home winemaker and those interested in exploring winemaking as a career, either as a cellar worker or as a new winery owner. During this course, students will build a basic understanding of Fruit winemaking. This course is part of VESTA's viticulture and enology program with emphasis on the practical aspects of winemaking.

VITI 1148	Winery Sanitation	3	VITI 1146

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.

VITI 1157	Principles of Agricultural Mechanization	3	none

This course will offer an introduction to mechanized components of vineyard and winery operations. Topics will include safety, fencing, trellises, tractor operations, mechanical harvesting, spraying, pruning, fertilizing, and forklift operation.

VITI 1160	Winery Equipment Operation	2	VITI 1146

This course covers process technologies and process systems that are used in modern commercial wineries. The course will include lectures, demonstrations, and a two-day workshop. Overview of winemaking systems including work place safety, cleaning and sanitation procedures, winemaking equipment and materials, tanks, barrels and barrel alternatives, filtration systems, and bottling equipment. We will also touch on chillers and electrical needs.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
VITI 1190	Vineyard Safety	1	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.

VITI 1202	Legal Aspects of Vineyard and Winery Operations	3	none

This course will introduce students to the general concepts and issues relating to the creation and operation of a winery. The course will explain general legal concepts, outline business formation and operation concepts, discuss governmental agencies and regulation, and describe legal issues and areas specifically related to the operation of a winery.

VITI 1210	Intro to Wine Microorganisms	3	none

This course is designed to introduce students to the basic principles of wine microbiology and to serve as an introduction to the variety of microorganisms frequently encountered in the wine making process. Yeasts, bacteria, and molds play vital roles in the production of wine, both beneficial and harmful. Students will become familiar with the morphology, reproduction, and sensory attributes of wine microorganisms in order to understand their influence on winemaking, and to be able to manage them effectively.

VITI 1211	Integrated Pest Management	2	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.

VITI 1212	Winter Vineyard Technology	2	VITI 1111

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.

VITI 1213	Regional Vineyard Management	2	VITI 1111

This course is a survey of vineyard management in the general wine growing regions in the Continental United States. The course covers management of the mature vineyard from region to region and builds on the topics covered prerequisite courses.

VITI 1214	Winter Vineyard Technology	2	VITI 1111

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.

VITI 1215	Marketing for the Wine Business	3	none

This course explores the strategies and tactics that a winery would utilize to develop a strong marketing program. The students will develop a marketing plan, incorporating online technology, social media, including the application of blogs and social networking accounts to market both winery retail and wholesale markets. The course will conclude with a student presentation of a marketing package directed at a specific target market.

VITI 1246	Intermediate Enology-Harvest/Crush	2	VITI 1146

This course in the science and technology of winemaking is intended for the experienced intermediate winemaker, the winery employee interested in career development, or the advanced home winemaker that is seeking new challenges. Basic organic chemistry, microbiology, and some mathematics familiarity are recommended. There is a required 16-hour practicum component to this course. The purpose of the practicum is to provide students with hands-on experience in the winery by assisting in various winery operations. All students must identify a winery in their area that would be willing to serve a field practicum site and provide a mentor to guide the student during their hands-on experiences in their enology course.

VITI 1247	Intermediate Enology: Post Harvest Operations	2	VITI 1146, VITI 1246

This course in the science and technology of winemaking is intended for the experienced intermediate winemaker, the winery employee interested in career development, or the advanced home winemaker that is seeking new challenges. This course will focus on advanced science and technology concepts of winemaking as it relates to post-harvest activities including blending, correction, aging of wine, clarification, fining, wine analysis, and bottling. Basic organic chemistry, microbiology, and some mathematics familiarity are recommended.

VITI 1257	Fall Wine Production Internship	3	VITI 1146, VITI 1148, VITI 1160, VITI 1246

This course is designed to provide a student who has completed major VESTA course sequences with an intense level of practical and realistic winery operation experiences to equip him/her with sufficient skills and work experience for an entry-level position in the wine industry. Students involved in this course will participate in a full-time crush season internship at a supporting winery. They are expected to use the time and opportunities to further their understanding of the winemaking process and common winery operations.

VITI 1259	Cellar Operations Technology	2	VITI 1146, VITI 1148, VITI 1160, VITI 1246, VITI 1268, VITI 1257

This 2-credit course is designed to provide students initiated in the field of enology with actual and practical exposure to the technology of wine making as is performed during the passive vineyard periods associated with winter. Students are expected to improve their understanding of the methods and science involved by on-site participation in the various activities associated with finished wine production. The course is designed to qualify as work experience for those seeking employment in commercial enology.NOTE: Two credit courses typically run for 12 weeks, however, since this is an Internship course, it runs longer to accommodate the field time that may be needed to complete the required 64 hours in the cellar.

VITI 1266	Sensory Evaluation of Wine	3	VITI 1146, must be legal drinking age

This is a course intended for those individuals who need to develop an understanding of the principles of sensory evaluation used in commercial wine making. It will also be of benefit to the wine enthusiast who is interested in reaching advanced levels of appreciation as well as to the producer, the wine merchant, and ultimately the enologist, who by the nature of their profession need to discern flavors and establish tasting benchmarks. Students will practice sensory analysis at home and in workshops to further their sensory evaluation skills and techniques.

VITI 1268	Wine and Must Analysis	3	VITI 1146, CHEM 1414

This course covers 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 hands-on laboratory experiences at a scheduled workshop.

VITI 1270	Marketing for the Small Winery	2	VITI 1146

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.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
VITI 1272	Winery Tasting Room Management	2	none

This course will explore the management of winery tasting rooms. Focus is on the customer service and customer loyalty.

VITI 1274 Wines of the World 3 VITI 1266, must be of legal drinking age

This is a course intended for those individuals who wish to further their understanding of wine styles and builds on the knowledge developed in VIN 266, Sensory Evaluation. It is appropriate for commercial winemakers who wish to understand how the wines that they produce compare and contrast with the most popular and important wine styles around the globe. It will also be of benefit to the wine enthusiast who is interested in reaching advanced levels of appreciation and an understanding of global benchmarks. Students will practice sensory analysis at home to further their sensory evaluation skills and techniques.

VITI 1275 Financial Management for the Winery 3 none

This course integrates wine production with the management of a winery and its strategic business units. In the process wine marketing, financial management, strategic winery business management, legal structures, leadership, organization development and the breadth of the value chain are all examined as these relate to an actual winery.

VITI 1276 Advanced Tasting Room Management 3 VITI 1130, VITI 1132

This course expands on winery tasting room management, delving deeper into the front of the house success, focusing on tasting room design and start-up, legal and compliance issues, budgeting, finance and profitability metrics. The students will explore destination marketing, in-house and on-the-road sales practices, as well as wine club and e-commerce success. Staff training and development, leadership in the tasting room and staff retention will also be discussed. This course is designed for winery tasting room owners, managers and key sales staff who desire to expand their knowledge about the interplay of customer service, marketing and winery sales.

VITI 1280 nery Establishment and Design 2 VITI 1130, VITI 1132

Winery Establishment and Design is a 12-week course that will review the basic winery establishment and design. The course will cover county, state and federal requirements, people you need to hire and vetting, winery layout, winery economics, equipment, winery staffing and marketing. The goal of this course is to provide the student with the necessary knowledge and tools to begin a winery project.

VITI 1285 Addressing Human Resources Issues in a Commercial Vineyard or Winery 3 none

The course will explore the different specialties that fall under the broad heading Human Resources and the skills necessary to succeed in them. Topics such as labor relations, global HR, executive compensation, employee development, employment law, organization styles, leadership, motivation, adaptation, employee/employer rights and responsibilities, employee manual, and communications will be covered.

VITI 1290 Vineyard and Winery Safety 3 none

An introduction to safety and procedures specific to the vineyard and winery. This course will include general history of food and beverage safety and health issues, ergonomics, OSHA safety rules and safety issues and concerns specific to the grape and wine industry.

VITI 1293 Soils for Viticulture 3 none

The course will explore soil properties and behavior and their influence on vine growth and wine grape characteristics. The course focuses not only on growth and production, but on the long-term effects of viticulture on soil quality and the wider environment. The goal of the course is for students to be able to select sites for a new vineyard, and help manage soils in existing vineyards upon completion of the course.

VITI 1399 Special Topics 3 none

This course will examine selected topics of interest in Viticulture and Enology. Offered on demand.

WELD 1100 Introduction to Welding 2 none

This course will provide students with the basic fundamental skills required to understand and utilize the equipment and processes of basic welding. Students will identify and place in to practice a common set of safety standards utilized with Oxy-Acetylene Welding (OAW), Gas Metal Arc Welding (GMAW), and Shielded Metal Arc Welding (SMAW). Students will develop and place into practice the necessary skills to properly operate and trouble shoot welding equipment.

WELD 1101 Shielded Metal ARC Welding I 2 none

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the shielded metal arc welding process, under a variety of conditions that meet given industry-standard specifications. Students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

WELD 1102 Shielded Metal ARC Welding II 3 WELD 1101

This course will expand on skills obtained in WELD 1101 including safety, equipment setup, electrode selection, and operating parameters. Students will refine and further advance skill sets to produce quality welds. Visual and non-destructive testing practices are used to determine weld acceptability.

WELD 1111 Blueprint Reading I 2 none

This course will provide students with the basic fundamental skills required to communicate as fabricators through the use of blueprints. Students will understand and identify orthographic drawings, isometric drawings, basic lines, and dimensioning techniques. Students will develop and place into practice the necessary skills to create and interpreted practical blueprints. These are building-block skills for future courses.

WELD 1112 Blueprint Reading II (Welding Symbols) 2 WELD 1111

This course will expand on skills obtained in WELD 1111 Blueprint Reading I and further develop skills required to communicate as fabricators through the use of blueprints. Students will identify welding symbols and there components, and understand their relationships with orthographic drawings. Students will develop and place into practice the necessary skills to created, and interpreted practical weldment blueprints.

WELD 1113 Blueprint Reading III (CAD Systems) 2 WELD 1111, WELD 1112 This course will expand on skills obtained in WELD 1111 and WELD 1112. Students will use CAD to create 3D models, 2D prints, assembly prints, and welding symbols. Students will develop and place into practice the necessary skills to create and interpret weldment blueprints and create a final project.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite
WELD 1114	Metallurgy & Fabrication	2	None

Students will study all aspects of metallurgical engineering including the three areas of extractive, mechanical, and physical metallurgy. Theory and applications of metallurgical principles as applied to the conditioning, design, identification, selection, testing, and processing of metals and alloys. Topics include heat treatment, crystal structures, phase diagrams, materials standards, specific alloys, nondestructive and destructive testing, and fabrication methods. The safe and proper operation of iron workers, sheet metal shears, oxy-fuel and plasma cutting equipment will be taught. Both manual and automatic systems will be covered. Material handling techniques are also studied.

WELD 1115 Gas Tungsten ARC Welding I 2 None

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the gas tungsten arc welding process, under a variety of conditions that meet given industry-standard specifications. During the course, students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

WELD 1116 Gas Tungsten ARC Welding II 3 WELD 1115

This course will expand on skills obtained in WELD 1115 including safety, electrode selection and operating parameters, weld characteristic of stainless steels and nonferrous metals. Students will refine and further advance skill sets used to produce quality welds. Visual and non-destructive testing practices are used to determine weld acceptability.

WELD 1117 Gas Metal ARC Welding I 2 none

This course will expand on the skills obtained in WELD 1100 and include topics such as safety, equipment selection and setup, electrode selection and application, and best operating parameters for particular tasks. Students will create and refine their capacity to plan and produce quality welds, using the gas metal arc welding process, under a variety of conditions that meet given industry-standard specifications. During the course, students will complete a variety of skill-specific tasks and a final project to demonstrate their welding competencies.

WELD 1118 Gas Metal ARC Welding II 3 WELD 1117

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.

WELD 1120 Fabrication Design and Construction 4 WELD 1150

This course is intended to utilize all content and skills learned in previous courses. Students will design and fabricate projects that meet specific requirements from start to finish. Projects may include fire rings, signs, and personal projects as approved by the instructor. To complete these projects, students will demonstrate mastery of various fabrication equipment, such as a plasma cutter, press brake, grinder, and the tools they have made in previous classes.

WELD 1128 Metal Fabrication 3 WELD 1111

Fundamental sheet metal layout, bend and forming allowances, safe operation of metal fabrication equipment, and a student fabrication project are the objectives of this course.

WELD 1130 Advanced Welding Processes 4 WELD 1101, WELD 1117

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.

WELD 1132 Testing/Codes & Inspection 2 none

Students will study the major national codes that govern the welding industry, specifically the ASME pressure vessel code, the American Welding Society Structural Code D1.1, along with AWS codes. Students will also study the fundamentals of welding inspection techniques and the different types of destructive and nondestructive weldment testing.

WELD 1134 Welding Qualification 3 WELD 1102, WELD 1116, and WELD 1118

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 industry recognized modules and performance evaluations in compliance with The American Welding Society standard to obtain full certification. During the class, students will explore various welds, welding techniques, inspection standards, and destructive tests for specific welding tasks.

WELD 1140 Trade Knowledge 4 none

This course will introduce student to fundamentals skills related to the welding & fabrication trade, which includes safety, fabrication equipment, fabrication techniques, measurement, layout, hand tools, fasteners, thread repair, and shop math. Students create and refine skill sets by producing class projects such as a nut and bolt gauge and electrode holder, which will be utilized in future classes.

WELD 1150 Advanced Metal Fabrication 4 WELD 1100, WELD 1111, and WELD 1140

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.

WELD 1160 Welding Theory 4 none

This course will provide students with the fundamentals required to understand the equipment and processes of basic welding. Students will study a common set of safety standards and gain basic knowledge in Oxy-Acetylene Welding (OAW), Oxy-Acetylene Cutting (OAC), Plasma Arc Cutting (PAC), Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), and Gas Tungsten Arc Welding (GTAW).

WELD 1161 Introduction to Nondestructive Testing 2 none

This course is designed to introduce students to the five major Nondestructive Testing disciplines: Radiographic Testing (RT), Ultrasonic Testing (UT), Visual Testing (VT), Penetrant Testing (PT), and Magnetic Particle Testing (MT). Students will understand the benefits and limitations of each method as well as an overview of the various discontinuities that may be encountered.

WELD 1162 Ultrasonic Testing (UT) Level I & II 3 none

Ultrasonic testing (UT) uses waveforms to inspect welds. UT Level I includes a basic introduction to the theory and principles of ultrasound. It contains study materials related to the propagation, reflection, and attenuation of sound as well as the responses from discontinuities. UT is also used for precise thickness measurements and the basic procedure for this is covered. UT Level II explains advanced theory, application, and variables such as beam profile, near and far zones, acoustic impedance, absorption, and sound characteristics. Other subjects pertaining to angle beam inspection include refraction, mode conversion, and tip diffraction. Vertical/horizontal linearity and mode converted calibrations are covered. Examination and evaluation of several test specimens are required.

Course Descriptions

Course Code	Course Label	Credits	Prerequisite

WELD 1163 Penetrant Testing Level I & II 2 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.

WELD 1164 Magnetic Particle Testing Level I & II 2 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.

WELD 1165 Radiation Safety 2 none
his 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).

WELD 1166 Radiographic Testing Level I & II 3 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.

WELD 1167 Visual Inspection Level I & II 1 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.

WELD 1168 Codes and Specifications 1 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.

WELD 1350 Elective Open Lab I 1-6 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.

WELD 2370 Topics in Welding 1-3 none
This course will examine selected topics of interest in Welding. Offered on demand.

WMST 1400 Introduction to Women's Studies 3 Accuplacer Reading 56+, or Next Gen Reading 237+
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.

WMST 2420 Women & Religion 3 Accuplacer Reading Score 56+
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.

Administration, Faculty and Staff

ADMINISTRATION

Joy Bodin, Vice President of Academic and Student Affairs
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M.S. Capella University

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M.B.A. University of Mary

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