Selected programs at HCC have been awarded special accreditation or certification.

**THEY ARE AS FOLLOWS:**

- **Automotive Technology** ........................................Automotive Services of Excellence
- **Dental Assistant** ..................................................Commission on Dental Accreditation
- **Diesel Mechanics/Heavy Equipment Maintenance** .......Associated Equipment Distributors (AED) – In progress
- **Electrical Maintenance** .........................................MN Department of Labor and Industry
- **Law Enforcement** ...................................................Minnesota Peace Officers Standards & Training Board
- **Medical Lab Technician** .........................................National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
- **Pharmacy Technician** .............................................American Society of Health System Pharmacists
- **Nursing Assistant** ....................................................Minnesota Department of Health
- **Nursing** ...............................................................Minnesota Board of Nursing, ACEN

**HCC IS APPROVED BY:**

United States Office of Education  
Minnesota State Approving Agency  
Minnesota Department of Rehabilitation Services

**HCC OFFERS:**

- Associate of Arts Degree  
- Associate of Fine Arts  
- Associate of Science Degree  
- Associate of Applied Science Degree  
- Diplomas  
- Certificates

**NOTE:** Hibbing Community College reserves the right to change without notice any of the materials, information, requirements and regulations published in this catalog. This catalog is not to be regarded as a contract. As we prepare this catalog, please be aware that policies and class offerings may change. A catalog addendum will be prepared to reflect these changes. This publication will be made available in alternative formats upon request.

Hibbing Community College calendar is subject to modifications or interruption due to occurrences such as fire, flood, labor disputes, interruption of utility services, acts of God, civil disorder and war. In the event of such occurrences, HCC will attempt to accommodate its students. It does not, however, guarantee that course of instruction, extracurricular activities or other college programs or events will be completed or rescheduled. Refunds will be made to eligible students in accordance with the HCC refund policy.
MESSAGE
FROM THE PROVOST

Welcome to Hibbing Community College (HCC)! Like thousands of other colleges across the country, HCC comes alive in the fall when students from countless backgrounds step foot onto our campus. Whether you are a graduate from a local high school, someone seeking a career change, a student from another state or country, or a student-athlete pursuing your passion, you bring a unique perspective and energy along with an individual story of hope to our college.

2017 is an exciting time to be an HCC student as the college undergoes an extensive rightsizing and remodeling project this year thanks to funding received through the State of Minnesota bonding bill. This 11.2 million-dollar project will include a brand-new centralized library and academic center, a remodeled one-stop student services center, and a new bookstore and business services area that will all be conveniently located for students. Students and visitors alike will be greeted with a new main entrance on the south side of campus that will connect buildings together and eliminate the existing unconditioned walkways. The project is expected to be complete in the spring of 2019.

While building construction will be obviously visible, classes will resume as normal and many engaging activities will hopefully enrich your experience. Some of these activities include career fairs, health partnership expos, multicultural events, theater performances, art exhibits, athletic events, and of course, our very popular fall buffets presented by our culinary program. I hope you take the time to engage in at least one of these events outside of your normal day-to-day classroom routine.

For over 100 years, Hibbing Community College has proudly served its students and community. Through the hard work of our faculty and staff, we are privileged to continue this legacy of service to our region. Thank you for choosing HCC, and I wish you the very best in achieving your dreams!

Dr. Michael Raich, Provost
AFFIRMATIVE ACTION/EQUAL OPPORTUNITY STATEMENT

Hibbing Community College is a member of the Northeast Higher Education District and Minnesota State. Minnesota State 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, familial status, sexual orientation, gender identity or gender expression. In addition, discrimination in employment based on membership or activity in a local commission as defined by law or familial status is prohibited.

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, gender identity, gender expression, or familial status. Sexual violence has no place in a learning or work environment. Further, Minnesota State shall work to eliminate violence in all its forms. Physical contact by designated system, college, and university staff members may be appropriate if necessary to avoid physical harm to persons or property.

This document is available in alternative formats to individuals with disabilities, consumers with hearing or speech disabilities may contact us via their preferred Telecommunications Relay Service.

If you require an accommodation for a disability, please contact:
Name: Mary Iozzo
Office Location: M-166
Phone and E-mail: 218.262.6712; maryiozzo@hibbing.edu
Upon request, this publication is available in alternative formats.

Complaints of discrimination or harassment should be directed to:
Name: David Olds
Office Location: M – 173
Phone and E-mail: 218.262.6759; davidolds@hibbing.edu
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HCC VALUES DIVERSITY
Hibbing Community College appreciates our rich and diverse society, and promotes an atmosphere of acceptance and respect. Every student is valued as an individual, regardless 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. Harassment/discrimination will not be tolerated.

For more information regarding harassment/discrimination, contact the Designated Officer: David Olds, Office Location: M – 173, Phone and E-mail: 218.262.6759; davidolds@hibbing.edu

You may also contact the Disabilities Coordinator: Mary Iozzo, Office Location: M-166, Phone and E-mail: 218.262.6712; maryiozzo@hibbing.edu

POLICY ON STUDENTS WITH DISABILITIES
1. Hibbing Community College shall not deny enrollment to persons with disabilities and complies with the Americans with Disabilities Act and the Minnesota law for students with disabilities which provides for reasonable accommodations for students.

2. No person with a disability will be subjected to discrimination in recruitment, in any educational program, educational services, activities or placement.

3. The college is committed to reasonable accommodations for persons with disabilities in all educational programs, activities, and assists all admitted students to reach their educational goals.

4. Included in these services are advocacy, counseling, academic assistance, placement and referral services. All appropriate and necessary services shall be provided for enrolled or admitted qualified students with disabilities based on recent assessment and documentation.

5. This policy and information will be available to both prospective and enrolled students in the College Catalog.

6. The College Buildings are handicap accessible.

7. For additional information regarding students with disabilities and services available, please contact: Disability Services Coordinator, Mary Iozzo, Office Location: M-166 Phone and E-mail: 218.262.6712; maryiozzo@hibbing.edu
HCC PROMOTES THE RIGHTS AND PROTECTIONS PROVIDED BY ADA

HCC is committed to providing access and does not discriminate against qualified students or employees with disabilities. Admissions decisions and access to programs are based on a policy of non-discrimination. (Section 35.107, Dept. of Justice regulations).

As stated in section 504 of the Rehabilitation Act of 1973, “no otherwise qualified handicapped individual shall solely by reason of his/her handicap be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance.”

For more information contact the Disability Services Coordinator, Mary Iozzo, Office M-166 at 218-262-6712.

HCC ENSURES FREEDOM FROM SEXUAL HARASSMENT

Hibbing Community College regards sexual harassment and sexual violence as unacceptable behavior. Any individual, student, staff or administrator, who is subject to such treatment is encouraged to inform the Designated Officer. The Designated Officer can provide information about sexual harassment, advice and assistance in filing a complaint.

For more information, contact the Designated Officer: David Olds, Office: M – 173, at 218.262.6759

Sexual harassment is a violation of both state and federal laws.

NONDISCRIMINATION IN EMPLOYMENT AND EDUCATION OPPORTUNITY POLICY

Hibbing Community College is a public, two-year comprehensive community and technical college with open access to enrollment.

Offerings include occupational and general education areas of study that transfer to four-year colleges and universities. Key instructional programs include the Associate of Arts (AA) degree in Liberal Arts, the Associate of Science (AS) degree in Health Sciences, Engineering and Business Administration, the Associate of Fine Arts (AFA) in Art as well as certificate, diploma and associate degree programs in the following areas:

- Automotive Technician
- Administrative and Office Management (general, legal and medical)
- Cisco Network Technician
- Computer/Information Technology
- Culinary Arts
- Dental Assistant
- Diesel Mechanics
- Electrical Maintenance
- Heating and Cooling Technician
- Industrial Systems Technology
- Information Technology Networking and Security
- Law Enforcement
- Medical Laboratory Technician
- Nursing
- Nursing Assistant/Home Health Aide
- Pharmacy Technician
- Professional Truck Driving – CDL

Hibbing Community 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, gender identity or gender expression. In addition, discrimination based on membership or activity in a local commission as defined by law or familial status is prohibited.
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, Hibbing Community 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.

If you experience or witness harassment or discrimination, please report it to:

Complaints of acts of discrimination or harassment by employees:
Affirmative Action Officer
Carmen Bradach, Chief Human Resources Officer
C.Bradach@mesabirange.edu
218.749.7743

Complaints of acts of discrimination or harassment by students:
David Olds, Designated Officer
davidolds@hibbing.edu
218.262.6759
Student Services, M-173

If you require an accommodation for a disability, please contact:
Mary Iozzo
maryiozzo@hibbing.edu
218.262.6712
Student Services, M-166

This information is available in an alternative format. Call 218.262.6712 or TTY/Minnesota Relay at 1.800.627.3529

**HCC PROCEDURE FOR IDENTIFICATION AND ASSESSMENT OF LIMITED ENGLISH PROFICIENCY (LEP) STUDENTS**

Hibbing Community College requires all students to complete a student assessment that includes basic measures of reading comprehension and mathematics. The student assessment shall not be used to make admissions decisions. HCC exempts some students from all or portions of the student assessment based on presentation of transcript or equivalent evidence of adequate preparations or prior education; presentation of ACT subset scores of 21 in reading, 18 in writing, and 22 in math; enrollment in non-credit continuing education or customized training; or enrollment in a one- or two-course program of study.

Limited English Proficiency (LEP) students are identified through the assessment process or by self-identification.

a. Students scoring below the developmental course placement level on reading or writing assessments meet with a counselor / advisor to discuss possible reasons, prerequisites, alternatives, and resources / support services available.

b. Students may self-identify as LEP through the questions accompanying the assessment or directly to a counselor / advisor.

LEP students are encouraged to connect on a weekly basis with the HCC Academic Center (room C-239) for learning assistance, tutoring and support. Academic Center personnel provide tutoring and student assistance at no cost to the student.

**ACADEMIC FREEDOM**

HCC maintains and encourages full freedom, within the law, of inquiry, teaching, and research. Academic freedom comes with a responsibility that members of our education community benefit from it without intimidation, exploitation, or coercion. In recognition and support of academic freedom for faculty, students, staff members and other members of the college community, academic freedom shall be considered in investigating and reviewing complaints of discrimination or harassment. However, raising issues of academic freedom will not excuse discriminatory/harassing behaviors that constitute a violation of this policy.
DISCIPLINE

Any College action taken pursuant to this policy will be consistent with requirements of applicable collective bargaining agreements, Minnesota Statutes, and Minnesota State policies. Hibbing Community College will take disciplinary action it deems necessary and appropriate to end sexual harassment or sexual violence and prevent their recurrence. Disciplinary action toward employees may include, but is not limited to, counseling, warning, suspension, or termination. Disciplinary action toward students may include, but is not limited to, counseling, warning, probation, suspension or expulsion.
GRADUATION
REQUIREMENTS, TRANSFER PATHWAYS, AND
OTHER ACADEMIC INFORMATION

Graduation requirements and other academic information are important to successful completion of your courses, programs, or degrees at Hibbing Community College. This information is as current as possible. If policies change, the College will make every effort to keep you updated.

DEGREES, DIPLOMAS AND
CERTIFICATES

Certificates are designed to be stand-alone awards though they may also complement a subsequent award in a related area. They are short programs, highly focused on specific outcomes (occupational or a focused area of study), and may or may not include general education. General education, if any, should directly support the certificate’s purpose. Certificates are not intended to be “stacked” on top of one another (sequenced or prerequisites) by requiring that one be completed before the other. Certificate Programs are offered at both the undergraduate and graduate levels.

• Diplomas are also designed to be stand-alone awards. They are one-to-two years in length, highly focused on specific occupational outcomes to prepare students for employment and may or may not include general education.

• Associate Degrees (AA, AFA, AS, AAS) are offered at the lower division level. Most associate degrees (AA, AFA and AS) are designed primarily to transfer to baccalaureate degrees. Most contain general education courses. The AFA and the AS require a formal articulation agreement with one or more system institutions. Associate degree curriculum is designed to be similar to curriculum taken by the university students in the first two years of their baccalaureate degrees, and should transfer “in its entirety” to the baccalaureate program. The articulation agreement specifies the course equivalencies involved in the transfer.

• The Associate of Arts degree is a general liberal arts degree without a named field of study. Areas of emphasis are permitted in AA degrees, but the coursework within the emphasis must transfer to a specific baccalaureate degree. An Articulation Agreement is required for an AA with an area of emphasis. The AA degree program requires completion of the Minnesota Transfer Curriculum.

• The Associate of Fine Arts degree is a named fine arts degree designed to transfer to a specific baccalaureate fine arts degree. An Articulation Agreement is required.

• The Associate of Science degree is a named degree designed primarily to transfer to a specific baccalaureate degree. Coursework is concentrated in a scientific, technical, or professional field. Some AS degree programs also may have an occupational outcome, e.g., preparation for a nursing license. There are two types of AS degrees: a degree in a specific field and a broad field degree. Broad field AS degrees must transfer to all system universities offering that major at the baccalaureate degree. Articulation Agreements are required for all AS degrees.

• The Associate of Applied Science degree has an occupational outcome. It can be designed to stand alone or for transfer to a bachelor of applied science degree (BAS). Articulation Agreements are required for an AAS degree that transfers to a BAS program.

DEFINITIONS

Program: A program is a cohesive pattern of credit courses and experiences leading to a degree, diploma, or certificate. Programs are designed to (1) prepare students for advanced study, (2) qualify students for an occupation or range of occupations, and (3) increase students’ knowledge and understanding in a specific area/discipline.
Accomplishment of program objectives requires a set of structured learning experiences in which a student must demonstrate competencies in a wide range of skills and knowledge that constitute a major or are certified by a credential.

Credit: A credit is the unit of measure normally associated with specific courses and experiential learning activities. While credits are the units of measure utilized in this policy, their use is not intended to limit or reduce opportunities to certify skills and competency attainment through alternative student outcome assessment approaches. The goal of education is the attainment of specific skills and knowledge. Creative approaches to the awarding of credit in response to demonstrated student skills attainment, above and beyond credit for prior learning and credit through examination programs, are both encouraged and desired.

CRITERIA

Degrees, diplomas and certificates awarded for program completion by the Minnesota State Colleges and Universities shall meet the following criteria:

1. A certificate may be awarded for successful completion of a specialized program of study. A certificate shall include 9 to 30 semester credits.

2. A diploma may be awarded for successful completion of a program intended to provide students with employment skills. A diploma shall include 31 to 72 semester credits. The Chancellor must approve program credit lengths that exceed 72 semester credits. At least one-third of the credits shall be taught by the faculty recommending the award of the diploma. This requirement may be decreased upon recommendation by the faculty and approval by the president.

3. An Associate of Arts (A.A.) Degree or Associate of Science (A.S.) Degree may be awarded after the successful completion of a program of 60 semester credits. The Chancellor must approve program credit lengths that exceed 60 semester credits. The Associate of Science and Associate of Arts degrees are designed for transfer to a baccalaureate degree. At least 20 semester credits shall be taught by the faculty recommending the awarding of the degree. This requirement may be decreased upon recommendation by the faculty and approval by the president.

• An Associate of Science (A.S.) degree may be awarded for successful completion of a program in a designated field or area which transfers to a baccalaureate major in a related scientific or technical field. An Associate of Science degree must have one or more articulation agreement(s) between the institution awarding the Associate of Science degree and an institution awarding a related baccalaureate degree. An A.S. degree may also be designed to prepare students for employment. An Associate of Science program shall include a minimum of 30 semester credits in general education credits. An Associate of Science degree is designed to provide a substantial general education component. General education courses shall be selected from at least six of the ten goal areas of the Minnesota Transfer Curriculum. An Associate of Science degree may include the entire Minnesota Transfer Curriculum.

4. An Associate of Applied Science (A.A.S.) Degree may be awarded for successful completion of a program of 60 to 72 semester credits. The Chancellor must approve program credit lengths that exceed 72 semester credits. At least 20 semester credits shall be taught by the faculty recommending the awarding of the degree. This requirement may be decreased upon recommendation by the faculty and approval by the president.

• An A.A.S. degree may be awarded for successful completion of a program primarily intended to prepare students for employment. An A.A.S. degree may be designed to transfer to a related baccalaureate major. An A.A.S. program shall include a minimum of 25 percent of the total semester credits in general education credits. General education courses shall be selected from at least three of the ten goal areas of the Minnesota Transfer Curriculum. At least 30 semester credits shall be program-related occupational or technical credits.

5. An Associate of Fine Arts (A.F.A.) Degree in Art may be awarded to students completing the minimum general education requirements outlined below, and earning at least a 2.00 grade point average in 60 semester credits in courses numbered 1000 or above. The A.F.A Degree in Art requires completion of the Minnesota Transfer Curriculum (MnTC). The culminating research and studio practices in the A.F.A Degree in Art prepares students for direct transfer to a Bachelors
degree in Fine Arts. HCC’s A.F.A. program has been designed to challenge students to explore a personal approach to a variety of art media. The program requires that students develop a specific language to articulate their ideas, methods and intentions of their artwork and the artwork of others. Students will use their understanding of contemporary and historical art to better inform their work and their understanding of the visual systems used in cultures around the world.

CORE COMPETENCIES

Upon graduation, HCC students in this course are expected to have acquired the following Core Competencies:

I. WORKING PRODUCTIVELY AND COOPERATIVELY

**Defined:** An individual possesses and applies effective work habits and attitudes, and is able to work with others to complete tasks, solve problems, and resolve conflicts.

*Students demonstrate this ability by showing competence in five or more of the following areas:*
- Study skills
- Organization
- Time management
- Goal-setting and follow-through
- Cooperativeness and effectiveness in a group setting
- Accepting or adapting to change
- Knowledge of a workplace’s environmental demands
- Seeking or providing assistance
- Working safely in a lab or shop setting

II. COMMUNICATING CLEARLY AND EFFECTIVELY

**Defined:** An individual is able to apply appropriate writing, speaking, reading, and listening skills to precisely convey information, ideas, and opinions, as well as demonstrate the ability to locate, evaluate, and effectively use information to research an issue or solve a problem.

*Students demonstrate this ability by showing competence in two of the three following divisions: Speaking/Listening, Writing/Reading/Visual, or Information Literacy:*

**A. Speaking/Listening** – *Students demonstrate this ability by showing competence in four or more of the following areas:*
- Preparing and delivering oral presentations
- Using appropriate terminology
- Speaking clearly

**B. Writing/Reading/Visual** – *Students demonstrate this ability by showing competence in four or more of the following areas:*
- Using grammar appropriately
- Using proper punctuation
- Writing logically and understandably
- Demonstrating effective sentence and paragraph structure
- Demonstrating varied and accurate vocabulary
- Spelling correctly
- Comprehending written material
- Communicating through visual presentation

**C. Information Literacy** – *Students demonstrate this ability by showing competence in three or more of the following areas:*
- Determining what information is needed for a project
- Accessing information
- Evaluating the quality of information
- Evaluating the reliability of sources
- Using information effectively to accomplish a purpose
- Using information ethically

III. THINKING CREATIVELY AND CRITICALLY

**Defined:** An individual applies the principles and strategies of purposeful, active, and organized thinking.

*Students demonstrate this ability by showing competence in four or more of the following areas:*
- Applying previously learned principles to new problems and situations
- Applying analytical skills
- Identifying and solving problems
- Conducting self- or other-directed-inquiries
- Synthesizing and integrating information and ideas
- Recognizing bias
- Applying mathematics application skills

IV. SOCIAL / CIVIC RESPONSIBILITY

**Defined:** An individual recognizes an obligation to self, others, and the environment.

*Students demonstrate this ability by showing competence in five or more of the following areas:*
- Awareness of individual and community cultures, beliefs, ethics, and values
V. PRACTICING CULTURAL, ECONOMIC, AND ENVIRONMENTAL SUSTAINABILITY

Defined: An individual can explain the importance of long-term cultural, economic, and environmental health and vitality, promoting the well-being of the current generation without compromising the resources of future generations.

Students demonstrate this ability by showing competence in three or more of the following areas:

- Awareness of energy consumption and alternative resources
- Utilizing technology and advancements in technological applications
- Encouraging arts and creative endeavors
- Education and equality for all
- Awareness of food access and healthy meal options
- Knowledge of healthcare and housing incentives, initiatives, and access
- Immersion in local resilience, traditions, and history
- Participation in public service
- Explaining the impact of public policy
- Recreation and personal health
- Knowledge of safety and awareness of risk
- Familiarity with varied transportation
- Cognizance of conservation, restoration of resources, and elimination of wastes
- Appreciation of agriculture and consumer-supported agriculture
- Comprehension of community infrastructure and support of local businesses
- Development of green buildings, products, or projects
- Awareness of sustainable investing and policy

MINNESOTA GENERAL EDUCATION TRANSFER CURRICULUM

The Minnesota General Education Transfer Curriculum is the result of a collaborative effort by all of the two-and four-year public colleges and universities in Minnesota to define a common philosophy toward general education. The goal of this effort is to help students transfer their work in general education. Completion of a defined transfer curriculum at one institution enables a student to receive credit for all lower-division general education upon admission to any other institution.

Students who complete a general education transfer curriculum are certified in ten areas of competency by faculty at the sending institution.

The Minnesota General Education Transfer Curriculum provides details about the competencies. The following are the ten areas of emphasis:

GOAL 1 WRITTEN AND ORAL COMMUNICATION

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

Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking, and discussion.

Student competencies: Students will be able to

- Understand/demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing and presentation.
- Participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
- Locate, evaluate, and synthesize in a responsible manner material from diverse sources and points of view.
- Select appropriate communication choices for specific audiences.
- Construct logical and coherent arguments.
- Use authority, point-of-view, and individual voice and style in their writing and speaking.
- Employ syntax and usage appropriate to academic disciplines and the professional world.
GOAL 2  CRITICAL THINKING
To develop thinkers who are able to unify factual, creative, rational, and value-sensitive modes of thought. Critical thinking will be taught and used throughout the general education curriculum in order to develop students' awareness of their own thinking and problem-solving procedures. To integrate new skills into their customary ways of thinking, students must be actively engaged in practicing thinking skills and applying them to open-ended problems.

Student competencies: Students will be able to
• Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
• Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
• Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
• Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

GOAL 3  NATURAL SCIENCES
To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

Student competencies: Students will be able to
• Demonstrate understanding of scientific theories.
• Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students’ laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.

GOAL 4  MATHEMATICS/SYMBOLIC SYSTEMS
To increase students' knowledge about mathematical and logical modes of thinking. This will enable students to appreciate the breadth of applications of mathematics, evaluate arguments, and detect fallacious reasoning. Students will learn to apply mathematics, logic, and/or statistics to help them make decisions in their lives and careers. Minnesota's public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra.

Student competencies: Students will be able to
• Illustrate historical and contemporary applications of mathematics/logical systems.
• Clearly express mathematical/logical ideas in writing.
• Explain what constitutes a valid mathematical/logical argument (proof).
• Apply higher-order problem-solving and/or modeling strategies.

GOAL 5  HISTORY AND THE SOCIAL AND BEHAVIORAL SCIENCES
To increase students' knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

Student competencies: Students will be able to
• Employ the methods and data that historians and social and behavioral scientists use to investigate the human condition.
• Examine social institutions and processes across a range of historical periods and cultures.
• Use and critique alternative explanatory systems or theories.
• Develop and communicate alternative explanations or solutions for contemporary social issues.
GOAL 6  THE HUMANITIES—THE ARTS, LITERATURE, AND PHILOSOPHY
To expand students’ knowledge of the human condition and human cultures, especially in relation to behavior, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities.

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

GOAL 7  HUMAN DIVERSITY
To increase students’ understanding of individual and group differences (e.g. race, gender, class) and their knowledge of the traditions and values of various groups in the United States. Students should be able to evaluate the United States’ historical and contemporary responses to group differences.

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

GOAL 8  GLOBAL PERSPECTIVE
To increase students’ understanding of the growing interdependence of national and international peoples and develop their ability to apply a comparative perspective to cross-cultural, social, economic and political experiences.

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

GOAL 9  ETHICAL AND CIVIC RESPONSIBILITY
To develop students’ capacity to identify, discuss, and reflect upon the ethical dimensions of political, social, and personal life and to understand the ways in which they can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, students should learn that responsible citizenship requires them to develop skills to understand their own and other’s positions, be part of the free exchange of ideas, and function as public-minded citizens.

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

GOAL 10  PEOPLE AND THE ENVIRONMENT
To improve students’ understanding of today’s complex environmental challenges. Students will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.
Student competencies: Students will be able to:

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

GRADUATION REQUIREMENTS
GENERAL INFORMATION

To graduate from HCC with an Associate Degree, Diploma, or Certificate, students must complete all program requirements with a minimum of 2.00 (C) GPA. The following are also necessary:

• Students must have made up all failures and/or incompletes in required curricula.
• Students must have removed all financial obligations to the College prior to graduation.
• Twenty semester credits must be taught by the faculty recommending the award of the degree.
• Degree candidates must earn at least 20 semester credits at HCC.
• Courses numbered below 1000 may not be used to fulfill Associate Degree, Diploma, or Certificate requirements.
• Students must file an Application for Graduation in the Records Office prior to the requested graduation date.
• Students who have applied to graduate but have not met all requirements will receive a letter identifying the missing requirement(s).

Academic honors will be granted to those meeting the following based on cumulative GPA:

• Distinction 3.25 – 3.49 GPA
• High Distinction 3.50 – 3.74 GPA
• Very High Distinction 3.75 – 4.00 GPA

When a student enrolled in a program misses two consecutive semesters of coursework at HCC, they can:

1. adopt the program plan in place at the time of re-enrollment, or
2. adopt any revised plan put in place after re-enrollment. The student must fulfill requirements of the chosen plan in its entirety within 5 years of initial enrollment in the program. If a course is no longer available to fulfill requirements, the college will identify an appropriate replacement.

When graduation requirements for a program change after a student’s initial enrollment, the student can adopt the program plan in place when the student enrolled or adopt any revised program plan in place after initial enrollment. The student must fulfill requirements of the chosen plan in its entirety within 5 years of initial enrollment in the program. If a course is no longer available to fulfill requirements, the college will identify an appropriate replacement.

In cases in which the student’s program and required courses have been modified by conversion to semesters or other revisions during an extended interruption in attendance, the student must meet with an advisor to determine how remaining graduation requirements may be fulfilled.

A Commencement Ceremony is held once each year at the end of Spring Semester. All candidates enrolled during the academic year may participate. Students must indicate intent to participate by submitting an Application for Graduation.
GRADUATION REQUIREMENTS FOR AN ASSOCIATE OF ARTS DEGREE

An Associate of Arts Degree will be awarded to students completing the minimum general education requirements outlined below, and earning at least a 2.00 grade point average in 60 semester credits in courses numbered 1000 or above. The A.A. Degree requires completion of the Minnesota Transfer Curriculum (MnTC).

I. General Education (Minnesota Transfer Curriculum)
A minimum of 40 semester credits is required to satisfy general education requirements. Students must satisfy minimum requirements in all ten goal areas listed below. Courses which satisfy more than one goal area may be counted for credit only once.

1. COMMUNICATIONS
(9 semester credits minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
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</tr>
<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1030</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1040</td>
<td>Intro to Communication</td>
<td>3</td>
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</table>

2. CRITICAL THINKING:
Requirements are fulfilled when all MnTC goals are complete.

3. NATURAL SCIENCES
(6 credits minimum. Two courses must include labs.)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ASTR 1050</td>
<td>Introduction to Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
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<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 1610</td>
<td>Biology of Women</td>
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<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
<td>4</td>
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<tr>
<td>CHEM 1300</td>
<td>Investigating Chemistry through Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
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<tr>
<td>ENSC 1050</td>
<td>Environmental Science</td>
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<tr>
<td>GEOL 1010</td>
<td>Physical Geology</td>
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<td>PHYS 1005</td>
<td>Physics Concepts</td>
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<tr>
<td>PHYS 2021</td>
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</tr>
<tr>
<td>PHYS 2030</td>
<td>Modern Physics</td>
<td>3</td>
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</tbody>
</table>

4. MATH/LOGICAL REASONING
(3 credits minimum) One math course is required.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CSCI 1081</td>
<td>Fundamentals of Computer Science</td>
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<tr>
<td>MATH 1040</td>
<td>College Algebra</td>
<td>4</td>
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<tr>
<td>MATH 1100</td>
<td>Finite Math</td>
<td>3</td>
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<tr>
<td>MATH 1140</td>
<td>Liberal Arts Mathematics</td>
<td>3</td>
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<tr>
<td>MATH 1145</td>
<td>Introduction to the Mathematical Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1200</td>
<td>Survey of Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1300</td>
<td>Trigonometry</td>
<td>2</td>
</tr>
<tr>
<td>MATH 1501</td>
<td>Pre-Calculus</td>
<td>5</td>
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<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
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<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
<td>5</td>
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<td>MATH 2111</td>
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<td>MATH 2121</td>
<td>Calculus 3</td>
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<tr>
<td>MATH 2211</td>
<td>Differential Equations with Intro. to Linear Algebra</td>
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<tr>
<td>PHIL 1250</td>
<td>Logic</td>
<td>3</td>
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</table>

5. HISTORY / SOCIAL / BEHAVIORAL SCIENCE
(8 credits minimum) Select from at least two areas.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1055</td>
<td>European History: Ancient to 1789</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
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<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
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<tr>
<td>HIST 1300</td>
<td>The History of Food and Culture</td>
<td>3</td>
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<tr>
<td>HIST 1400</td>
<td>Modern Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2100</td>
<td>Divided America: 1960 - 1980</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2200</td>
<td>Minnesota History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2300</td>
<td>World War II</td>
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<td>HIST 2580</td>
<td>The Vietnam War</td>
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<td>MCS 1010</td>
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<td>PSCI 1100</td>
<td>American Government</td>
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<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
<td>3</td>
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</table>
### 6. HUMANITIES

(9 credits minimum with a minimum of one course from Area A, a minimum of two semester credits from Area B, and a minimum of one course from Area C.)

<table>
<thead>
<tr>
<th>Area A: Analysis and Criticism</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
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<tr>
<td>ART 1490</td>
<td>Art History – Prehistory/Gothic</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 1500</td>
<td>Art History – Renaissance to Present</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HUM 1200</td>
<td>World Religions</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUSC 1050</td>
<td>America’s Popular Music</td>
<td>3</td>
<td></td>
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<tr>
<td>MUSC 1100</td>
<td>Music Appreciation</td>
<td>3</td>
<td></td>
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<tr>
<td>MUSC 1110</td>
<td>Rock ‘n Roll: A Short History</td>
<td>3</td>
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<tr>
<td>PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>3</td>
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<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
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<td>PHIL 1350</td>
<td>Human Nature</td>
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<table>
<thead>
<tr>
<th>Area B: Performance and Expression</th>
<th>Course #</th>
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<tbody>
<tr>
<td>ART 1050</td>
<td>Drawing 1</td>
<td>3</td>
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<tr>
<td>ART 1060</td>
<td>Drawing 2</td>
<td>3</td>
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<tr>
<td>ART 1070</td>
<td>Principles of Printmaking</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 1120</td>
<td>2-D Design</td>
<td>3</td>
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<tr>
<td>ART 1210</td>
<td>Painting</td>
<td>3</td>
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<tr>
<td>ART 1600</td>
<td>Ceramics 1</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 1800</td>
<td>The Art of Photography</td>
<td>3</td>
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<td>ART 2010</td>
<td>Sculpture</td>
<td>3</td>
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<tr>
<td>ART 2120</td>
<td>3-D Design</td>
<td>3</td>
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<td>ART 2020</td>
<td>Intro to Metal Sculpture</td>
<td>3</td>
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<td>ART 2600</td>
<td>Ceramics 2</td>
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<tr>
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<td>Creative Writing</td>
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<td>MACO 1400</td>
<td>Digital Photography</td>
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<td>MCS 1071</td>
<td>American Indian Art</td>
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<tr>
<td>MUSC 1415</td>
<td>Beginning Voice</td>
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### 7. HUMAN DIVERSITY

(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART 1800</td>
<td>Art of Photography</td>
<td>3</td>
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<tr>
<td>BIOL 1610</td>
<td>Biology og Women</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1150</td>
<td>Multicultural Literature</td>
<td>3</td>
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<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
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<tr>
<td>MUSC 1110</td>
<td>Rock ‘n Roll: A Short History</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
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<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
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<tr>
<td>SPCH 1030</td>
<td>Interpersonal Communication</td>
<td>3</td>
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</table>

### 8. GLOBAL PERSPECTIVE

(1 course minimum)

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
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<tr>
<td>ART 1490</td>
<td>Art History – Prehistory/Gothic</td>
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<td>ART 1500</td>
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<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
<td>3</td>
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<tr>
<td>ENGL 1170</td>
<td>Film</td>
<td>3</td>
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<tr>
<td>ENGL 1190</td>
<td>Lives Through Literature</td>
<td>3</td>
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<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
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<tr>
<td>HIST 1055</td>
<td>European History: Ancient to 1789</td>
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</tr>
<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
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<tr>
<td>HIST 1300</td>
<td>The History of Food and Culture</td>
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</tbody>
</table>
HIST 1400  Modern Asia 3
HIST 2580  The Vietnam War 3
HUM 1200  World Religions 3
MUSC 1100  Music Appreciation 3
PHIL 1350  Human Nature 3

9. ETHICS AND CIVIC RESPONSIBILITY
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1130</td>
<td>Science Fiction</td>
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<td>Intro to Philosophy</td>
<td>3</td>
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<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1100</td>
<td>American Government</td>
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<td>State &amp; Local Government</td>
<td>3</td>
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<td>PSCI 1500</td>
<td>Alternative Spring Break</td>
<td>3</td>
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<td>SOC 1200</td>
<td>Social Problems</td>
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<td>SOC 1300</td>
<td>Criminology</td>
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<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

Or 25 hours of community service-learning through HCC.

10. PEOPLE AND THE ENVIRONMENT
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1180</td>
<td>Environmental Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENSC 1050</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
</tbody>
</table>

PHYSICAL EDUCATION
Two semester credits in physical education activity courses numbered 1010 - 1999 OR one semester credit in Physical Education activity numbered 1010 - 1999 plus HLTH 1150.

ELECTIVES AND/OR COURSES REQUIRED FOR MAJOR
Electives and/or courses required for major field of study should total a minimum of 18 semester credits. No courses numbered below 1000 may be included.

GRADUATION REQUIREMENTS FOR ASSOCIATE OF FINE ARTS DEGREE IN ART
An Associate of Fine Arts Degree in Art will be awarded to students completing the minimum general education requirements outlined below, and earning at least a 2.00 grade point average in 60 semester credits in courses numbered 1000 or above. The A.F.A Degree requires completion of the Minnesota Transfer Curriculum (MnTC).
GRADUATION REQUIREMENTS FOR ASSOCIATE OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION

An Associate of Science Degree in Business Administration will be awarded to students completing the minimum general education requirements outlined below, and earning at least a 2.00 grade point average in 60 semester credits in courses numbered 1000 or above. The A.S. Degree requires completion of the Minnesota Transfer Curriculum (MnTC).

The Business Administration program provides a strong foundation for the study of business and is intended for students who wish to transfer to a four-year institution.

I. General Education (Minnesota Transfer Curriculum) - A minimum of 40 semester credits is required to satisfy general education requirements. Students must satisfy minimum requirements in all ten goal areas listed below. Courses which satisfy more than one goal area may be counted for credit only once.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
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<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1030</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1040</td>
<td>Introduction to Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

2. CRITICAL THINKING:

Requirements are fulfilled when all MnTC goals are complete

3. NATURAL SCIENCES (6 credits minimum. Two courses must include labs.)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ASTR 1050</td>
<td>Introduction to Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
<td>3</td>
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<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
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<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
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<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
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<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
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<tr>
<td>CHEM 1300</td>
<td>Investigating Chemistry through Forensic Science</td>
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<table>
<thead>
<tr>
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<th>Course Title</th>
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<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
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<td>ENSC 1050</td>
<td>Environmental Science</td>
<td>3</td>
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<tr>
<td>GEOL 1010</td>
<td>Physical Geology</td>
<td>3</td>
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<tr>
<td>PHYS 1005</td>
<td>Physics Concepts</td>
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<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
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<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
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<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
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<tr>
<td>PHYS 2030</td>
<td>Modern Physics</td>
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4. MATH/LOGICAL REASONING (4 credits minimum)

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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>MATH 1040</td>
<td>College Algebra</td>
<td>4</td>
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5. HISTORY / SOCIAL / BEHAVIORAL SCIENCE (8 credits minimum)

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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
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<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
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<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
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<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
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<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1055</td>
<td>European History: Ancient to 1789</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
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<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1300</td>
<td>The History of Food and Culture</td>
<td>3</td>
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<tr>
<td>HIST 1400</td>
<td>Modern Asia</td>
<td>3</td>
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<tr>
<td>HIST 2100</td>
<td>Divided America: 1960 - 1980</td>
<td>3</td>
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<tr>
<td>HIST 2200</td>
<td>Minnesota History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2300</td>
<td>World War II</td>
<td>3</td>
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<tr>
<td>HIST 2580</td>
<td>The Vietnam War</td>
<td>3</td>
</tr>
<tr>
<td>MCS 1010</td>
<td>Introduction to Indian Studies</td>
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<tr>
<td>PSCI 1100</td>
<td>American Government</td>
<td>3</td>
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<tr>
<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
<td>3</td>
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<tr>
<td>PSCI 1500</td>
<td>Alternative Spring Break</td>
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<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
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<td>PSYC 1350</td>
<td>Lifespan Development</td>
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<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
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<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
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<tr>
<td>SOC 1300</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
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<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
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6. HUMANITIES
(9 credits minimum)

<table>
<thead>
<tr>
<th>Area A: Analysis and Criticism</th>
<th>Course #</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 1490</td>
<td>Art History – Prehistory/Gothic</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 1500</td>
<td>Art History – Renaissance to Present</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUSC 1050</td>
<td>America’s Popular Music</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUSC 1100</td>
<td>Music Appreciation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUSC 1110</td>
<td>Rock ’n Roll: A Short History</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
<td></td>
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<tr>
<td>PHIL 1350</td>
<td>Human Nature</td>
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</table>

<table>
<thead>
<tr>
<th>Area B: Performance and Expression</th>
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<tr>
<td>ART 1050</td>
<td>Drawing 1</td>
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<td>3</td>
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<tr>
<td>ART 1060</td>
<td>Drawing 2</td>
<td></td>
<td>3</td>
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<tr>
<td>ART 1070</td>
<td>Principles of Printmaking</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 1120</td>
<td>2-D Design</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 1210</td>
<td>Painting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 1600</td>
<td>Ceramics 1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 1800</td>
<td>The Art of Photography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 2010</td>
<td>Sculpture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 2120</td>
<td>3-D Design</td>
<td>3</td>
<td></td>
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<tr>
<td>ART 2600</td>
<td>Ceramics 2</td>
<td>3</td>
<td></td>
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<tr>
<td>ENGL 2100</td>
<td>Creative Writing</td>
<td>3</td>
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<tr>
<td>MCS 1071</td>
<td>American Indian Art</td>
<td>3</td>
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<tr>
<td>MUSC 1415</td>
<td>Beginning Voice</td>
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<table>
<thead>
<tr>
<th>Area C: Literature Courses</th>
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<tr>
<td>ENGL 1130</td>
<td>Science Fiction</td>
<td>3</td>
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<tr>
<td>ENGL 1150</td>
<td>Multicultural Literature</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENGL 1170</td>
<td>Film</td>
<td>3</td>
<td></td>
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<tr>
<td>ENGL 1180</td>
<td>Environmental Literature</td>
<td>3</td>
<td></td>
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<tr>
<td>ENGL 1190</td>
<td>Lives Through Literature</td>
<td>3</td>
<td></td>
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<tr>
<td>ENGL 2110</td>
<td>English Literature 700 - 1700</td>
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<tr>
<td>ENGL 2120</td>
<td>English Literature 1700 - 1920</td>
<td>3</td>
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<tr>
<td>ENGL 2210</td>
<td>American Literature to 1865</td>
<td>3</td>
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<tr>
<td>ENGL 2220</td>
<td>American Literature 1865 - 1960</td>
<td>3</td>
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</table>

One course from each of the following areas (7, 8, 9, 10) must either be included in the preceding 40 general education credits or taken in addition to those 40 credits.

7. HUMAN DIVERSITY
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 1800</td>
<td>The Art of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1150</td>
<td>Multicultural Literature</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
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<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
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<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2100</td>
<td>Divided America: 1960 - 1980</td>
<td>3</td>
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<tr>
<td>HIST 2200</td>
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<td>3</td>
</tr>
<tr>
<td>HIST 2300</td>
<td>World War II</td>
<td>3</td>
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<tr>
<td>MCS 1010</td>
<td>Introduction to Indian Studies</td>
<td>3</td>
</tr>
<tr>
<td>MCS 1071</td>
<td>American Indian Art</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1050</td>
<td>America’s Popular Music</td>
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</tr>
<tr>
<td>MUSC 1110</td>
<td>Rock ’n Roll: A Short History</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1350</td>
<td>Human Nature</td>
<td>3</td>
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<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
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<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
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</tr>
<tr>
<td>SPCH 1030</td>
<td>Intercultural Communications</td>
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8. GLOBAL PERSPECTIVE
(1 course minimum)

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
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<td>Introduction to Art</td>
<td>3</td>
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<tr>
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<td>3</td>
</tr>
<tr>
<td>ART 1500</td>
<td>Art History – Renaissance to Present</td>
<td>3</td>
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<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
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<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1170</td>
<td>Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1190</td>
<td>Lives Through Literature</td>
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<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
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<tr>
<td>HIST 1055</td>
<td>European History: Ancient to 1789</td>
<td>3</td>
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<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
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<tr>
<td>HIST 1300</td>
<td>History of Food and Culture</td>
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<td>Modern Asia</td>
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<td>HIST 2580</td>
<td>The Vietnam War</td>
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<tr>
<td>MUSC 1100</td>
<td>Rock ’n Roll: A Short History</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1350</td>
<td>Human Nature</td>
<td>3</td>
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9. ETHICS AND CIVIC RESPONSIBILITY
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1130</td>
<td>Science Fiction</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
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<td>PSCI 1100</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
<td>3</td>
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</tbody>
</table>
PSCI 1500  Alternative Spring Break  3
SOC 1200  Social Problems  3
SOC 1300  Criminology  3
SOC 2300  Sociology of Aging  3
or 25 hours of community service-learning through HCC.

10. PEOPLE AND THE ENVIRONMENT
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1180</td>
<td>Environmental Literature</td>
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</tr>
<tr>
<td>ENSC 1050</td>
<td>Environmental Science</td>
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REQUIRED BUSINESS COURSES:

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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1230</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
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<tr>
<td>BUS 2240</td>
<td>Principles of Accounting 2</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2500</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2510</td>
<td>Principles of Management</td>
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GRADUATION REQUIREMENTS FOR ASSOCIATE OF SCIENCE DEGREE IN ENGINEERING

An Associate of Science Degree in Engineering will be awarded to students completing the minimum general education requirements outlined below and earning a 2.00 grade point average (or better) in 60 semester credits in courses numbered 1000 or above.

1. COMMUNICATIONS
(3 semester credits minimum)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
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</table>

3. NATURAL SCIENCES
(15 credits minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ASTR 1050</td>
<td>Solar System Astronomy</td>
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<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
<td>3</td>
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<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
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<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 1610</td>
<td>Biology of Women</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
<td>4</td>
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<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
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<tr>
<td>ENSC 1050</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1 (Required)</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2 (Required)</td>
<td>5</td>
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</table>

4. MATH/LOGICAL REASONING
(15 credits minimum)

<table>
<thead>
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<th>Course Title</th>
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<tbody>
<tr>
<td>CSCI 1081</td>
<td>Fundamentals of Computer Science 1</td>
<td>4</td>
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<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2111</td>
<td>Calculus 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2121</td>
<td>Calculus 3</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2211</td>
<td>Differential Equations with Intro. to</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Linear Algebra</td>
<td></td>
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</table>

5. HISTORY / SOCIAL / BEHAVIORAL SCIENCE
(3 credits minimum)

<table>
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<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3 required</td>
</tr>
<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1055</td>
<td>European History: Ancient to 1789</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
<td>3</td>
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<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1400</td>
<td>Modern Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2100</td>
<td>Divided America: 1960 - 1980</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2200</td>
<td>Minnesota History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2300</td>
<td>World War II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2580</td>
<td>The Vietnam War</td>
<td>3</td>
</tr>
<tr>
<td>MCS 1010</td>
<td>Introduction to Indian Studies</td>
<td>2</td>
</tr>
<tr>
<td>PSCI 1100</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1500</td>
<td>Alternative Spring Break</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
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<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
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<tr>
<td>SOC 1300</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
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</table>

GRADUATION REQUIREMENTS
## 6. HUMANITIES
(3 credits minimum)

### Area A: Analysis and Criticism

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 1490</td>
<td>Art History – Prehistory/Gothic</td>
<td>3</td>
</tr>
<tr>
<td>ART 1500</td>
<td>Art History – Renaissance to Present</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1050</td>
<td>America’s Popular Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1100</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1110</td>
<td>Rock ‘n Roll: A Short History</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
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</tbody>
</table>

### Area C: Literature Courses

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1130</td>
<td>Science Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1150</td>
<td>Multicultural Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1170</td>
<td>Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1180</td>
<td>Environmental Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1190</td>
<td>Lives Through Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2110</td>
<td>English Literature 700 - 1700</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2120</td>
<td>English Literature 1700 - 1920</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2210</td>
<td>American Literature to 1865</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2220</td>
<td>American Literature 1865 - 1960</td>
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## 7. HUMAN DIVERSITY:
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
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<tbody>
<tr>
<td>ART 1800</td>
<td>Art of Photography</td>
<td>3</td>
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<tr>
<td>BIOL 1610</td>
<td>Biology of Women</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1150</td>
<td>Multicultural Literature</td>
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</tr>
<tr>
<td>HIST 1150</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2100</td>
<td>Divided America: 1960 - 1980</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2200</td>
<td>Minnesota History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2300</td>
<td>World War II</td>
<td>3</td>
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<tr>
<td>MCS 1071</td>
<td>American Indian Art</td>
<td>3</td>
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<tr>
<td>MUSC 1050</td>
<td>America’s Popular Music</td>
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</tr>
<tr>
<td>MUSC 1110</td>
<td>Rock ‘n Roll: A Short History</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
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</table>

## 8. GLOBAL PERSPECTIVE:
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
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<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 1490</td>
<td>Art History – Prehistory/Gothic</td>
<td>3</td>
</tr>
<tr>
<td>ART 1500</td>
<td>Art History – Renaissance to Present</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1030</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1170</td>
<td>Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1190</td>
<td>Lives Through Literature</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1100</td>
<td>Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1055</td>
<td>European History Ancient to 1789</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1060</td>
<td>European History: 1789 - Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1300</td>
<td>The History of Food and Culture</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2580</td>
<td>The Vietnam War</td>
<td>3</td>
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<td>HUM 1200</td>
<td>World Religions</td>
<td>3</td>
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<tr>
<td>MUSC 1100</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1350</td>
<td>Human Nature</td>
<td>3</td>
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## 9. ETHIC AND CIVIC RESPONSIBILITY:
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1130</td>
<td>Science Fiction</td>
<td>3</td>
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<tr>
<td>PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1100</td>
<td>American Government</td>
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<td>PSCI 1500</td>
<td>Alternative Spring Break</td>
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<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1300</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
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or 25 hours of community service learning through HCC

## 10. PEOPLE AND THE ENVIRONMENT:
(1 course minimum)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1050</td>
<td>Human Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1180</td>
<td>Environmental Literature</td>
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<td>ENSC 1050</td>
<td>Environmental Science</td>
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## CHEMISTRY & ENGINEERING ELECTIVES
(14 credits minimum)

<table>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
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<tr>
<td>CHEM 2710</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>CSCI 1021</td>
<td>Visual Basic Programming 1</td>
<td>3</td>
</tr>
</tbody>
</table>
GRADUATION REQUIREMENTS FOR ASSOCIATE OF SCIENCE DEGREE IN NURSING

An Associate of Science Degree in Nursing will be awarded to students completing the minimum general education requirements outlined below and earning a 2.00 grade point average (or better) in 64 semester credits in courses numbered 1000 or above.

FIRST YEAR
SUMMER SEMESTER - Prior to Fall Entry

Course #  Course Title  Credits
---  ---  ---
ENGL 1060  Freshman Composition  3
Biol 1270  Human Anatomy & Physiology  4
or
Biol 1280  Human Anatomy & Physiology  4
* Completion of certified nursing assistant course is required.
* Achievement of a minimum cutscore of 69 on the Accuplacer Arithmetic test is required by July 29 each year

FALL SEMESTER

Course #  Course Title  Credits
---  ---  ---
HLTH 2010  Nutrition  2
NURS 0950  Essential Mathematics for Nurses  1
NURS 1250  Foundations of Nursing  8
PSYC 1205  General Psychology  4

Additional courses to satisfy 60 semester credits requirement with approval of program advisor.

SPRING SEMESTER
Course #  Course Title  Credits
---  ---  ---
Biol 1270  Human Anatomy & Physiology  4
or
Biol 1280  Human Anatomy & Physiology  4
*Alternate class from above to complete the series.

NURS 1350  Care of the Client Affected by Chronic Stressors  8

PSYC 1350  Lifespan Development  3

SECOND YEAR
SUMMER SEMESTER

Course #  Course Title  Credits
---  ---  ---
Biol 1120  Microbiology  3
(All students entering the second year of nursing)

** All of the above courses must be completed before entering the second year of the program.

NURS 1750  Nursing Bridge  5
(Must be taken by LPN students entering the program in the fall)

SECOND YEAR
FALL SEMESTER

Course #  Course Title  Credits
---  ---  ---
NURS 2050  Care of Women & Children  4
NURS 2150  Care of the Client Affected by Acute Stressors  5
PHIL 1300  Ethics  3

SPRING SEMESTER

Course #  Course Title  Credits
---  ---  ---
NURS 2250  Care of the Client Affected by Complex Stressors  6
NURS 2350  Foundations of Leadership  1
NURS 2900  Capstone Experience (Elective)  1
NURS 2900  Transition to Practice Essentials (Elective)  1
NURS 1755  Clinical Simulation in Nursing (Elective)  1
NURS 2902  Cultural Diversity in Health Care (Elective)  1
Communication Course  3
Social Science Elective  3

Communication Electives:

Course #  Course Title  Credits
---  ---  ---
ENGL 1070  Technical Report Writing  3
ENGL 1090  Advanced Composition  3
SPCH 1010  Fundamentals of Speech  3
SPCH 1030  Intercultural Communication  3
SPCH 1040  Introduction to Communication  3
## Social Science Elective:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

## Graduation Requirements for The Associate of Applied Science Degree

An Associate of Applied Science Degree will be awarded to students completing the requirements of a two-year occupational program of study and earning a 2.00 grade point average (or better). See the specific courses required in the next section for the Associate of Applied Science Degree.
Transfer programs are designed for students who wish to earn their Associate of Arts Degree at Hibbing Community College and then transfer to four-year colleges or professional schools. The programs consist of typical lower division requirements for a variety of major fields. Since lower division course requirements vary from one college to another, students must consult their counselors or advisors and the catalogs of the colleges or universities to which they plan to transfer.

Most four-year public colleges in Minnesota accept the Associate of Arts Degree as complete fulfillment of their liberal education distribution requirements. Each baccalaureate program has its own requirements. The classes listed below are a general guide to help you start planning. Transfer programs included here are the most popular. HCC counselors have transfer information on other programs not listed here.

Programs listed in the career programs section of the catalog are primarily for students who plan to prepare themselves for employment in a specialized occupation. Although the courses are designed as career programs, some of the courses will transfer to four-year colleges and universities should the students later decide to continue their education. Students should check with the college counselors on the transferability of specific courses in this section of the catalog.

Students majoring in career programs should follow the courses outlined in the specific programs in order to qualify for the positions for which the programs are preparing them.
**TRANSFER PROGRAMS**

**ACCOUNTING/BUSINESS ADMINISTRATION**

*Complete the A.A. degree including MnTC.*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 1230</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
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<tr>
<td>BUS 2240</td>
<td>Principles of Accounting 2</td>
<td>4</td>
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<td>ECON 1010</td>
<td>Macroeconomics</td>
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<td>ECON 1050</td>
<td>Microeconomics</td>
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<tr>
<td>MATH 1040</td>
<td>College Algebra</td>
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or

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<th>Credits</th>
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<tbody>
<tr>
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</table>

**In addition, some colleges/universities require:**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1300</td>
<td>Business Communications</td>
<td>3</td>
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<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
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</tr>
<tr>
<td>CSCI ****</td>
<td>Varies by college.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Specific colleges may have other requirements. See a counselor for details.

**ARCHITECTURE**

Architecture schools have a variety of undergraduate and graduate programs available. Students interested in pursuing a degree in architecture should consult with their counselors or advisors and the catalogs of the college to which they plan to transfer. Students who complete the MnTC may meet the college liberal education requirements for a degree program.

An education in architecture requires a broad understanding of the arts, humanities, and sciences, along with the architectural principles of design theory, history, technology and profession practice. Highly recommended courses for pre-architecture students would include art, drafting, English, literature, biology, math, physics, and speech.

**ART**

*Complete the A.A. degree including MnTC.*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
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<td>ART 1050</td>
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<tr>
<td>ART 1120</td>
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<tr>
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<tr>
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<td>Art History - Renaissance to Present</td>
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<td>ART 1600</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.

**BIOLOGICAL SCIENCES**

*Complete the A.A. degree including MnTC.*

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<td>General Biology of Animals &amp; Plants</td>
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<td>MATH 2101</td>
<td>Calculus 1</td>
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**In addition, some colleges require:**

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<td>Organic Chemistry 2</td>
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<tr>
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<td>Calculus 2</td>
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<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
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<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
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or

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**Note:** Specific colleges may have other requirements. See a counselor for details.

**BUSINESS ADMINISTRATION**

*Complete the A.S. degree including MnTC.*

**Business Core:**

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<tr>
<td>BUS 2104</td>
<td>Business Mathematics</td>
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<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
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<td>BUS 2240</td>
<td>Principles of Accounting 2</td>
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<td>BUS 2500</td>
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<td>CSCI 1010</td>
<td>Computer Literacy</td>
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or

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### General Education:

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<td>ENGL 1060</td>
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<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td><strong>• Science/Math:</strong></td>
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<td></td>
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<tr>
<td>Lab Science</td>
<td>3</td>
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<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
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<td><strong>• Social/Behavior Science:</strong></td>
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<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
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<td>Microeconomics</td>
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<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
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<tr>
<td>or</td>
<td>PSYC 1205</td>
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<tr>
<td>or</td>
<td>SOC 1100</td>
<td>3</td>
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<tr>
<td><strong>• Humanities:</strong></td>
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Additional General Education credits to total 30 with a program total of 64 credits.

### CHEMICAL ENGINEERING

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<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>CSCI 1250</td>
<td>Programming in C++</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2010</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2010</td>
<td>Mechanics of Materials</td>
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<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
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<td>Calculus 2</td>
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<tr>
<td>MATH 2121</td>
<td>Calculus 3</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2211</td>
<td>Differential Equations with Intro. to Linear Algebra</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
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<td>General Physics 2</td>
<td>5</td>
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**In addition, some colleges require:**

<table>
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<th>Course #</th>
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<tbody>
<tr>
<td>ECON 1050</td>
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<tr>
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<tr>
<td>ENGR 2061</td>
<td>Electrical Engineering Fundamentals with Lab</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.

### CHEMISTRY

**Complete the A.A. degree including MnTC.**

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<td>ECON 1050</td>
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<tr>
<td>BIOL 1100</td>
<td>Microbiology</td>
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<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
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<td>BIOL 1280</td>
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</tr>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
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### CHIROPRACTIC

**Complete the A.A. degree including MnTC.**

<table>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
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<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
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<td>PSYC 1205</td>
<td>General Psychology</td>
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**One additional communication course**

**Social Science and Humanities courses**

**16**

**In addition, some colleges require:**

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<td>Microbiology</td>
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<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
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<td>BIOL 1280</td>
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### CIVIL ENGINEERING

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<tr>
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<tr>
<td>CSCI 1250</td>
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<td>Statics</td>
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<td>ENGR 2020</td>
<td>Dynamics</td>
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<td>ENGR 2030</td>
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<td>MATH 2101</td>
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<td>MATH 2211</td>
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<td>PHYS 2010</td>
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</tr>
<tr>
<td>PHYS 2021</td>
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<td>5</td>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
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<tr>
<td>or</td>
<td>ECON 1050</td>
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<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
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<tr>
<td>ENGR 2061</td>
<td>Electrical Engineering</td>
<td></td>
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<tr>
<td></td>
<td>Fundamentals with Lab</td>
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<td>GEOL 1010</td>
<td>Introduction to Physical Geology</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.

### CRIMINAL JUSTICE

**Complete the A.A. degree including MnTC.**

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**In addition, some colleges require:**

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<tbody>
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<td>MATH 2010</td>
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<td>PHIL 1300</td>
<td>Ethics</td>
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<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
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<td>PSYC 1205</td>
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<td>PSYC 1400</td>
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<tr>
<td>SOC 1200</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.

### COMPUTER SCIENCE

**Complete the A.A. degree including MnTC.**

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<td>ENGL 1060</td>
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<td>MATH 2101</td>
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<tr>
<th>Course #</th>
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<tbody>
<tr>
<td>CSCI 1250</td>
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<td>MATH 2010</td>
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</tr>
<tr>
<td>MATH 2121</td>
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<td>Differential Equations with Intro. to Linear Algebra</td>
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<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
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<td>General Physics 2</td>
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### DENTAL HYGIENE

**Complete the A.A. degree including MnTC.**

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<td>CHEM 1020</td>
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<td>Freshman Composition</td>
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<td>PSYC 1205</td>
<td>General Psychology</td>
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<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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<tbody>
<tr>
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<td>HLTH 1010</td>
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<tr>
<td>MATH 2010</td>
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<tr>
<td>PHIL 1300</td>
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### DENTISTRY

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**In addition, some colleges require:**

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</tr>
<tr>
<td>BIOL 1280</td>
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Courses in Art.

**Note:** Specific colleges may have other requirements. See a counselor for details.

**Dietetics/Nutrition**

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<td>General Biology of Animals &amp; Plants</td>
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**In addition, some colleges require:**

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Courses in Art, Music, Social Science and Literature.

**Note:** Specific colleges may have other requirements. See a counselor for details.

**Economics**

Complete the A.A. degree including MnTC.

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<td>BUS 2240</td>
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**In addition, some colleges require:**

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<td>SOC 1100</td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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Courses in Computer Science

**Note:** Specific colleges may have other requirements. See a counselor for details.

**Electrical Engineering**

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<td>CSCI 1250</td>
<td>Programming in C++</td>
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<tr>
<td>ENGR 2010</td>
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<td>3</td>
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<tr>
<td>ENGR 2020</td>
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<tr>
<td>ENGR 2061</td>
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<td>ENGR 2071</td>
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<td>MATH 2101</td>
<td>Calculus 1</td>
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<td>MATH 2111</td>
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<tr>
<td>MATH 2121</td>
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<td>MATH 2211</td>
<td>Differential Equations with Intro. to Linear Algebra</td>
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</tr>
<tr>
<td>PHYS 2010</td>
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<td>PHYS 2021</td>
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**In addition, some colleges require:**

<table>
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<tr>
<td>ECON 1010</td>
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<tr>
<td>or</td>
<td>ECON 1050</td>
<td>Microeconomics</td>
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<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
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<tr>
<td>or</td>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
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<tr>
<td>ENGR 1510</td>
<td>Digital Logic</td>
<td>3</td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.
**ELECTRONIC EDUCATION**

*Complete the A.A. degree including MnTC.*

<table>
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<td>Chemical Awareness</td>
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<td>Fundamentals of Music</td>
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<td>PSYC 1205</td>
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**In addition, some colleges require:**

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<td>Advanced Algebra</td>
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<td>MUSC 1100</td>
<td>Music Appreciation</td>
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<td>PSYC 1350</td>
<td>Lifespan Development</td>
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<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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One course each in History, Geography, Geology, Political Science, Biology, Chemistry, Physics.

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**ENGINEERING - GENERAL**

*Complete the A.A. degree including MnTC.*

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<td>CHEM 1611</td>
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<tr>
<td>CSCI 1250</td>
<td>Programming in C++</td>
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<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
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<td>or</td>
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<tr>
<td>ECON 1050</td>
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<td>ENGL 1060</td>
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<td>ENGL 1070</td>
<td>Technical Report Writing</td>
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<td>or</td>
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<td>ENGL 1090</td>
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<td>ENGR 2030</td>
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<tr>
<td>ENGR 2061</td>
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<tr>
<td>or</td>
<td>Fundamentals with Lab</td>
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**Note:** Specific colleges may have other requirements. See a counselor for details.

**ENGLISH**

*Complete the A.A. degree including MnTC.*

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<tr>
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**In addition, some colleges require:**

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<td>English Literature 1700 - 1920</td>
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**FOREST RESOURCES**

*Complete the A.A. degree including MnTC.*

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<td>PHYS 1020</td>
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<tr>
<td>SPCH 1010</td>
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**GEOLOGY AND GEOLOGICAL ENGINEERING**

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<td>CHEM 1611</td>
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<tr>
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<td>ENGR 2010</td>
<td>Statics</td>
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<td>Dynamics</td>
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<td>Mechanics of Materials</td>
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MATH 2121  Calculus 3  5
MATH 2211  Differential Equations with Intro. to
            Linear Algebra  5
PHYS 2010  General Physics 1  5
PHYS 2021  General Physics 2  5
In addition, some colleges require:

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<td>Fundamentals with Lab</td>
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HISTORY
Complete the A.A. degree including MnTC.

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<td>HIST 1250</td>
<td>U.S. History to 1877</td>
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<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
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For social studies teaching, history emphasis:

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<td>ECON 1030</td>
<td>Introduction to Economics</td>
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<td>Microeconomics</td>
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<td>GEOG 1100</td>
<td>Human Geography</td>
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<td>HIST 1250</td>
<td>U.S. History 1877 - Present</td>
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</tr>
<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
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<td>MATH 2010</td>
<td>Statistics</td>
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<td>PSCI 1100</td>
<td>American Government</td>
<td>3</td>
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<td>PSYC 1205</td>
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In addition, some colleges require:

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<td>HIST 2300</td>
<td>World War II</td>
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<td>HIST 2580</td>
<td>The Vietnam War</td>
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INDUSTRIAL EDUCATION/INDUSTRIAL
TECHNOLOGY
Complete the A.A. degree including MnTC.

<table>
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<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

For Industrial Education, Grades 7-12 licensure, include:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1050</td>
<td>Chemical Awareness</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1021</td>
<td>Visual Basic Programming 1</td>
<td>3</td>
</tr>
<tr>
<td>CSCI ****</td>
<td>Programming elective</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1020</td>
<td>Advanced Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Specific colleges may have other requirements. See a counselor for details.

INTERIOR DESIGN / DECORATING
Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART electives</td>
<td>up to 15 credits.</td>
<td></td>
</tr>
<tr>
<td>BUS 2104</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 1021</td>
<td>Visual Basic Programming 1</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1150</td>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
</tbody>
</table>

LAW

Law schools generally require the completion of bachelor’s
degree for admission. Majors in business administration,
political science, history or sociology are common; however,
other majors, such as engineering and biological sciences, are
desirable.

Highly recommended courses for all pre-law students are BUS
2230 Principles of Accounting 1 and BUS 2240 Principles of
Accounting 2.
MASS COMMUNICATION

Students interested in pursuing a degree in Mass Communication should consult with their counselors, advisors and the catalogs of the college to which they plan to transfer. Students who complete the MnTC may meet the college liberal education requirements for a degree program.

An education in Mass Communication requires a broad understanding of arts, humanities and science. Highly recommended courses for Mass Communication students would include English, Economics, History, Political Science, and Fundamentals of Speech.

MATHEMATICS AND STATISTICS

Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2111</td>
<td>Calculus 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2121</td>
<td>Calculus 3</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2211</td>
<td>Differential Equations with Intro. to Linear Algebra</td>
<td>5</td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1250</td>
<td>Programming in C++</td>
<td>3</td>
</tr>
<tr>
<td>CSCI 1081</td>
<td>Fundamentals of Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>CSCI 1081</td>
<td>Fundamentals of Computer Science 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Actuarial Science students add:

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<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
</tr>
<tr>
<td>BUS 2240</td>
<td>Principles of Accounting 2</td>
<td>4</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
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</table>

Note: Specific colleges may have other requirements. See a counselor for details.

MECHANICAL ENGINEERING

<table>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>CSCI 1250</td>
<td>Programming in C++</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 1010</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>ENGR 2010</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2020</td>
<td>Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2030</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2061</td>
<td>Electrical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2111</td>
<td>Calculus 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2121</td>
<td>Calculus 3</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2211</td>
<td>Differential Equations with Intro. to Linear Algebra</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
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</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 2010</td>
<td>Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Social Science electives</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>Fine Arts and Humanities electives from Area A or C only.</td>
<td></td>
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</table>

MEDICAL TECHNOLOGY (CLINICAL LAB SCIENCE)

Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2710</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>One Math Course:</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>Statistics, College Algebra, Finite Math or Calculus 1</td>
<td></td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>
SPCH 1010  Fundamentals of Speech  3
SPCH 1040  Introduction to Communication  3

Note: Specific colleges may have other requirements. See a counselor for details.

MEDICINE
Complete the A.A. degree including MnTC.
Select a major for your bachelors’ degree. Include these courses by the time you finish your four-year degree.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
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<tr>
<td>CHEM 2710</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL ****</td>
<td>One Literature Course</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
<td>5</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Social sciences and humanities courses  18

Note: Specific colleges may have other requirements. See a counselor for details.

MORTUARY SCIENCE
Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CSCI 1010</td>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>HIST ****</td>
<td>One course</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1040</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPCH 1040</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

The following required courses may be completed before or after transfer:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1600</td>
<td>Medical/Legal Terminology</td>
<td>2</td>
</tr>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
</tbody>
</table>

MUSIC/MUSIC EDUCATION
Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1050</td>
<td>Chemical Awareness</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>

Participation in one or more of the performance organizations each quarter together with applied study on a major instrument, piano and/or voice are required.

Note: Specific colleges may have other requirements. See a counselor for details.

OCCUPATIONAL THERAPY
Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>BUS 1600</td>
<td>Medical/Legal Terminology</td>
<td>2</td>
</tr>
<tr>
<td>MATH 2010</td>
<td>Statistics</td>
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<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
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<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1250</td>
<td>Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
<td>4</td>
</tr>
</tbody>
</table>

Courses in studio arts.

Note: Specific colleges may have other requirements. See a counselor for details.
OPTOMETRY

Complete the A.A. degree including MnTC.

<table>
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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2710</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2101</td>
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<td>5</td>
</tr>
<tr>
<td>MATH 2121</td>
<td>Calculus 2</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 1010</td>
<td>Introduction to Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
</tr>
</tbody>
</table>

In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
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<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
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<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
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</table>

Note: Specific colleges may have other requirements. See a counselor for details.

PARALEGAL / LEGAL ASSISTANT

Complete the A.A. degree including MnTC.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 1230</td>
<td>Legal Environment of Business</td>
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<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
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In addition, some colleges require:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>BUS 2240</td>
<td>Principles of Accounting 2</td>
<td>4</td>
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<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
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<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
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<tr>
<td>ENSCI 1050</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1250</td>
<td>U.S. History to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1260</td>
<td>U.S. History 1877 - Present</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 1100</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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</tr>
<tr>
<td>SPCH 1040</td>
<td>Introduction to Communication</td>
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PHARMACY

Complete the A.A. degree including MnTC.

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<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
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<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
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<tr>
<td>CHEM 2710</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
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<tr>
<td>MATH 2101</td>
<td>Calculus 1</td>
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<tr>
<td>MATH 2111</td>
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<td>PHYS 1010</td>
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</tr>
<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS 2010</td>
<td>General Physics 1</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 2021</td>
<td>General Physics 2</td>
<td>5</td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
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<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
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</tr>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
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In addition, some colleges require:

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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
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Note: Specific colleges may have other requirements. See a counselor for details.

PHYSICAL EDUCATION

Complete the A.A. degree including MnTC.

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1270</td>
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<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
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<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HLTH 1050</td>
<td>Chemical Awareness</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
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</table>

See individual university catalog for current list of required physical education activity courses.

In addition, some colleges require:

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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</tbody>
</table>
**Note:** Specific colleges may have other requirements. See a counselor for details.

### PHYSICAL THERAPY
*Complete the A.A. degree including MnTC.*

<table>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
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<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1611</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
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</tr>
<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
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<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1010</td>
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<tr>
<td>PHYS 1020</td>
<td>Introduction to Physics</td>
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<tr>
<td>or PHYS 2010</td>
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<td>PHYS 2021</td>
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<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
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<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
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</table>

**In addition, some colleges require:**

<table>
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<th>Course #</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BUS 1600</td>
<td>Medical/Legal Terminology</td>
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</tr>
<tr>
<td>HLTH 1010</td>
<td>Personal &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1040</td>
<td>College Algebra</td>
<td>4</td>
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<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1040</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Courses in humanities.

**Note:** Specific colleges may have other requirements. See a counselor for details.

### POLITICAL SCIENCE
*Complete the A.A. degree including MnTC.*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSCI 1100</td>
<td>American Government</td>
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**In addition, some colleges require:**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSCI 1300</td>
<td>State &amp; Local Government</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
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</tbody>
</table>

**Note:** Specific colleges may have other requirements. See a counselor for details.

### PSYCHOLOGY
*Complete the A.A. degree including MnTC.*

<table>
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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
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</table>

**In addition, some colleges require:**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1510</td>
<td>General Biology of Cells</td>
<td>5</td>
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<tr>
<td>HLTH 2010</td>
<td>Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>MATH 2010</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Note:** Specific colleges may have other requirements. See a counselor for details.

### PHYSICIANS’ ASSISTANT
*Complete the A.A. degree including MnTC.*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
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<td>BIOL 1510</td>
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<tr>
<td>BIOL 1520</td>
<td>General Biology of Animals &amp; Plants</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1610</td>
<td>General Chemistry 1</td>
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</tr>
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<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
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<td>CHEM 2720</td>
<td>Organic Chemistry 2</td>
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</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
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</table>

### RETAIL FASHION MERCHANDISING
*It is often to the students’ advantage to transfer after one year, if the following courses are complete.*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 1010</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2230</td>
<td>Principles of Accounting 1</td>
<td>4</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Macroeconomics</td>
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<td>ECON 1050</td>
<td>Microeconomics</td>
<td>3</td>
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<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>Course #</td>
<td>Course Title</td>
<td>Credits</td>
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<td>ENGL 1090</td>
<td>Advanced Composition</td>
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</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, some colleges require:
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
MATH 1040  | College Algebra                       | 4       |
Two Science electives
One or two Social Science electives
Two Humanities electives

**SPECIAL EDUCATION**

Complete the A.A. degree including MnTC.
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
HLTH 1010  | Personal & Community Health           | 3       |
HLTH 1050  | Chemical Awareness                    | 3       |
MUSC 1150  | Fundamentals of Music                 | 3       |
PSYC 1205  | General Psychology                    | 4       |
PSYC 1350  | Lifespan Development                  | 3       |
SPCH 1010  | Fundamentals of Speech                | 3       |

In addition, some colleges require:
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
MATH 1020  | Advanced Algebra                      | 3       |
Courses required for Elementary Education.

Note: Specific colleges may have other requirements. See a counselor for details.

**SOCIAL WORK/SOCIOLOGY**

Complete the A.A. degree including MnTC.
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
SOC 1200   | Social Problems                       | 3       |

In addition, some colleges require:
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
ANTH 1010  | Cultural Anthropology                 | 3       |
BIOI 1270  | Human Anatomy & Physiology 1          | 4       |
BIOI 1280  | Human Anatomy & Physiology 2          | 4       |
or
BIOI 1510  | General Biology of Cells              | 5       |
BIOI 1520  | General Biology of Animals & Plants   | 5       |
ECON 1010  | Macroeconomics                        | 3       |
ECON 1030  | Introduction to Economics             | 3       |
ECON 1050  | Microeconomics                        | 3       |
HLTH 1010  | Personal & Community Health           | 3       |
or
HLTH 2010  | Nutrition                             | 2       |
MATH 2010  | Statistics                            | 4       |

**VETERINARY MEDICINE**

Complete the A.A. degree including MnTC.
Course #    | Course Title                          | Credits |
-----------|---------------------------------------|---------|
BIOI 1510  | General Biology of Cells              | 5       |
BIOI 1520  | General Biology of Animals & Plants   | 5       |
BIOI 1120  | Microbiology                          | 3       |
CHEM 1610  | General Chemistry 1                   | 5       |
CHEM 1611  | General Chemistry 2                   | 5       |
CHEM 2710  | Organic Chemistry 1                   | 5       |
CHEM 2720  | Organic Chemistry 2                   | 5       |
ENGL 1060  | Freshman Composition                  | 3       |
ENGL 1090  | Advanced Composition                  | 3       |
PHYS 1010  | Introduction to Physics 1             | 4       |
PHYS 1020  | Introduction to Physics 2             | 4       |

PSCI 1100  | American Government                   | 3       |
PSCI 1300  | State & Local Government              | 3       |
PSYC 1205  | General Psychology                    | 4       |
PSYC 1350  | Lifespan Development                  | 3       |
PSYC 1400  | Abnormal Psychology                   | 3       |
SPCH 1040  | Introduction to Communication         | 3       |
SOC 1100  | Introduction to Sociology             | 3       |
SOC 1400  | Marriage and the Family               | 3       |
SOC 2200  | Race and Ethnicity                    | 3       |

Note: Specific colleges may have other requirements. See a counselor for details.
Programs listed in the career programs section of the catalog are primarily for students who plan to prepare themselves for employment in a specialized occupation. Although the courses are designed as career programs, some of the courses will transfer to four-year colleges and universities should the students later decide to continue their education. Students should check with the transfer specialist on the transferability of specific courses in this section of the catalog.

Students majoring in career programs should follow the courses outlined in the specific programs in order to qualify for the positions for which the programs are preparing them.

The following career programs’ course listings, credits, and locations are subject to change.
## AUTOMOTIVE TECHNICIAN
**Diploma**

**Credits Required for Graduation:** 64 Credits

### Program Description:
The Automotive Technician program combines classroom study and practical hands-on application to provide students with the essential skills needed to diagnose and make the appropriate repairs on today's vehicles. The Automotive Technician program at Hibbing Community College is ASE/NATEF accredited.

### Program Goals
- Students learn:
  - Auto engines
  - Chassis
  - Electrical systems
  - Transmissions
  - Diagnostics
  - Troubleshooting
  - Testing and tuning
  - Computerized engine controls
  - Proper service management

### Job Outlook
The employment prospects for automotive technicians are excellent. Technicians may find employment at new car dealerships, independent repair shops, specialty car care chains as well as at federal, state, and county maintenance shops. They may also start their own business.

### Certifications
- Certified by ASE/NATEF
- Instructors ASE certified

### FIRST YEAR
**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ASES 1020</td>
<td>General Service Shop</td>
<td>2</td>
</tr>
<tr>
<td>ASES 1021</td>
<td>Automatic Transmission / Transaxle</td>
<td>5</td>
</tr>
<tr>
<td>ASES 1022</td>
<td>Four Wheel / All Wheel Drive</td>
<td>1</td>
</tr>
<tr>
<td>ASES 1023</td>
<td>Basic Electricity and Ignition Systems</td>
<td>4</td>
</tr>
<tr>
<td>ASES 1010</td>
<td>Brakes</td>
<td>2</td>
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<tr>
<td>CAPP 1510</td>
<td>Computer Applications</td>
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**SPRING SEMESTER**

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<td>Starting &amp; Charging Systems</td>
<td>2</td>
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<td>ASES 1011</td>
<td>Steering and Suspension</td>
<td>4</td>
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<td>ASES 1012</td>
<td>Manual Transmission and Drivelines</td>
<td>3</td>
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<td>ASES 1014</td>
<td>Engine Diagnosis &amp; Repair</td>
<td>4</td>
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<td>ASES 1018</td>
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<td>COMM 1100</td>
<td>Professional &amp; Personal Communications</td>
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## SECOND YEAR
**FALL SEMESTER**

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<tbody>
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<td>Auto Heat/Air Conditioning</td>
<td>3</td>
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<td>ASES 1016</td>
<td>Fuel Systems</td>
<td>2</td>
</tr>
<tr>
<td>ASES 2020</td>
<td>Advanced Ignition Systems</td>
<td>2</td>
</tr>
<tr>
<td>ASES 2026</td>
<td>Advanced Engine Performance</td>
<td>4</td>
</tr>
<tr>
<td>ASES 2027</td>
<td>Auto Computers</td>
<td>4</td>
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<tr>
<td>PSYC 1010</td>
<td>Psychology of Adjustment</td>
<td>2</td>
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**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ASES 2010</td>
<td>Brakes - ABS</td>
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<tr>
<td>ASES 2013</td>
<td>Automotive Electrical Accessories</td>
<td>3</td>
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<tr>
<td>ASES 2014</td>
<td>Customer Auto 1</td>
<td>3</td>
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<tr>
<td>ASES 2015</td>
<td>Customer Auto 2</td>
<td>3</td>
</tr>
<tr>
<td>ASES 2018</td>
<td>Shop Management / Supervision</td>
<td>1</td>
</tr>
<tr>
<td>ASES 2022</td>
<td>Transmission &amp; Transfer Case Controls</td>
<td>2</td>
</tr>
<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
<td>1</td>
</tr>
</tbody>
</table>

**Note:** Students are required to purchase their own basic tool set.

Articulation Agreement with Minnesota State University, Moorhead

## CISCO NETWORKING TECHNICIAN
**Certificate**

**Credits Required for Graduation:** 17 Credits

### CISCO as a career path
The CISCO Networking Technician program provides comprehensive, project-based training in computer network design, set-up, maintenance, troubleshooting, and administration. Students participate in hands-on projects which provide experimental learning, while preparing for the CISCO certification exam. This exam, given at the completion of one year, determines if the student is fully qualified to work as a CISCO Certified Networking Associate. Throughout the year, students are learning about network operations and management.

### Job Outlook
Upon completion, students will be trained and ready for a career in a field experiencing critical shortages and high income potential. For more information about job outlook in computer technology please visit www.deed.state.mn.us.

### Admission Requirement
Previous computer experience is required.
CULINARY ARTS

A.A.S. Degree
Credits Required for Graduation: 65 Credits

Diploma
Credits Required for Graduation: 60 Credits

1-Year Diploma
Credits Required for Graduation: 31 Credits

Program Description:
HCC’s Culinary Arts program bridges creativity and cooking as students in the Food Service and Management program learn to implement the basic food production and management techniques necessary in the Food Service Industry.

Students gain valuable hands-on experience by working in state-of-the-art kitchens at Hibbing Community College. Students learn institutional cooking by assisting in the preparation of meals for the students, faculty, staff and general public in the campus cafeteria. They also learn how to create mouth-watering cuisine in HCC’s formal dining room.

You will learn:
• Basic food handling and safety techniques
• Planning and production
• Personnel management
• Cost control methods

You will learn:
• Nutritional menu planning
• The art of presentation and service with specialty buffets and banquets

Job Outlook
Graduates of the Culinary Arts program typically start their careers in entry level positions such as line cooks, entry level bakers, and basic food service workers. The culinary arts student is encouraged to work in the industry during their program to help build their repertoire. Cooks who successfully complete a course of study in a culinary school will find the path to a management position shortened.

Students who complete this program will be prepared for employment in the following positions: Sous chef, second cook, chef, kitchen manager, dining room manager, food production manager, banquet chef, institutional production cook/supervisor.

FIRST YEAR (Diploma 60 Credits)

FALL SEMESTER

Course #  Course Title  Credits
CAMT 1600  Introduction to Food Service  6
CAMT 1602  Basic Food Production Principles  6
CAMT 1603  Institutional Food Production  4

SPRING SEMESTER

Course #  Course Title  Credits
CAMT 1606  Culinary Math  1
CAMT 2410  Hotel Restaurant Food Production I  4
CAMT 1601  Quality Assurance  1
CAMT 1604  Institutional Food Production II  4
SPCH 1040  Introduction to Communication  3
CAPP 1510  Computer Applications  1

SECOND YEAR

FALL SEMESTER

Course #  Course Title  Credits
CAMT 2400  Food Service Procurement & Cost Control  3
CAMT 2420  Hotel/Restaurant Food Production II  5
CAMT 2430  Advanced Culinary Skills I  6
PSYC 1010  Psychology of Adjustment  2

SPRING SEMESTER

Course #  Course Title  Credits
CAMT 2440  Advanced Culinary Skills II  6
CAMT 2450  Specialty Foods Preparation  5
CAMT 2470  Restaurant Management  2
EMPL 2515  Employment Skills  1

Note: Students are required to purchase their own basic tools and uniform.
DENTAL ASSISTANT

Diploma
Credits Required for Graduation: 40 credits

Associate of Applied Science
Credits Required for Graduation: 60 credits

American Dental Association Certified Program

Program Description:
The Dental Assistant program is nationally accredited and prepares students for a rewarding career in the field. Students learn a variety of skills required of a chairside assistant, laboratory technician, and dental receptionist.

Practical training in area dental offices allows students to practice the skills they have acquired in the classroom. After successfully completing the program, students are eligible to take the National Chairside Assisting Certification Exam and the Minnesota License Exam.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association. Collectively instructors possess a comprehensive background in the dental professions with more than 50 years experience.

Program Goals
Students master skills required in the field:
- polishing teeth
- applying fluoride
- taking impressions
- placing and removing rubber dams
- taking x-rays

Job Outlook
Positions in dental assisting are available with general practitioners and specialists in private and group practices and in public health programs.

Notes:
- Admission Requirement: A record of physical examination must be submitted before final enrollment.
- Students are required to purchase their own basic uniform and needed tools.
- Most students complete the diploma program; however students seeking to also become dental hygienists should consider the A.A.S. program option.
- Selected courses are transferable to Lake Superior College’s Dental Hygiene Program.
- 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.

- If you have ever been convicted of a felony or gross misdemeanor you may be unable to become a licensed dental assistant.
- Current Healthcare Provider Level CPR required.
- A grade of C or better is required in all diploma courses.

FIRST YEAR
(Diploma 40 Credits)

FALL SEMESTER
Course #  Course Title  Credits
CAPP 1510  Computer Applications  1
DAS 1501  X-Ray 1  2
DAS 1507  Dental Anatomy 1  3
DAS 1512  Chairside 1  3
DAS 1517  Dental Lab  2
DAS 1520  Dental Science  2
DAS 1525  Expanded Duties 1  3
DAS 1528  Infection Control  1
SPCH 1040  Intro. To Communications  3

SPRING SEMESTER
Course #  Course Title  Credits
DAS 1504  Nutrition  1
DAS 1529  Expanded Duties 2  3
DAS 1530  Office Management  1
DAS 1542  X-Ray 2  2
DAS 1547  Dental Anatomy 2  2
DAS 1552  Chairside 2  3
DAS 1572  Extramural  7
DAS 1582  Nitrous Oxide-Oxygen Inhalation Sedation  1

SECOND YEAR
(Completion of Dental Assisting Program Plan - Above)

Course #  Course Title  Credits
BIOL 1120  Microbiology  3
BIOL 1270  Human Anatomy & Physiology. 1  4
BIOL 1280  Human Anatomy & Physiology. 2  4
DAS 2658  Extramural 2  2-4
ENGL 1060  Freshman Composition  3
PSYC 1205  General Psychology  4

Electives
Course #  Course Title  Credits
EMS 1505  CPR-Course C  1
EMPL 2515  Employment Skills  1

Note: Students seeking to enter a dental hygiene program should consult an academic advisor regarding order of coursework.
DIESEL MECHANICS/HEAVY EQUIPMENT MAINTENANCE

Diploma

Credits Required for Graduation: 65 Credits

Associate of Applied Science

Credits Required for Graduation: 72 Credits

Program Description:

Diesel mechanics understand the diesel engine. They can troubleshoot, repair and adjust it; they are knowledgeable about fuel injection and turbochargers as well as electrical and hydraulic systems.

Heavy equipment mechanics repair all parts of large trucks, buses, construction and earth moving equipment. They inspect, test and repair heavy equipment systems, including hydraulics, pneumatics and electrical.

Hibbing Community College’s Diesel and Heavy Equipment program provides a modern equipped diesel shop. Students learn theory and application of 2-cycle and 4-cycle engines, electrical and hydraulic systems, clutches, heavy equipment, record keeping, power transmissions, steering, brakes, and tires.

Employment Opportunities

Diesel mechanics and heavy equipment mechanics secure jobs with road construction companies, trucking companies, the mining industry, bus lines and logging and diesel equipment dealers. Government agencies hire mechanics to maintain their diesel-powered equipment.

FIRST YEAR

FALL SEMESTER

(Diploma 65 Credits)

<table>
<thead>
<tr>
<th>Course #</th>
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<td>CAPP 1510</td>
<td>Computer Applications</td>
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<tr>
<td>DSL 1501</td>
<td>General Shop Practices 1</td>
<td>1</td>
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<tr>
<td>DSL 1510</td>
<td>Basic Diesel Engines</td>
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<tr>
<td>DSL 1535</td>
<td>Electronics / Electrical Systems</td>
<td>6</td>
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<tr>
<td>DSL 1560</td>
<td>Heavy Equipment Air Conditioning</td>
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<td>COMM 1100</td>
<td>Professional &amp; Personal Communications</td>
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<tr>
<td>DSL 1527</td>
<td>Welding for Diesel Mechanics</td>
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SPRING SEMESTER

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<tbody>
<tr>
<td>DSL 1502</td>
<td>Diesel Systems &amp; Troubleshooting</td>
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<td>DSL 1529</td>
<td>Diesel Fuel Systems</td>
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<td>DSL 1525</td>
<td>Mobile and Heavy Equipment</td>
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<tr>
<td>DSL 1526</td>
<td>Cummins and Caterpillar Overhaul</td>
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<td>DSL 1530</td>
<td>Heavy Equipment Hydraulics</td>
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<tr>
<td>DSL 1527</td>
<td>Welding for Diesel Mechanics</td>
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SECOND YEAR

FALL SEMESTER

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<tbody>
<tr>
<td>DSL 2500</td>
<td>General Shop Practices 2</td>
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<td>DSL 2515</td>
<td>Mach Tool Technology</td>
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<tr>
<td>DSL 2524</td>
<td>Power Shift Transmissions</td>
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<td>DSL 2540</td>
<td>Standard Transmissions/Clutches</td>
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<td>DSL 2547</td>
<td>Customer Repair</td>
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<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
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<tr>
<td>PSYC 1010</td>
<td>Psychology of Adjustment</td>
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SPRING SEMESTER

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<th>Course Title</th>
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<tbody>
<tr>
<td>DSL 2531</td>
<td>Heavy Duty Air Brakes</td>
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<tr>
<td>DSL 2535</td>
<td>Undercarriage</td>
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<tr>
<td>DSL 2543</td>
<td>Differentials</td>
<td>3</td>
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<tr>
<td>DSL 2545</td>
<td>Steering/Alignment &amp; Tires</td>
<td>2</td>
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<tr>
<td>DSL 2550</td>
<td>Customer Repair</td>
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Electives

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<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>CDL 1500</td>
<td>Commercial Driver License (Elective)*</td>
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<tr>
<td>CDL 1515</td>
<td>Behind the Wheel Driving (Elective)*</td>
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<tr>
<td>CDL 1540</td>
<td>CDL Pre-Trip (Elective)*</td>
<td>1</td>
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</table>

*All three electives will be taken in the same semester, and if not, only with instructor pre-approval.

Notes: Hibbing Community College requires all Diesel students to pass a pre-enrollment drug test. All tests will be screened through a facility designated by Hibbing Community College.

Students are required to provide their own tool set.

Articulation Agreement with Minnesota State University, Moorhead

ELECTRICAL MAINTENANCE AND CONSTRUCTION (ELECTRICIAN)

Diploma

Credits Required for Graduation: 74 Credits

Minnesota Department of Labor and Industry Accredited Program

Program Description:

The Electrical Maintenance program is unique because it covers an array of employment opportunities in the electrical field. Electrical maintenance workers understand electrical theory in its many diverse applications from residential, commercial construction, maintenance, heavy industrial power and control installations. They apply the latest technology and codes to diagnose, test and repair...
electrical equipment including appliances, motors, generators, power distribution and control circuits.

Program Goals
Through the course of the program, students learn:
- Understanding of electricity
- Understand, design and build electrical circuits
- Install, operate and troubleshoot electrical equipment

Electrician as a career path
The Electrical Maintenance program at Hibbing prepares students to attain employment in the fields of construction, maintenance, utilities and specialized fields such as programming and design.

Job Outlook
Graduates will qualify for employment with processing companies, industrial firms, large and small manufacturing companies, electrical contractors, power companies and building construction companies. They may choose to do general electrical maintenance, install power and lighting systems or work in instrumentation, automation or robotics.

Admission Recommendations
Students are encouraged to have a basic knowledge of algebra and a mechanical aptitude to prepare for success in the program.

**FIRST YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CAPP 1510</td>
<td>Computer Applications</td>
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<tr>
<td>ELM 1005</td>
<td>Electrical Math Applications</td>
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<tr>
<td>ELM 1101</td>
<td>DC Electrical Theory &amp; Applications</td>
<td>5</td>
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<tr>
<td>ELM 1201</td>
<td>AC/DC Electrical Circuits &amp; Calculations</td>
<td>5</td>
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<tr>
<td>ELM 1301</td>
<td>Residential Wiring &amp; Code 1</td>
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**SPRING SEMESTER**

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELM 1102</td>
<td>AC Electrical &amp; Electronic Theory &amp; Applications</td>
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<tr>
<td>ELM 1202</td>
<td>Transformers, Generators, Alternators &amp; Motors</td>
<td>6</td>
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<tr>
<td>ELM 1302</td>
<td>Residential Wiring &amp; Code 2</td>
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<tr>
<td>ELM 1006</td>
<td>Algebra for Electricians</td>
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**SECOND YEAR**

**FALL SEMESTER**

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<th>Course Title</th>
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<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
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<tr>
<td>ELM 2101</td>
<td>Print Reading &amp; Lighting Systems</td>
<td>5</td>
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<tr>
<td>ELM 2201</td>
<td>AC/DC Motor Control 1</td>
<td>5</td>
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<tr>
<td>ELM 2312</td>
<td>Renewable Energy Systems and a House Project</td>
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**SPRING SEMESTER**

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<tbody>
<tr>
<td>ELM 2102</td>
<td>Commercial/Industrial Wiring Methods</td>
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<tr>
<td>ELM 2202</td>
<td>AC/DC Motor Controls 2</td>
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<tr>
<td>ELM 2311</td>
<td>Power Limited Circuits &amp; Instrumentation</td>
<td>5</td>
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<tr>
<td>ITNS 1400</td>
<td>Fiber Optics Technician Prep</td>
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<tr>
<td>PSYC 1010</td>
<td>Psychology of Adjustment</td>
<td>2</td>
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</tbody>
</table>

**Elective:**
- ELM 1400 Attendance Make-up Project 1

**Note:** Students are required to purchase their own basic tools and multimeter.

Articulation Agreement with Minnesota State University, Moorhead

**HEATING AND COOLING TECHNICIAN**

**Diploma**
*Credits Required for Graduation: 32 credits*

**Program Description:**
Graduates of this program will be prepared as entry-level technicians in the heating, air-conditioning and refrigeration industry. Students will be trained to service residential and light commercial equipment in the heating, air-conditioning and refrigeration field.

**Heating & Cooling Technician Career Path**
Today’s heating, air-conditioning and refrigeration equipment requires highly skilled technicians who not only possess the technical skills needed to repair today’s sophisticated equipment but the “soft skills” to relate to the customer’s needs. This Career field is not as sensitive to economic times because maintenance of existing systems will be needed. Graduates are in high demand due to shortage of qualified technicians nationwide.

**Employment Opportunities**
The heating, air-conditioning and refrigeration field is expected to grow by 33.7% by the year 2020 while the growth for all other occupations in the United States is only expected to grow by 14.3%. In addition, the Bureau of Labor Statics (BLS) projects that 31.2% of heating, air conditioning and refrigeration service personnel will retire and need to be replaced by 2020. The BLS also projects that by the year 2020 65.6% of service technicians in the heating, air-conditioning and refrigeration industry will be people that are not in the industry today. What does this
mean to those who choose this career path? The answer is 

**FIRST YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HCT 1500</td>
<td>Introduction to Electricity</td>
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<tr>
<td>HCT 1505</td>
<td>Refrigeration Theory</td>
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<td>HCT 1510</td>
<td>Residential Refrigeration Systems</td>
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<td>HCT 1515</td>
<td>Light Commercial Refrigeration Systems</td>
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<td>HCT 1520</td>
<td>Refrigerant Certification</td>
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<tr>
<td>EMPL 2515</td>
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<th>Course Title</th>
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<tbody>
<tr>
<td>HCT 1530</td>
<td>Air Conditioning/Heat Pump Systems</td>
<td>5</td>
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<tr>
<td>HCT 1535</td>
<td>Gas Heating Systems</td>
<td>5</td>
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<tr>
<td>HCT 1540</td>
<td>Oil Heating Systems</td>
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</tr>
<tr>
<td>HCT 1545</td>
<td>Radiant Heating Systems</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1100</td>
<td>Professional and Personal Communications</td>
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</table>

**INDUSTRIAL SYSTEMS TECHNOLOGY**

**A.A.S. Degree**

Credits Required for Graduation: 60 credits

**Program Description:**
The Industrial Systems Technology program prepares students for employment in today’s technologically advanced industrial and manufacturing environment. Through hands-on training, students learn skills such as mobile equipment operating, blueprint reading, mechanical systems, electricity fundamentals, welding, machining, fluid power, gear and belt-drive systems, and various diagnostic and repair procedures. Students will learn and understand the economic and environmental impact of industry. Class visits will be taken to industries such as Mining, Pulp and Paper, Power Generation, Industrial Construction and Light Manufacturing. These visits will allow students a first-hand look at the industry environment as well as allow graduates the opportunity to network. Students are trained to safely and efficiently operate mobile and plant equipment and are required to incorporate teamwork, effective communication skills and critical thinking throughout the program.

**Job Outlook**

Industrial System Technology graduates can work in the operations portion of the industry, and with post employment training, move into maintenance departments. The industry is expecting a reduction of forty to sixty percent in its workforce due to impending retirements from the Baby Boomer generation. Industries are looking to fill these positions with well trained and educated employees possessing two years of technical training.

Students in the IST program will earn certificates in:
- Forklift Operations
- Skidsteer Operations
- Carry Deck Crane Operations
- Scissor Manlift Operations
- Boiler Operator-Special
- OSHA - 10

**FIRST YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>Introduction to Industrial Systems Technology</td>
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<td>IST 1150</td>
<td>Welding Technologies</td>
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<tr>
<td>IST 1250</td>
<td>Mobile &amp; Process Equipment Operations I</td>
<td>3</td>
</tr>
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<td>IST 1350</td>
<td>Industrial Technology Math Lab 1</td>
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<tr>
<td>CAPP 1600</td>
<td>Emerging Information Technologies</td>
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<td>IST 1550</td>
<td>Mechanical Systems I</td>
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<td>IST 1450</td>
<td>Industrial Tech. Math Lab II</td>
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<tr>
<td>IST 1950</td>
<td>Integrated Projects I</td>
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<td>ENSC 1050</td>
<td>Environmental Science</td>
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<td>SPCH 1040</td>
<td>Intro to Communication</td>
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<td>Elective</td>
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**SECOND YEAR**

**FALL SEMESTER**

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<td>Mobile &amp; Process Equipment Operations II</td>
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<td>IST 2550</td>
<td>Mechanical Systems II</td>
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<td>IST 2050</td>
<td>Industrial Fluid Power I</td>
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<td>Industrial Electrical Systems</td>
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<td>Integrated Projects II</td>
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<td>PHYS 1005</td>
<td>Physics Concepts</td>
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<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 2650</td>
<td>Mechanical Systems III</td>
<td>3</td>
</tr>
<tr>
<td>IST 2450</td>
<td>Industrial Fluid Power II</td>
<td>3</td>
</tr>
<tr>
<td>IST 2150</td>
<td>Industrial Machine Tool Technology</td>
<td>2</td>
</tr>
<tr>
<td>IST 2950</td>
<td>Integrated Projects III</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

Articulation Agreements with Minnesota State University, Moorhead and Bemidji State University
IT NETWORKING & SECURITY

Diploma

Credits Required for Graduation: 67 Credits

Program Description:
The IT Networking and Security program prepares students for rewarding careers in the dynamic field of computer networking, repair and security. The continued growth of the internet, wide area networks (WANs), cloud storage, and local area networks (LANs) requires people with broad knowledge and skills needed to design, manage, secure and troubleshoot sophisticated information storage, retrieval and presentation systems.

This is a rigorous educational program that covers the workings of networks and computers from an end-user’s desktop to a remote server that could be located anywhere in the world. The curriculum has been designed to encompass many of the same competencies that are covered by several recognized industry certifications, for example Comp TIA’s A+, Server+, Network+, Linux+, and Security+; Cisco CCNA; CWNA; and Microsoft MTA Server, so students will gain the knowledge and skills that are recognized as important for employment in the field.

Job Outlook
Graduates of the IT Support, Networking and Security program have many career advantages in almost any area of the country. Careers such as:
- Computer Repair Technician
- Network Security
- Computer/Network Support and Help Desk
- CISCO router support and installation
- Microsoft Server support and administration
- Network cabling installation and support

FIRST YEAR

FALL SEMESTER

Course #    Course Title             Credits
CAPP 1510   Computer Applications    1
CAPP 2019   Windows OS               2
ITNS 1557   Com. Cable & Term.       2
PSYC 1010   Psychology of Adjustment 2
ITNS 1543   A+ Hardware              3
ITNS 1545   A+ Software              3
ITNS 1500   i-Net+                    3

SPRING SEMESTER

Course #    Course Title              Credits
ITNS 2010   Linux Installation & Administration 3
ITNS 2020   Linux Administration & Security 3
ITNS 2095   Oracle Programming         5
ITNS 2140   Microsoft MTA Windows Server 6

SECOND YEAR

FALL SEMESTER

Course #    Course Title              Credits
CNT 1010    Network Fundamentals      3
CNT 1020    Router Theory & Technology 3
CNT 2010    Information Assurance     3
CNT 2070    Digital Forensics         3
ITNS 2536   PC Systems 1              2
SPCH 1040   Introduction to Communication 3

SPRING SEMESTER

Course #    Course Title              Credits
EMPL 2515   Employment Skills        1
ITNS 1601   Technical Writing Applications 2
CNT 1030    Advanced Routing & Switching 3
CNT 1040    Advanced Networking & Management 3
ITNS 2560   Wireless Network Administration 3
ITNS 2537   PC Systems II             2
ITNS 2580   IT Project Management      3

Articulation Agreement with Minnesota State University, Moorhead

LAW ENFORCEMENT

A.A.S. Degree

Credits Required for Graduation: 72 Credits

Minnesota Peace Officers Standards & Training Board Certified Program

Program Description:
The Law Enforcement program is an academy style program. Steeped in over 35 years of tradition, students combine academic disciplines with hands-on training that sets Hibbing Community College Law Enforcement graduates apart in the workforce. Students wear uniforms, stand inspection, and are subject to traditional police policy rules and regulations within a defined disciplinary process. HCC’s Law Enforcement instruction and training is conducted in one of the most complete and modern education centers in the Northern Minnesota.

Student Experience
- Firearms Training within a modern indoor firearms range.
- Develop driving skills with a full fleet of training squads.
- Technologically advanced simulation training using our Ti Training System.
- Integrated community service to develop well-rounded individuals.
- Law Enforcement program club participation including...
campus security, club trips and social functions.

Job Outlook
Successful graduates of Hibbing Community College are employed throughout the state and nation. Law Enforcement departments (state, municipal and county) have a continual need for well trained and highly skilled officers. In addition to city police, state troopers, county deputies, tribal police and conservation officers, graduates have found employment with federal law enforcement agencies including the U.S. Border Patrol, U.S. Marshal Service, U.S. Immigration and Naturalization Service, U.S. Customs Service, and Home Land Security agencies including the Transportation Security Agency (TSA).

FIRST YEAR

FALL SEMESTER

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
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<tr>
<td>LAW 1510</td>
<td>Intro to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1512</td>
<td>MN Traffic Code</td>
<td>2</td>
</tr>
<tr>
<td>LAW 1528</td>
<td>Police &amp; Community</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1538</td>
<td>Juvenile Justice &amp; Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>PE 1800</td>
<td>PE for Law Enforcement*</td>
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<tr>
<td>SPCH 1040</td>
<td>Introduction to Comm.</td>
<td>3</td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
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<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
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SPRING SEMESTER

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
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<tr>
<td>LAW 1544</td>
<td>Police Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1516</td>
<td>Minnesota Criminal Code</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1548</td>
<td>Police &amp; Human Behavior</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1595</td>
<td>Criminal &amp; Civil Procedures</td>
<td>4</td>
</tr>
<tr>
<td>LAW 1550</td>
<td>Street Survival**</td>
<td>2</td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAW 2531</td>
<td>Basic Firearms</td>
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SECOND YEAR

FALL SEMESTER

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<th>Course #</th>
<th>Course Title</th>
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<tr>
<td>LAW 2421</td>
<td>Traffic Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2511</td>
<td>Defensive Tactics &amp; Physical Preparation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2595</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2596</td>
<td>Crime Scene Processing</td>
<td>2</td>
</tr>
<tr>
<td>LAW 2460</td>
<td>Stnd. Field Sobriety Testing</td>
<td>1</td>
</tr>
<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2452</td>
<td>Interviewing Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

LAW ENFORCEMENT

PROFESSIONAL PEACE OFFICER ED

Diploma

Credits Required for Graduation: 43 Credits

Minnesota Peace Officers Standards & Training Board Certified Program

Program Description:

The Law Enforcement Professional Peace Officer Education (PPOE) program is designed for persons who have completed a two or four-year degree. The degree must be a minimum of an Associate degree and must be awarded from a College that is regionally accredited. This diploma law enforcement program is run in an academy setting. Students wear uniforms, stand inspection, and are subject to traditional police policy rules and regulation within a defined disciplinary process. Students attend weekly inspections.

The Law Enforcement program is an academy style program. Steeped in over 35 years of tradition, students combine academic disciplines with hands-on training that sets Hibbing Community College Law Enforcement graduates apart in the workforce. Law enforcement instruction and training is conducted in one of the most complete and modern education centers in Northern Minnesota.
**Student Experience**
- Firearms Training within a modern indoor firearms range.
- Develop driving skills with a full fleet of training squads.
- Technologically advanced simulation training using our Ti Training System.
- Integrated community service to develop well-rounded individuals.
- Law Enforcement program club participation including campus security, club trips and social functions.

**Job Outlook**
Successful graduates of Hibbing Community College are employed throughout the state and nation. Law Enforcement departments (state, municipal and county) have a continual need for well trained and highly skilled officers. In addition to city police, state troopers, county deputies, tribal police and conservation officers, graduates have found employment with federal law enforcement agencies including the U.S. Border Patrol, U.S. Marshal Service, U.S. Immigration and Naturalization Service, U.S. Customs Service, and Home Land Security agencies including the Transportation Security Agency (TSA).

**FIRST YEAR**
**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>LAW 1510</td>
<td>Intro to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1512</td>
<td>Minnesota Traffic Code</td>
<td>2</td>
</tr>
<tr>
<td>LAW 1528</td>
<td>Police and Community</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2595</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1538</td>
<td>Juvenile Justice</td>
<td>3</td>
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</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>LAW 1548</td>
<td>Police &amp; Human Behavior</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1516</td>
<td>Minnesota Criminal Code</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1595</td>
<td>Criminal &amp; Civil Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LAW 1544</td>
<td>Police Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>LAW 2534</td>
<td>Drug &amp; Gang Investigation</td>
<td>3</td>
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</tbody>
</table>

**Summer Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKL 2661</td>
<td>Patrol Practical</td>
<td>3</td>
</tr>
<tr>
<td>SKL 2664</td>
<td>Firearms</td>
<td>3</td>
</tr>
<tr>
<td>SKL 2665</td>
<td>Crime Scene Processing &amp; Investigation</td>
<td>2</td>
</tr>
<tr>
<td>SKL 2666</td>
<td>Traffic Enforcement</td>
<td>2</td>
</tr>
<tr>
<td>SKL 2667</td>
<td>Defensive Tactics</td>
<td>2</td>
</tr>
<tr>
<td>LAW 2540</td>
<td>POST Prep</td>
<td>1</td>
</tr>
</tbody>
</table>

**Notes:**
- A criminal history background, driver’s license check, physical and a psychological test is required.
- EMT or First Responder certification is required by P.O.S.T and is not part of this program
- Check out the Law Enforcement video www.hibbing.edu.
- *Met with Military Service **Met with MOS31B

**MEDICAL CODING SPECIALIST**

Diploma

Credits required for graduation: 42 Credits

**Program Description:**
The Medical Coding Specialist program provides students with the necessary skills to perform abstracting and coding of medical records. Graduates of this program will analyze medical record documentation in order to assign diagnostic and procedures codes, provide important information for the health care reimbursement process, and assist in medical research and statistics.

**Program Notes**
The Medical Coding Specialist program at HCC will include hands-on experience provided by highly qualified instructors who have extensive on-site experience in the medical coding field.

**Job Outlook**
There is a strong demand for electronic coding personnel in the medical sector. This is a fast-growing field, and according to the U.S. Bureau of Labor Statistics, it is projected to grow 22 percent from 2012 to 2022. The wage outlook is also excellent, as the 2013 Salary Survey from AAPC has estimated an average starting salary of $46,847 a year.

**FIRST YEAR**
**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDC 1132</td>
<td>CD-10-CM Coding</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1110</td>
<td>Keyboarding 1</td>
<td>2</td>
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<tr>
<td>ALHE 1600</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1510</td>
<td>Computer Applications</td>
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<tr>
<td>MEDC 1120</td>
<td>Intro. To Health Info Mgmt within Healthcare Delivery Systems</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>Psychology of Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
<td>1</td>
</tr>
</tbody>
</table>
Program Goals
Students learn:
• Entry-level skills that enable them to work in any clinical laboratory setting
• How to prepare for and successfully pass national certifying examinations

Job Outlook
The need for Medical Laboratory Technicians is growing faster than there are qualified people to fill these jobs. Hospitals, clinics, public health facilities, businesses and industry all have positions open for qualified laboratory professionals. The employment outlook promises to continue to be strong as there is a shortage of Medical Laboratory Technicians nationwide.

Spring Semester
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1105</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1201</td>
<td>Integrated Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>MECD 1127</td>
<td>Medical Coding Terminology</td>
<td>2</td>
</tr>
<tr>
<td>MEDC 1124</td>
<td>Advanced Coding &amp; Reimbursement</td>
<td>3</td>
</tr>
<tr>
<td>MEDC 1123</td>
<td>Coding &amp; Reimbursement for Physicians’ Services</td>
<td>3</td>
</tr>
<tr>
<td>PHAR 1040</td>
<td>Pharmacotherapy of Disease Processes</td>
<td>4</td>
</tr>
</tbody>
</table>

Summer Semester
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDC 1126</td>
<td>Professional Practice for Coding</td>
<td>2</td>
</tr>
<tr>
<td>MEDC 1125</td>
<td>Advanced Physicians’ Coding</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1040</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Job Outlook
• All course work has to be completed within 5 years with the exception of Speech and Psychology courses
• C or better is required in all course work.
• Biology 1201 can be substituted with Biology 1270 and Biology 1280 with grades of C or better and must have been completed within 5 years.

Medical Laboratory Technician
A.A.S. Degree

Credits required for graduation: 62 credits

The Medical Laboratory program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

Program Description:
Students in the Medical Laboratory Technician program prepare to work in hospital and clinical laboratories. Coursework includes theories and practical applications of microbiology, hematology, immunology, clinical chemistry and phlebotomy. Upon completion of the program’s classroom phase, students spend 16 weeks in a clinical internship at an approved hospital/clinic. Every effort is made to arrange this internship experience immediately following the completion of the student’s second year. Students should be aware that a deferred or waiting list may have to be established if the number of eligible students exceeds the number of approved clinical training sites.

Second Year
Fall Semester
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>MLT 1424</td>
<td>Medical Microbiology 1</td>
<td>4</td>
</tr>
<tr>
<td>MLT 1425</td>
<td>Clinical Chemistry 1</td>
<td>2</td>
</tr>
<tr>
<td>MLT 1432</td>
<td>Hematology 2</td>
<td>3</td>
</tr>
<tr>
<td>MLT 1445</td>
<td>Immunology</td>
<td>3</td>
</tr>
</tbody>
</table>

Summer Semester
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCH 1040</td>
<td>Intro to Communication</td>
<td>3</td>
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</tbody>
</table>

Any 3 credit elective from the first 6 goal areas of the MNTC transfer curriculum - #
SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLT 2590</td>
<td>Clinical Practicum *</td>
<td>10</td>
</tr>
<tr>
<td>MLT 2510</td>
<td>MLT Seminar</td>
<td>2</td>
</tr>
</tbody>
</table>

Notes:
- The awarding of the A.A.S. degree is not contingent upon students passing any external certification of licensing exams.
- This program is also available online for prospective students who are currently employed in a medical laboratory setting.
- *Denotes prerequisites
- Check with advisor for acceptable college transfer credits.
- **Any History/Social/Behavioral Science elective can be taken/transferred.
- A grade of a C or better is required in all course work.

MEDICAL LABORATORY TECHNICIAN ONLINE

A.A.S. Degree

Credits required for graduation: 62 credits

The Medical Laboratory program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

Program Description:
Students in the Medical Laboratory Technician program prepare to work in hospital and clinical laboratories. Coursework includes theories and practical applications of microbiology, hematology, immunology, clinical chemistry and phlebotomy. Upon completion of the program's classroom phase, students spend 16 weeks in a clinical internship at an approved hospital/clinic. Every effort is made to arrange this internship experience immediately following the completion of the student's second year. Students should be aware that a deferred or waiting list may have to be established if the number of eligible students exceeds the number of approved clinical training sites.

Program Goals
Students learn:
- Entry-level skills that enable them to work in any clinical laboratory setting
- How to prepare for and successfully pass national certifying examinations

Job Outlook

The need for Medical Laboratory Technicians is growing faster than there are qualified people to fill these jobs. Hospitals, clinics, public health facilities, businesses and industry all have positions open for qualified laboratory professionals. The employment outlook promises to continue to be strong as there is a shortage of Medical Laboratory Technicians nationwide.

Special Note

This program is for prospective students who are currently employed in a medical laboratory setting or have access to a lab to perform the Laboratory Competencies required for this program. For more information contact Admissions by calling 218-262-7207 or emailing admissions@hibbing.edu

Summer Semester

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MLT 1408</td>
<td>Introduction to the Medical Laboratory</td>
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<tr>
<td>MLT 1422</td>
<td>Laboratory Techniques</td>
<td>3</td>
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<tr>
<td>ALHE 1600</td>
<td>Medical Terminology</td>
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<tr>
<td>CAPP 1510</td>
<td>Computer Applications</td>
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FIRST YEAR

FALL SEMESTER

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MLT 1425</td>
<td>Clinical Chemistry 1</td>
<td>2</td>
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<tr>
<td>MLT 2445</td>
<td>Clinical Chemistry 2</td>
<td>2</td>
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<tr>
<td>PSYC 1010</td>
<td>Psychology of Adjustment ***</td>
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SPRING SEMESTER

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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MLT 1445</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>MLT 2466</td>
<td>Blood Bank</td>
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SUMMER SEMESTER

<table>
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<th>Course #</th>
<th>Course Title</th>
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<tr>
<td>Any 3 credit course from the first 6 areas of the MNTC transfer Curriculum **</td>
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SECOND YEAR

FALL SEMESTER

<table>
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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MLT 1424</td>
<td>Medical Microbiology 1</td>
<td>4</td>
</tr>
<tr>
<td>MLT 2435</td>
<td>Urinalysis &amp; Body Fluids</td>
<td>2</td>
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SPRING SEMESTER

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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPCH 1040</td>
<td>Intro to Communications</td>
<td>3</td>
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<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
<td>1</td>
</tr>
<tr>
<td>MLT 2424</td>
<td>Medical Microbiology 2/ Parasitology</td>
<td>4</td>
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</tbody>
</table>
THIRD YEAR
FALL SEMESTER
Course #  Course Title  Credits
MLT 1412  Hematology 1  3
MLT 1432  Hematology 2  3

SPRING SEMESTER
Course #  Course Title  Credits
BIOL 1050  Human Biology  3
BIOL 1280  Human Anatomy & Physiology  4

Summer Semester
Course #  Course Title  Credits
MLT 2510  MLT Seminar  2
MLT 2590  Clinical Practicum  10

Notes:
• The awarding of the A.A.S. degree is not contingent
  upon students passing any external certification of
  licensing exams.
• Check with advisor for acceptable college transfer
  credits.
• **Any History/Social/Behavioral Science elective can be
  taken/transferred.
• A grade of a C or better is required in all course work.

NURSING ASSISTANT / HOME HEALTH AIDE
Certificate
Credits required for graduation:  4 credits

Program Description
Students work directly under the supervision of a registered
nurse to become familiar with the duties and
responsibilities of a nursing assistant and home health aide. The program prepares students for jobs in a variety
of settings such as nursing homes, home care agencies,
hospitals, group homes, and semi-independent living
facilities. The course includes classroom theory and testing
as well as instruction on how to assist residents with
hygiene, feeding, skin care, bed making, dressing,
movement and other general assistance. Clinical
experience at a local nursing home is included.

General Information
• Students are required to wear a uniform on all clinical
days. The uniform shall consist of scrub pants and top,
either solid color or print tops are acceptable, mostly
white shoes and a name tag.

• Prior clinical experience, evidence of negative Mantoux
(a skin test for Tuberculosis) must be provided to the
instructor. Check with your instructor on where this test
is administered.
• You will earn four credits for this course. These credits
may meet Registered Nursing/Practical Nursing
Requirements. Check with an instructor for more
information.

ALLIED HEALTH
Course #  Course Title  Credits
ALHE 1500  Introduction to Nursing  4
(Nursing Assistant/Home Health Aide)

NOTE: This course is a prerequisite to HCC’s Nursing
program and most Practical Nursing programs. Students
interested in applying to HCC’s Nursing program are
couraged to visit with an admissions representative.

NURSING
A.S. Degree
Credits Required for Graduation:  64 Credits

Program Description:
Hibbing Community College Program in Nursing is an
associate degree nursing program established in 1964.
The Program offers a generic/traditional associate degree
track and an advanced standing/ LPN to associate degree
track. The College has a longstanding and proud history of
bringing the Nursing Program out to distant rural sites
enabling students to fulfill their educational dreams and
providing our rural communities with needed healthcare
providers. The nursing curriculum reflects learning
opportunities designed to prepare students to engage in
health promotion, illness prevention, and care for clients
across the lifespan who are experiencing chronic, acute, or
complex stressors.

Program Mission
Challenged to respond to a diverse and growing need for
qualified nurses, Hibbing Community College Program in
Nursing is dedicated to providing students with entry level
theory and clinical skill needed to understand and assume
the responsibilities of a Registered Nurse in an individual,
family, community, or acute, long-term, and/or rural
community based setting as well as fostering within each
student a commitment to lifelong learning and professional
growth.

Application Process
Admission to the College does not guarantee admission to
the nursing program. Students should follow the steps
listed in the Hibbing Community College Program in Nursing Admission Packet to make formal application. The Nursing Admission Packet can be accessed at: http://hibbing.edu/assets/sites/hibbing/uploads/pdfs/Nursing-MLT/ADMISSIONPACKET.pdf

*It is recommended you visit with a Hibbing Community College Nursing Admissions Representative or an Academic Advisor to discuss the process of application and acceptance.

**Job Outlook**

Students who successfully complete nursing and general education graduation requirements are eligible to apply for licensure and apply to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Graduates are prepared for entry level positions in hospitals, nursing homes, home health agencies and clinics. The job outlook remains strong nation- and worldwide.

**Accreditation Status**

This nursing education program is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN) and approved by the Minnesota Board of Nursing (MBON).

**ACEN contact:** ACEN-3343 Peachtree Road NE-Suite 850-Atlanta, GA 30326-404-975-5000 www.acenursing.org

**MBON contact:** Minnesota Board of Nursing-2829 University Ave SE #200-Minneapolis, MN 55414 612-317-3000 www.nursingboard.state.mn.us

**FIRST YEAR**

**Summer Semester - Prior to Fall Entry**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1270</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>OR Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
</tbody>
</table>

* Achievement cutscore of 69 on the Accuplacer Arithmetic test is required by July 29th.

* Completion of certified nursing assistant course is required.

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1205</td>
<td>General Psychology</td>
<td>4</td>
</tr>
<tr>
<td>HLTH 2010</td>
<td>Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>NURS 0950</td>
<td>Essential Mathematics for Nurses</td>
<td>1</td>
</tr>
<tr>
<td>NURS 1250</td>
<td>Foundations of Nursing</td>
<td>8</td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1250</td>
<td>Human Anatomy &amp; Physiology 1</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 1280</td>
<td>Human Anatomy &amp; Physiology 2</td>
<td>4</td>
</tr>
<tr>
<td>NURS 1350</td>
<td>Care of the Client Affected by Chronic Stressors</td>
<td>8</td>
</tr>
<tr>
<td>PSYC 1350</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Summer Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1120</td>
<td>Microbiology</td>
<td>3</td>
</tr>
</tbody>
</table>

(all students entering the second year of nursing)

All of the above courses must be completed before entering the second year of the program. (by ALL students)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NURS 1750</td>
<td>Nursing Bridge</td>
<td>5</td>
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</tbody>
</table>

Must be taken by LPN Students only entering the program for Fall

**SECOND YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 2050</td>
<td>Care of Women &amp; Children</td>
<td>4</td>
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<tr>
<td>NURS 2150</td>
<td>Care of the Client Affected by Acute Stressors</td>
<td>5</td>
</tr>
<tr>
<td>PHIL 1300</td>
<td>Ethics</td>
<td>3</td>
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**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NURS 2250</td>
<td>Care of the Client Affected by Complex Stressors</td>
<td>6</td>
</tr>
<tr>
<td>NURS 2350</td>
<td>Foundations of Leadership</td>
<td>1</td>
</tr>
<tr>
<td>NURS 2900</td>
<td>Transition to Practice Essentials (Elective)</td>
<td>1</td>
</tr>
<tr>
<td>NURS 1755</td>
<td>Clinical Simulation in Nursing (Elective)</td>
<td>1</td>
</tr>
<tr>
<td>NURS 2902</td>
<td>Cultural Diversity in Health Care (Elective)</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Communications Course (see list below) 3
Social Science Elective (see list below) 3

**Communication Electives:**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 1070</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1090</td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1010</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1040</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1030</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>
### Social Science Elective:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANTH 1010</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1400</td>
<td>Abnormal Psychology</td>
<td>3</td>
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<tr>
<td>SOC 1100</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1200</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2200</td>
<td>Race and Ethnicity</td>
<td>3</td>
</tr>
<tr>
<td>SOC 2300</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1400</td>
<td>Marriage &amp; the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

Articulation Agreements with ALL Minnesota State Colleges & Universities

**NOTE:** State law requires any person who provides services that involve direct contact with patients and residents at a Minnesota licensed health care facility have a background study conducted by the State. An individual who is disqualified from having direct patient contact as a result of the background study, and whose disqualification is not set aside by the Commissioner of Health, will not be permitted to participate in a clinical placement in a licensed health care facility. Failure to participate in clinical placement required by this program will result in ineligibility to qualify for a degree, diploma, and certificate and the student will be withdrawn from the program. Furthermore, successful completion of a DHS criminal background check (qualification to provide direct patient contact) does not ensure eligibility for licensure or future employment within the chosen field. Students are strongly encouraged to contact the Minnesota Board of Nursing regarding specific eligibility requirements for licensure.

### OFFICE ADMINISTRATION

#### Program Options
The Office Administration program has several areas of emphasis:

- **Administrative Assistant**  
  *Associate of Applied Science Degree, 60 credits*  
  This degree prepares graduates for work as an executive assistant.

- **Legal Administrative Assistant**  
  *Associate of Applied Science Degree, 60 credits*  
  This option is designed for those interested in employment in an attorney’s office, courthouses or other legal offices.

- **Medical Administrative Assistant**  
  *Associate of Applied Science Degree, 60 credits*  
  This option is designed for students who have a special interest in working in hospitals, clinics, and other medical facilities.

- **Secretary/Receptionist**  
  *Diploma, 28 credits*  
  This option prepares students to work in office support positions.

#### Program Description
The Office Administration curriculum prepares students for employment in administrative support positions in banking, advertising, public relations, government agencies, travel bureaus, real estate, and related office occupations of all kinds. Special emphasis is placed on current computer applications such as word processing, data processing, accounting (QuickBooks), spreadsheets, and desktop publishing.

### ADMINISTRATIVE ASSISTANT

**A.A.S. Degree**

**Credits Required for Graduation:** 60 Credits

#### Employment Opportunities
Employers are looking for graduates who are knowledgeable in computer applications, have strong communication skills and have excellent organizational skills.

#### FIRST YEAR

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1105</td>
<td>Business English**</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1107</td>
<td>Records Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1110</td>
<td>Keyboarding 1</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1560</td>
<td>Presentation Graphics</td>
<td>1</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education credits</td>
<td></td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1105</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1111</td>
<td>Keyboarding 2</td>
<td>3</td>
</tr>
<tr>
<td>CAPP 1540</td>
<td>Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education credits</td>
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</table>

#### SECOND YEAR

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 2105</td>
<td>Elements of Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2250</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>CAPP 1515</td>
<td>Spreadsheet Applications</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1521</td>
<td>Advanced Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>CAPP 1541</td>
<td>Advanced Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education credits</td>
<td></td>
</tr>
</tbody>
</table>
### Legal Administrative Assistant

**A.A.S. Degree**

**Credits Required for Graduation:** 60 Credits

**Employment Opportunities**
This option is designed for those interested in employment in administrative positions in an attorney’s office, courthouses, or other legal facilities.

#### First Year

**Fall Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1105</td>
<td>Business English**</td>
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</tr>
<tr>
<td>BUS 1107</td>
<td>Records Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1110</td>
<td>Keyboarding 1</td>
<td>2</td>
</tr>
<tr>
<td>BUS 1600</td>
<td>Legal Terminology**</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1560</td>
<td>Presentation Graphics</td>
<td>1</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education Credits</td>
<td></td>
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</tbody>
</table>

**Spring Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1010</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1111</td>
<td>Keyboarding 2</td>
<td>3</td>
</tr>
<tr>
<td>CAPP 1540</td>
<td>Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education Credits</td>
<td></td>
</tr>
</tbody>
</table>

**General Education:** In addition to the 39 Bus/Capp/General Ed credits listed above, you also need 15 additional General Ed credits to be selected from the following areas: Communications, Math/Logical Reasoning, History/Social/Behavioral Sciences, Humanities/Fine Arts and 6 additional credits in BUS/CAPP/General Ed with approval of Advisor/Instructor.

**Notes:**
- ** Denotes prerequisite: +78 on Reading Accuplacer or completion of ENGL 0900
- If you have taken classes previously at another college, please notify advisor/instructor immediately.
- An average 15 credits of 1000 level or higher courses is needed per semester to graduate within the 2 year time period

### Medical Administrative Assistant

**A.A.S. Degree**

**Credits Required for Graduation:** 60 Credits

**Employment Opportunities**
This option is designed for students who have a special interest in employment in administrative positions in hospitals, clinics, and other medical facilities.

#### First Year

**Fall Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1230</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1300</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2156</td>
<td>Office Admin. Practices</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2510</td>
<td>Multimedia Concepts</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1530</td>
<td>Database</td>
<td>1</td>
</tr>
<tr>
<td>CAPP 1595</td>
<td>Computerized Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education Credits</td>
<td></td>
</tr>
</tbody>
</table>

**Spring Semester**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1210</td>
<td>Elements of Accounting*</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2250</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>CAPP 1515</td>
<td>Spreadsheet Applications</td>
<td>2</td>
</tr>
<tr>
<td>CAPP 1521</td>
<td>Advanced Spreadsheets</td>
<td>1</td>
</tr>
<tr>
<td>CAPP 1541</td>
<td>Advanced Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>BUS/CAPP</td>
<td>General Education Credits</td>
<td></td>
</tr>
</tbody>
</table>
FIRST YEAR
FALL SEMESTER
Course #  Course Title  Credits
BUS 1105  Business English**  3
BUS 1107  Records Management  2
BUS 1110  Keyboarding 1  2
ALHE 1600  Medical Terminology  2
CAPP 1560  Presentation Graphics  1
BUS/CAPP  General Education Credits

SPRING SEMESTER
Course #  Course Title  Credits
BUS 1010  Introduction to Business  3
BUS 1111  Keyboarding  3
CAPP 1540  Word Processing  2
BUS/CAPP  General Education Credits

SECOND YEAR
FALL SEMESTER
Course #  Course Title  Credits
BUS 2105  Elements of Accounting  3
BUS 2250  Principles of Supervision  3
CAPP 1515  Spreadsheet Applications  2
CAPP 1521  Advanced Spreadsheets  1
CAPP 1541  Advanced Word Processing  2
BUS/CAPP  General Education Credits

SPRING SEMESTER
Course #  Course Title  Credits
BUS 1300  Business Communications  3
BUS 2156  Office Admin. Practices  3
CAPP 1530  Database  1
CAPP 1595  Computerized Accounting  3
CAPP 2510  Multimedia Concepts  2
BUS/CAPP  General Education Credits

General Education: In addition to the 41 Bus/Capp/General Ed Credits listed above, you also need 15 additional General Ed credits to be selected from at least three for the ten goal areas of the Minnesota Transfer Curriculum and 4 additional credits in BUS/CAPP/General Ed with approval of Advisor/Instructor.

Notes:
• ** Denotes you must have obtained a certain score on your entrance exams or take a lower-level class.
• If you have taken classes previously at another college, please notify advisor/instructor immediately.
• An average 15 credits of 1000 level or higher courses is needed per semester to graduate within the 2 year time period.

SECRETARY / RECEPTIONIST
Diploma
Credits Required for Graduation:  28 Credits

Employment Opportunities:
This program prepares students for employment in office support positions in word processing, banking, advertising, public relations, government agencies, travel bureaus, real estate and related office occupations of all kinds.

FIRST YEAR
FALL SEMESTER
Course #  Course Title  Credits
BUS 1105  Business English**  3
BUS 1107  Records Management  2
BUS 1110  Keyboarding 1  2
CAPP 1510  Computer Applications  1
CAPP 1515  Spreadsheet Applications  2
CAPP 1521  Advanced Spreadsheets  1
CAPP 1560  Presentation Graphics  1
BUS/CAPP  General Education Credits

SPRING SEMESTER
Course #  Course Title  Credits
BUS 1111  Keyboarding 2  3
BUS 1300  Business Communications  3
BUS 2156  Office Administration Practices  3
CAPP 1530  Database  1
CAPP 1540  Word Processing  2
General Education Credits  2

General Education:  2 Credits from any “General Education” areas 1-10 of the Minnesota Transfer Curriculum.

BUS/CAPP Electives:  2 credits to be selected with approval of instructor.

Notes:
• ** Denotes you must have obtained a certain score on your entrance exams or take a lower-level class.

PHARMACY TECHNICIAN
A.A.S. Degree
Credits Required for Graduation:  60 Credits

The Pharmacy Technician program has received a special accreditation American Society of Health System Pharmacists. (ASHP)

Program Description:
The Pharmacy Technician AAS degree program provides graduates with opportunities in the field of pharmacy and provides the students with a general education component.
for a well-rounded education. The AAS degree also provides pharmacy practice applications in institutional settings and sterile product processing. The AAS degree program places an emphasis on pharmacy settings including retail, hospital, and industry. Pharmacy Technician students with the AAS degree will find opportunities for advancement in the field of pharmacy including areas of supervision and/or management.

**Pharmacy Technician as a career path:**
A pharmacy technician is someone who assists a pharmacist in all functions of prescription processing. A pharmacy technician should have knowledge in the skills required to provide medications to patients, including ordering, stocking, and packaging. Pharmacy technicians work under the direct supervision of a pharmacist. A pharmacy technician’s job can be varied to include working in community or hospital pharmacy or a number of other settings such as long-term care, compounding, mail order, insurance companies, drug manufacturers and wholesalers, and pharmacy technician training programs.

There are currently no federal requirements for formal training to become a pharmacy technician. The state of Minnesota had adopted such regulation in January 1, 2013. A pharmacy technician student will be registered with the MN Board of Pharmacy prior to the beginning of the experiential program. Additional regulations may be found on the MN Board of Pharmacy website (www.phcybrd.state.mn.us).

Each student must submit to and pass a background check before being allowed to participate in the experiential program each summer. Any student who has concerns about passing these checks should speak with the program director immediately.

**Job Outlook:**
The field has great job opportunities for full-time and part-time work especially for technicians with formal training. Employment is expected to grow through 2022 as the population grows and ages and the addition of federal health insurance reform.

A pharmacy technician can expect to earn up to $21.65/hr based on FTE status, work setting, education and/or experience. A certified technician can also expect to earn more than a technician who is not certified. According to the Bureau of Labor Statistics, the mean hourly wage is $15.23/hr.

### FIRST YEAR
#### FALL SEMESTER

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHAR 1010</td>
<td>Pharmacy Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHAR 1015</td>
<td>Fundamental Concepts of Pharmacy I</td>
<td>5</td>
</tr>
<tr>
<td>PHAR 1021</td>
<td>Fundamental Pharmaceutical Calculations I *</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 1060</td>
<td>Freshman Composition *</td>
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#### SPRING SEMESTER

<table>
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<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHAR 1030</td>
<td>Principles of Pharmacy *</td>
<td>5</td>
</tr>
<tr>
<td>PHAR 1035</td>
<td>Pharmacy Medication Technology *</td>
<td>1</td>
</tr>
<tr>
<td>ALHE 1600</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 1201</td>
<td>Integrated Anatomy and Physiology</td>
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<tr>
<td>CAPP 1510</td>
<td>Computer Applications</td>
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#### SUMMER SEMESTER

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</thead>
<tbody>
<tr>
<td>PHAR 1055</td>
<td>Experiential 1 – Retail*</td>
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</tr>
</tbody>
</table>

#### SECOND YEAR
#### FALL SEMESTER

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHAR 2010</td>
<td>Fundamental Concepts of Pharmacy II*</td>
<td>5</td>
</tr>
<tr>
<td>PHAR 1022</td>
<td>Fundamental Pharmaceutical Calculations II *</td>
<td>2</td>
</tr>
<tr>
<td>PSYC 1205</td>
<td>General Psychology *</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1020</td>
<td>Intro to Chemistry</td>
<td>4</td>
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<tr>
<td>EMPL 2515</td>
<td>Employment Skills</td>
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#### SPRING SEMESTER

<table>
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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHAR 2020</td>
<td>Pharmacy Sterile Products Lab *</td>
<td>5</td>
</tr>
<tr>
<td>PHAR 1040</td>
<td>Pharmacotherapy of Disease Processes</td>
<td>4</td>
</tr>
<tr>
<td>SPCH 1040</td>
<td>Introduction to Communication</td>
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#### SUMMER SEMESTER

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<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHAR 2055</td>
<td>Experiential 2 – Hospital</td>
<td>3</td>
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</tbody>
</table>

**Notes:**
- The training program at HCC will include hands-on experience at actual pharmacies.
- Students completing the program will be eligible to complete the National Pharmacy Technician Certification Examination.
TRUCK DRIVING
Certificate

Credits Required for Graduation: 17 Credits

Program Description:
This certificate program will cover rules and regulations of the Federal Motor Carrier Administration. The program includes: classroom education, behind the wheel training, and general education classes suited towards the trucking industry.

Employment Opportunities
Truck drivers and tractor-trailer jobs are forecasted to have a 13% increase in employment through 2018. Professional light truck drivers and those in sales are said to have the second highest increase in demand at 9% growth between 2008 and 2018. As economic growth occurs, there will be an increasing need for trucking services state and nationwide.

Admission Requirements
Hibbing Community College requires all Truck Driving students to pass a pre-enrollment drug test. All tests will be screened through a facility designated by Hibbing Community College. A Driver’s License Record Check is also required for all students entering into the program. Driving records will be screened from the department of Motor Vehicles.

FALL SEMESTER

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CDL 1500</td>
<td>Commercial Drivers License Classroom</td>
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<tr>
<td>CDL 1515</td>
<td>Behind the Wheel Driving</td>
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</tr>
<tr>
<td>CDL 1520</td>
<td>Calculations for Commercial Trucking</td>
<td>2</td>
</tr>
<tr>
<td>CDL 1530</td>
<td>Hazard Material Training- Transportation</td>
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<tr>
<td>SHA 1561</td>
<td>MSHA New Miner</td>
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<tr>
<td>CDL 1545</td>
<td>CDL Permit</td>
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<tr>
<td>CDL 1540</td>
<td>CDL Pre-trip</td>
<td>1</td>
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<tr>
<td>CDL 1535</td>
<td>Cargo Securement</td>
<td>1</td>
</tr>
<tr>
<td>CDL 1555</td>
<td>Electronics for Truck Driving</td>
<td>1</td>
</tr>
<tr>
<td>CDL 1570</td>
<td>Healthy Living for Today's Truck Driver</td>
<td>1</td>
</tr>
<tr>
<td>CDL 1560</td>
<td>Advanced Driving Techniques</td>
<td>2</td>
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<tr>
<td>OR</td>
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<tr>
<td>CDL 1550</td>
<td>Passenger Transportation</td>
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</table>
Courses offered by Hibbing Community College are described in this section. One-time course offerings (workshops and mini-classes) are not included.

Prerequisites for some courses have been established to ensure that students have an adequate background for those courses.
ALLIED HEALTH

ALHE 1500 INTRODUCTION TO NURSING
(Nursing Assistant/Home Health Aide)
Credits: 4
Prerequisites: None.
Introduction to Nursing (Nursing Assistant/Home Health Aide) students work directly under the supervision of a registered nurse to become familiar with the duties and responsibilities of a nursing assistant and home health aide. They learn to provide services contributing to the welfare of patients in a hospital, nursing home, or private setting. The course includes classroom theory and testing as well as instruction in how to assist patients with hygiene, feeding, skin care, bed making, movement and other general assistance. Clinical experience at a local nursing home is required. Nursing ALHE 1500 is a prerequisite to HCC’s nursing program as well as many other school’s nursing programs.

ALHE 1510 HEALTHCARE CORE CURRICULUM
Credits: 4
Prerequisites: None.
The Healthcare Core Curriculum is a standard competency based Healthcare curriculum that prepares students for the rapidly changing Healthcare careers. It includes basic knowledge common to all health care careers, knowledge to make career choices and a pathway to multiple health careers.

ALHE 1520 NURSING ASSISTANT SKILLS SET
Credits: 2
Prerequisites: None.
The Nursing Assistant Skills Set is an introduction to basic nursing care skills and concepts necessary to prepare a student to take the State exam, the Nursing Assistant Test-Out (NATO) and then be employed in a health care facility under the direct supervision of a licensed nurse. Prerequisite: Completion of or concurrent enrollment in the Health Care Core Curriculum.

ALHE 1600 MEDICAL TERMINOLOGY
Credits: 2
Prerequisites: None.
Medical Terminology introduces students to the specialized vocabulary which will be used in any medical profession. This course is for any student who will be writing, reading, charting, transcribing, or studying any field in the medical profession.

ANTHROPOLOGY

ANTH 1010 CULTURAL ANTHROPOLOGY
Credits: 3
Prerequisites: College-level reading ability required.
MNTC goal areas: (5) History / Social / Behavioral Sciences, (8) Global Perspective
Cultural Anthropology is an introduction to the concepts, theories, methods, and practices of cultural anthropology. Human behavior will be examined by looking at cultural variations in kinship, family life, marriage customs, religious beliefs and practices, food production, economic organization, and political systems, among other topics. Special attention will be given to American Indian, African, and Southeast Asian cultures.

ART

ART 1010 INTRODUCTION TO ART
Credits: 3
Prerequisites: None.
MNTC goal areas: (6) Humanities & Fine Arts, Area A and (8) Global Perspective.
Introduction to Art is designed to give students an intellectual base to approach the visual arts. The lecture portion of the course introduces students to the language of visual experience, explores the nature of art, its purpose, and function, and provides a historical overview of art. The lab portion of the course introduces students to a variety of media and studio processes.

ART 1050 DRAWING 1
Credits: 3
Prerequisites: None.
MNTC goal areas: (6) Humanities & Fine Arts, Area B.
Drawing 1 introduces students to drawing through the study of fundamental concepts of visual form. This study is grounded in the discipline of traditional media and techniques. Aesthetics and discussion of form and content in student work are parts of this course.

ART 1060 DRAWING 2
Credits: 3
Prerequisites: ART 1050.
MNTC goal areas: (6) Humanities & Fine Arts, Area B.
Drawing 2 emphasizes the development of creative expression utilizing several media. Aesthetics and discussion of form and content in student work are parts of this course.
ART 1070 PRINCIPLES OF PRINTMAKING
Credits: 3
Prerequisites: ART 1050 or consent of the instructor.
MNTC goal areas: (6) Humanities & Fine Arts, Area B.
Principles of Printmaking will provide students with the fundamental understandings of a variety of image transfer processes. Students will investigate the nuances and techniques associated with relief printmaking through woodcut and monoprinting and the qualities of intaglio or etching processes. Production will be primarily in black and white. Students will experiment with the monoprinting techniques of chine colle', Xerox transfer and inked objects. Specific instruction in print registration and techniques of editions and print aesthetics will be explored.

ART 1120 2-D DESIGN
Credits: 3
Prerequisites: None.
MNTC goal areas: (6) Humanities & Fine Arts, Area B.
2-D Design introduces students to the underlying structure of visual form in two dimensional design. A variety of techniques, tools, and materials will be used to investigate the elements and principles of design.

ART 1210 PAINTING
Credits: 3
Prerequisites: ART 1050 or consent of the instructor.
MNTC goal areas: (6) Humanities & Fine Arts, Area B.
Painting is an introduction to creative and technical problems in oil painting. Traditional and experimental techniques are emphasized. Representation, abstraction, and non representational work are stressed.

ART 1490 ART HISTORY - PREHISTORY - GOTHIC
Credits: 3
Prerequisites: None.
MNTC goal areas: (6) Humanities & Fine Arts, Area A; (8) Global Perspective.
Art History: Prehistory - Gothic is a survey of global art history. Development of Eastern and Western art and architecture from Prehistory through Gothic Art is examined as well as the role of the artist. Aesthetic analysis of form and content are discussed as it relates to student work and historical ceramics.

ART 1500 ART HISTORY - RENAISSANCE - PRESENT
Credits: 3
Prerequisites: None.
MNTC goal areas: (6) Humanities & Fine Arts, Area A and (8) Global Perspective.
Art History – Renaissance - Present is a survey of global art history. Development of Eastern and Western art and architecture from the early Renaissance through the present day is introduced. The role of the artist is also examined.

ART 1600 CERAMICS - HAND-BUILDING
Credits: 3
Prerequisites: None.
MNTC goal area: (6) Humanities & Fine Arts, Area B
Ceramics - Hand-Building students work with pinch, coil, slab, and mold making-methods of construction. Surface decoration techniques include slip, engobe, and glaze. The content of the course will highlight and centralize projects on the hand-building applications of ceramics construction. Aesthetic analysis of form and content are discussed as it relates to student work and historical ceramics.

ART 1800 THE ART OF PHOTOGRAPHY
Credits: 3
Prerequisites: None. Students must have access to a digital camera with manual control feature for focus, aperture, and shutter speed.
MNTC goal areas: (6) Humanities & Fine Arts, Area B and (7) Human Diversity.
The Art of Photography is divided into two phases: Phase One is devoted to the history and evolution of the photograph and emphasis is placed on the early masters. Students will analyze and critique photographic art through specific design concepts and a structure-based aesthetic process. Critical analysis of photographic images will develop an intellectual base to respond to and create significant photographic images. Phase Two introduces the tools, mechanics, and techniques required to produce and edit digital photographs. Focus will be placed on the digital camera and computer photo editing. Technical procedures will be presented in a “hands-on and how-to” style that will ensure successful compositions and images. We will not take pictures; we will make them. Students will produce a final photographic image that will be exhibited in the Student Gallery.
ART 1850 ALTERNATIVE PHOTOGRAPHIC PROCESSES  
**Credits:** 3  
**Prerequisites:** None.  
**MNTC goal areas:** (6) Humanities & Fine Arts, Area B  
Alternative Photographic Processes introduces students to the fundamentals of non-silver alternative photographic processes with emphasis on technical skills, aesthetic values, and critique of photographic work. Students will learn skills related to safe chemistry usage, scanning, Photoshop manipulation of digital negatives, paper coating, and contact printing techniques. Historical and contemporary trends in non-silver alternative photography will be discussed. Students will produce a final photographic image that will be exhibited in our Student Gallery.

ART 2010 SCULPTURE  
**Credits:** 3  
**Prerequisites:** None.  
**MNTC goal areas:** (6) Humanities & Fine Arts, Area B.  
Sculpture explores visual expression through three dimensional form. Methods of construction include additive, subtractive, substitution, assemblage, kinetic, and site specific concepts.

ART 2020 INTRODUCTION TO METAL SCULPTURE  
**Credits:** 3  
**Prerequisites:** None.  
**MNTC goal areas:** (6) Humanities & Fine Arts, Area B.  
Introduction to Metal Sculpture explores the technical aspects of welding steel and the visual problem-solving skills associated with art projects.

ART 2120 3-D DESIGN  
**Credits:** 3  
**Prerequisites:** ART 1120 or consent of the instructor.  
**MNTC goal areas:** (6) Humanities & Fine Arts, Area B.  
3-D Design will provide a foundation in the fundamentals of three-dimensional design. This course is a continuation of the visual structures discussed in 2-D Design and allows further investigation into the specific concepts of form/volume, space, texture, light and time as they relate to the sequence of projects for the course. In addition to learning the qualities and expressive nature of materials, students will be challenged to develop critical thinking and problem solving skills with development of their individual style and awareness of visual content.

ART 2500 WOMEN IN ART  
**Credits:** 3  
**Prerequisites:** None.  
**MNTC goal area(s):** (6) Humanities & Fine Arts, Area A and (7) Diversity  
Women in Art will investigate women as visual artists, as subjects of art, and as critics, theorists, and historians of art, across history, geography, and society. It will reflect on the ways in which women artists have been written about or not in the history of art, challenging conventional narratives that tend to govern the study of women and art (e.g. the overlooked woman artist, the forgotten maverick, gender bias) by emphasizing, the material realities of their lives and the formal integrity of their work, and their contribution to film and art.

ART 2600 CERAMICS: WHEEL-THROWING  
**Credits:** 3  
**Prerequisites:** None.  
**MNTC goal areas:** (6) Humanities & Fine Arts, Area B.  
Ceramics: Wheel-Throwing focuses exclusively on the applications and methods of wheel throwing as it pertains to utilitarian objects and sculptural vessels. Students will explore a variety of techniques and projects that will challenge them to consider the quality of handmade objects designed for daily use and the vessel as it relates to craft and art. This course can be repeated twice for elective credits.

ART 2900 PORTFOLIO CREATION  
**Credits:** 1  
**Prerequisites:** Art 1450, Art 1050, or Art 1210, or consent of instructor.  
Portfolio Creation will focus on documenting art work produced in studio arts courses. The course will allow students currently taking an art class or students who have taken an art class to photographically document their work. In documenting their work students will learn photography skills that will highlight the materials, forms, and nuances of the artwork. Two- and three-dimensional works will be photographed using a variety of lighting and staging methods. Students will be required to write an artist statement that articulates their decision-making processes and describes the formal nature of their artwork. The writing and photo documentation will establish the student’s research and prepare them for application processes for BFA programs, artist in residence programs and internships. All students will install an exhibition of their work in an HCC exhibition space and online in a blog, personal website, or collaborative artist website.
ART 2901 ADVANCED STUDIO
Credits: 1
Prerequisites: 2nd year AFA candidate, ART 2900 or concurrent enrollment, or consent of Instructor.
In Advanced Studio ART 2901, students will focus on developing specific studio research and techniques that relate to their AFA exhibition. This may include techniques in sculpture, ceramics, painting, and drawing. This course will support the culminating studio courses leading up to Art 2900, and allow students to remain in a studio environment while completing Art 2900, and preparing AFA exhibition. This course may be repeated one time as elective credit.

ASTRONOMY
ASTR 1050 SOLAR SYSTEM ASTRONOMY
Credits: 3
Prerequisites: None.
MNTC goal areas: (3) Natural Science.
Solar System Astronomy is an introductory astronomy course investigating humankind’s earliest view of the cosmos from a historical perspective, examining in detail the objects in the Solar System as shown by recent discoveries. It includes laboratories investigating some of the constellations of the sky and other labs related to the planets.

AUTOMOTIVE TECHNICIAN
ASES 1010 BRAKES
Credits: 2
Prerequisites: None.
Brakes covers basic principles of brakes, hydraulic system basics, disc and drum brakes, parking brakes and power assist units. Rear wheel anti-lock systems are also covered. Emphasis is placed on operation, diagnosis and repair of various types of braking systems.

ASES 1011 STEERING AND SUSPENSION
Credits: 4
Prerequisites: None.
Steering and Suspension covers the complete suspension and steering system. This includes theory of operation and service of the many different types of steering and suspension systems. Also, the theory of wheel alignment, pre-alignment inspection, and alignment and correction of vehicle problems are covered.

ASES 1012 MANUAL TRANSMISSION AND DRIVELINES
Credits: 3
Prerequisites: None.
Manual Transmission and Drivelines covers the designs, power flow, inspection, diagnosis, and overhaul of manual transmissions, transaxles, drivelines, and differentials.

ASES 1014 ENGINE DIAGNOSIS & REPAIR
Credits: 4
Prerequisites: None.
Engine Rebuilding covers basic engine theory and construction, part identification, along with measuring and testing engine components. The reconditioning of cylinders and other machine procedures are approached. Also, the testing and rebuilding of cylinder heads are covered.

ASES 1016 FUEL & EMISSION SYSTEMS
Credits: 2
Prerequisites: None.
Fuel and Emission Systems covers the operation, diagnosis, and repair of the automotive fuel system. Fuel injection is introduced. Theory, design, diagnosis and service of the vehicles emission system are included.

ASES 1018 AUTOMOTIVE MATH APPLICATIONS
Credits: 1
Prerequisites: None.
Automotive Math Applications offers a problem-solving approach to math applications used by automotive technicians. These applications employ basic mathematical principles, direct and computed measurements, gear and pulley applications, formula solution, and geometric fundamentals.

ASES 1019 STARTING AND CHARGING SYSTEMS
Credits: 2
Prerequisites: None.
Starting and Charging Systems covers the theory and operation of starting motors and alternators. This includes the identification of components and electrical circuits used in starting and charging systems. The student services, repairs, and tests these components.
ASES 1020 GENERAL SERVICE SHOP
Credits: 2
Prerequisites: Instructor approval.
General Service Shop introduces the student to basic shop practices and concepts. Shop safety will be stressed. Automotive maintenance will be introduced.

ASES 1021 AUTOMATIC TRANSMISSION/TRANSAXLE
Credits: 5
Prerequisites: Instructor approval.
Automatic Transmission/Transaxle covers the operation, diagnosis and repair of automotive automatic transmissions and transaxles. Topics include internal components and operation, power flow through the unit, and overhaul.

ASES 1022 FOUR-WHEEL/ALL-WHEEL DRIVE
Credits: 1
Prerequisites: Instructor approval.
Four-Wheel/All-Wheel Drive explains operation, diagnosis and repair of components used in four wheel drive/all wheel drive systems. Topics include transfer cases, power transfer units, and axle disconnects.

ASES 1023 BASIC ELECTRICITY AND IGNITION SYSTEMS
Credits: 4
Prerequisites: None.
Basic Electricity and Ignition Systems covers the theory of electricity and its automotive application. This will include the basic electrical system, theory of operation, and troubleshooting. The ignition system, primary and secondary, will also be covered.

ASES 2010 BRAKES-ABS
Credits: 2
Prerequisites: ASES 1010 or instructor approval.
The Antilock Brake and Traction Control course covers operation, diagnosis and repair of antilock brakes and traction control systems currently found in industry. Two systems, Teves Mark IV and Delco ABS VI, are covered in depth using school supplied vehicles for hands on applications.

ASES 2013 AUTOMOTIVE ELECTRICAL ACCESSORIES
Credits: 3
Prerequisites: ASES 1013 or instructor approval.
The Automotive Electrical Accessories course covers operation, diagnosis and repair of various electrically operated accessories found on automobiles. Topics include lighting, windshield wipers and washers, power windows and locks, inflatable restraints, and body controllers.

ASES 2014 CUSTOMER AUTO 1
Credits: 3
Prerequisites: Instructor approval.
The Customer Auto 1 course allows the student to work in a supervised shop environment on vehicles that have been scheduled for actual repairs. The course is designed to increase skills needed for an entry level position in the automotive technology repair field.

ASES 2015 CUSTOMER AUTO 2
Credits: 3
Prerequisites: Instructor approval.
The Customer Auto 2 course allows the student to work in a supervised shop environment on vehicles that have been scheduled for actual repairs. The course is designed to increase skills needed for an entry level position in the automotive technology repair field.

ASES 2018 SHOP MANAGEMENT / SUPERVISION
Credits: 1
Prerequisites: Instructor approval.
Shop Management / Supervision introduces concepts and business practices used in the managing or supervising in the automotive field. Topics include customer and employee relations, productivity monitoring, estimate construction, and repair order writing.

ASES 2020 ADVANCED IGNITION SYSTEMS
Credits: 2
Prerequisites: Instructor approval.
Advanced Ignition Systems covers the ignition systems that are not distributor based. The systems taught will be EI (electronic Ignition) and the COP (coil on plug) system. Theory of operation and the proper diagnostic and repair procedures will be covered.
**ASES 2022 TRANSMISSION & TRANSFER CASE CONTROLS**

*Credits: 2*

**Prerequisites:** Instructor approval.

Transmission & Transfer Case Controls covers the interaction between an electronic controller and the operation of the automatic transmission and the 4x4 transfer case. Theory of operation and proper diagnostic procedures are included. Use of the scan-tool and digital lab scope to assist in proper diagnosis will also be covered.

**ASES 2024 AUTOMOTIVE HEAT / AIR CONDITIONING**

*Credits: 3*

**Prerequisites:** Instructor approval.

Automotive Heat/Air Conditioning covers theory, operation, diagnosis and repair of automotive climate control systems. Topics include heating, air conditioning, controls, and electrical circuits.

**ASES 2026 ADVANCED ENGINE PERFORMANCE**

*Credits: 4*

**Prerequisites:** Instructor approval.

Advanced Engine Performance course expands upon the knowledge learned in ASES 2027(Auto Computers). OBDII (On Board Diagnostic 2nd generation) operation and program logic will be covered. Diagnosis and repair of driveability problems associated with OBD II systems will be taught in this course. Practical exercises on school vehicles reinforce learned knowledge with hands-on experience.

**ASES 2027 AUTOMOTIVE COMPUTERS**

*Credits: 4*

**Prerequisites:** Instructor approval.

Automotive Computers covers the operation and diagnosis of the engine control computer. The operation and diagnosis of the inputs and outputs used on Ford, GM, and Daimler Chrysler are stressed.

**BIOLOGY**

**BIOL 1001 INTRODUCTION TO BIOLOGY**

*Credits: 1*

**Prerequisites:** None.

Introduction to Biology is an introduction to the basic characteristics, processes, and techniques common to the study of biological sciences. Major topics include: basic cell biology, the chemistry of life, genetics, human organ systems, and an introduction to laboratory techniques and research. This class is intended for anyone interested in future courses or currently taking a college biology course and students who are part of a health careers learning community.

**BIOL 1050 HUMAN BIOLOGY**

*Credits: 3*

**Prerequisites:** None.

**MNTC goal areas:** (3) Natural Science and (10) People and Environment.

Human Biology is a course in modern biology intended for non majors. Major topics include genetics and inherited traits, ecology and evolution, human physiology and development, adaptation, and interactions involved in natural systems. Human Biology is centered on relevant concepts affecting humans.

**BIOL 1120 MICROBIOLOGY**

*Credits: 3*

**Prerequisites:** Previous course work in biology strongly recommended.

**MNTC goal areas:** (3) Natural Science.

Microbiology includes the classification, structure, and function of bacteria and other microorganisms. Pathogenic organisms and the application of sterilization and disinfection are included. Basic laboratory techniques involved in microbiology, the structure and function of the cell, the preparation and sterilization of nutrient material, identification of microbes, and other tests with microorganisms are also included. Microbiology is intended for anyone interested in further life science or health science studies as well as liberal arts studies.
BIOL 1201 INTEGRATED ANATOMY AND PHYSIOLOGY

Credits: 4
Prerequisites: None.
MNTC goal areas: (3) Natural Science.
Integrated Anatomy and Physiology is the study of organ systems and tissues of the human body. Systems included are the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, lymphatic, digestive, urinary, and reproductive. Focus is on structures and the integrated control mechanisms of physiology in these systems. This course is intended for students in medical coding or related fields.

BIOL 1270 HUMAN ANATOMY AND PHYSIOLOGY: SUPPORT, MOVEMENT AND CONTROL

Credits: 4
Prerequisites: None.
MNTC goal area: (3) Natural Science.
Human Anatomy & Physiology: Support, Movement and Control is the study of organ systems and tissues of the human body. Systems included are the integumentary, skeletal, muscular, nervous, and endocrine. Focus is on structures and the integrated control mechanisms of physiology in these systems. This course is intended for students in health-related fields as well as liberal arts students.

BIOL 1280 HUMAN ANATOMY AND PHYSIOLOGY: INTERNAL ORGAN SYSTEMS

Credits: 4
Prerequisites: None.
MNTC goal area: (3) Natural Science.
Human Anatomy & Physiology: Internal Organ Systems is the study of organ systems and tissues of the human body. Systems included are the cardiovascular, respiratory, lymphatic, digestive, urinary, and reproductive. The focus is on structure and the integrated control mechanisms of physiology in these systems. This course is intended for students in health-related fields as well as liberal arts students.

BIOL 1510 GENERAL BIOLOGY OF CELLS

Credits: 5
Prerequisites: College level reading.
MNTC goal area: (3) Natural Science.
General Biology of Cells is one of two general biology courses. This course is designed for any student preparing for further study in life science or health science. It stresses cellular structures and functions with emphasis upon the chemical agents of cellular respiration, photosynthesis, protein synthesis, and genetics as well as the basis of ecology and evolution. Previous course work in chemistry is helpful.

BIOL 1520 GENERAL BIOLOGY OF ANIMALS & PLANTS

Credits: 5
Prerequisites: College-level reading.
MNTC goal area: (3) Natural Science, (10) People and the Environment.
General Biology of Animals & Plants is one of two general biology courses. Morphology, physiology, taxonomy, natural history, evolution and ecology of animals and plants are stressed. General Biology of Animals & Plants is intended for students planning further studies in biology or in medically-related fields as well as liberal arts students.

BIOL 1610 BIOLOGY OF WOMEN

Credits: 3
Prerequisites: College-level reading
MNTC goal area: (3) Natural Science, (10) People and the Environment
Study of the biological aspects of being a woman, from sex cell formation and sexual development through menopause and aging. Biological principles and scientific analysis of: menstruation and menopause; infertility; pregnancy and fetal development; genetics and biological sex differentiation. Students will also gain an historical perspective of women, the biology of gender differences, a multicultural perspective of women's health issues, including the importance of taking a responsible role in personal health care, pre-menstrual syndrome, birth control, sexually transmitted diseases, and cancers. Lab methods include scientific inquiry and analysis. Students will assess the strengths and limitations of scientific approaches toward understanding the biology of women and human behavior. Open to both women and men.

BIOL 2140 HUMAN ANATOMY

Credits: 4
Prerequisites: College level reading and previous college level biology or medical terminology recommended.
Human Anatomy is the study of organ systems and tissues of the human body. Systems included are the integumentary, skeletal, muscular, nervous, endocrine,
cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive. Focus is on structures and their relationships in these systems. This course is intended for students in health-related fields as well as liberal arts students.

**Biol 2151 Human Physiology**

*Credits: 4*

**Prerequisites:** BIOL 2140 recommended.

**MNTC goal area:** (3) Natural Science.

Human Physiology is the study of organ systems and tissues of the human body. Systems included are the cardiovascular, respiratory, lymphatic, digestive, urinary, and reproductive. The focus is on the endocrine, nervous, and integrated control mechanisms of physiology in these systems. This course is intended for practical nurses enrolled in the associate degree nursing program and students in health-related careers.

**Business / Office Administration**

**Bus 1010 Introduction to Business**

*Credits: 3*

**Prerequisites:** None

Introduction to Business is an overview of the business field. This course gives non-business majors an overall understanding of business and it gives business majors the foundation for the study of business by studying management, marketing, business ownership, unions, and quality.

**Bus 1105 Business English**

*Credits: 3*

**Prerequisites:** Satisfactory performance on English placement examination or completion of ENGL 0900 with a grade of "C" or higher.

Business English provides a summarization of basic English and business communication skills through reinforcement of grammar usage, business vocabulary, spelling, punctuation, listening, and reading. The course increases the student's written and oral skills and increases the probability for success in the business world. This course is valuable to anyone with the need to communicate more effectively in today's changing society.

**Bus 1107 Records and Information Management**

*Credits: 2*

**Prerequisites:** None.

Records and Information Management provides an overview to records and information management (RIM). The basics for both manual filing and electronic records management are addressed through the use of alphabetic, numeric, geographic, subject, and chronological filing. Simulations are provided for the filing of non-electronic records, electronic information management, and network based records management.

**Bus 1110 Keyboarding 1**

*Credits: 2*

**Prerequisites:** None.

Keyboarding 1 introduces and develops basic keyboarding skills. Students learn the correct placement of the letters on a standard keyboard and are introduced to computerized word processing. This course is highly recommended for any student who has minimal or no previous computerized keyboarding skills.

**Bus 1111 Keyboarding 2**

*Credits: 3*

**Prerequisites:** Bus 1110.

Keyboarding 2 is a continuation of Keyboarding 1. The course is designed for students who will be processing a large volume of information using the computer. The course prepares the student for the office by implementing advanced keyboarding simulations, applying additional functions keys, creating special documents, and mastering the 10-key pad using the touch method.

**Bus 1230 Legal Environment of Business**

*Credits: 3*

**Prerequisites:** None.

Legal Environment of Business examines business ethics, international trade, courts, litigation, agency, torts, contracts, sales, product liability, employment agreement, real property, antitrust laws, and consumer protection. This course is intended for all business administration, accounting, and economics majors.
BUS 1245 INTEGRATED MARKETING COMMUNICATIONS
Credits: 3
Prerequisites: None.
Integrated Marketing Communications covers the management concept that is designed to make all aspects of marketing communication such as advertising, sales promotion, public relations, and personal selling work together as a unified force, rather than permitting each to work in isolation.

BUS 1286 DEVELOPING AND WRITING THE BUSINESS PLAN
Credits: 2
Prerequisites: None.
Developing and Writing the Business Plan is an intensive, structured course in developing and writing a business plan. It is designed to teach students the information and skills you need to plan a business startup, or stabilize and/or expand an existing business. It provides information and skills in four basic elements of business planning. Combined, these four elements will provide a process and structure to complete a well thought out and thorough business plan.

BUS 1290 PRINCIPLES AND PRACTICES OF ENTREPRENEURSHIP
Credits: 3
Prerequisites: None.
Principles and Practices of Entrepreneurship will guide students thorough the process of starting and operating a small business. Topics will include creating a new business vs. purchasing an existing business, Franchising, Location, Legal forms of ownership, Promotion, Staffing, vendor selection, financing, and planning for growth.

BUS 1291 MICRO ENTREPRENEURSHIP 1
Credits: 1
Prerequisites: None.
Micro Entrepreneurship looks at “foot-in-the door” methods of starting a business. It will focus on low cost and low risk methods used by entrepreneurs all over the world. The main focus will be on open public markets and kiosks.

BUS 1292 MICRO ENTREPRENEURSHIP 2
Credits: 1
Prerequisites: None.
Micro Entrepreneurship 2’s focus will be on Public Markets, Kiosks, and Food trucks. The course will include weekend field trip(s), which maybe include but not limited to public markets, kiosks, and food trucks.

BUS 1300 BUSINESS COMMUNICATIONS
Credits: 3
Prerequisites: BUS 1105 or ENGL 1060 is strongly recommended. Keyboarding skills advisable.
Business Communications focuses on giving students the ability to communicate effectively through written and oral channels. The course demonstrates what does and does not work in the real business world. Topics of discussion and application include ethics in business, international and cross-cultural communication, legal aspects, current technology, correspondence preparation, collaborative writing, proposal and report writing, oral and nonverbal communication, and employment communication. The student will learn direct and indirect plans for writing positive, neutral, negative, persuasive, and goodwill messages.

BUS 1600 LEGAL TERMINOLOGY
Credits: 2
Prerequisites: College level reading ability.
Legal Terminology introduces students to the specialized vocabulary which will be used in any legal profession. This course is for any student who will be writing, reading, charting, transcribing, or studying any field of law. Students select between the legal concentrations.

BUS 2104 BUSINESS MATHEMATICS
Credits: 3
Prerequisites: Math 0921 or Placement Score.
Business Mathematics will provide business students with the understanding and skills necessary to perform the math functions involved in the operation of a business. Topic will include markups, discounts, payroll, interest, financial statements, ratio analysis, inventory, descriptive statistics, and statistical process control.

BUS 2105 ELEMENTS OF ACCOUNTING
Credits: 3
Prerequisites: MATH 0921 or placement exam.
Elements of Accounting provides an introduction to
accounting terms, concepts, and procedures. The course focuses upon the complete accounting cycle for a small service business and a merchandising business. The course prepares students for employment in bookkeeping and office administration positions, and may be used as a first accounting course for business administration and accounting majors.

BUS 2156 OFFICE ADMINISTRATION PRACTICES
Credits: 3
Prerequisites: None.
Office Administration Practices is designed to prepare the competent, resourceful administrative support staff sought by employers. Through the use of office simulations, students handle the most common work assignments encountered on the job. This course provides students with the attitudes and decision-making skills needed to adapt their knowledge and abilities to varied situations encountered in business settings.

BUS 2210 PROJECT MANAGEMENT
Credits: 3
Prerequisites: None.
Project Management will focus on the application of knowledge, skills, tools, and techniques to customer driven project activities. Students will analyze the competing demands of scope, time, cost, risk, and quality for projects while studying the process stages of initiating, planning, executing, controlling, and closing of a project.

BUS 2220 BUSINESS COMPUTERS
Credits: 3
Prerequisites: None.
Business Computers presents the basics of computer hardware and the application of software for business purposes.

BUS 2230 PRINCIPLES OF ACCOUNTING 1
Credits: 4
Prerequisites: MATH 1020.
Principles of Accounting 1 examines accounting principles and practices, the accounting cycle, inventories, accounting systems, cash, receivables, temporary investments, plant assets, intangible assets, payroll, notes payable, accounting concepts, and partnerships. This course is intended for all accounting, business administration, and economics majors.

BUS 2240 PRINCIPLES OF ACCOUNTING 2
Credits: 4
Prerequisite: BUS 2230.

BUS 2250 PRINCIPLES OF SUPERVISION
Credits: 3
Prerequisites: None.
Supervision teaches the knowledge and skills needed to be successful as the frontline leader.

BUS 2255 MARKET RESEARCH
Credits: 3
Prerequisites: None.
Market Research gives students the skills and knowledge needed to determine the scope of the research, determine the sample size, create the instrument, determine collection methodology, and collect and analyze secondary and primary data.

BUS 2500 PRINCIPLES OF MARKETING
Credits: 3
Prerequisites: None.
Principles of Marketing is a foundational course in the study of business. This course introduces students to marketing terms, concepts, and principles. Students learn how to identify target markets and develop market strategies to meet the needs of local, national and international markets. Students in this course will develop a marketing plan.

BUS 2510 PRINCIPLES OF MANAGEMENT
Credits: 3
Prerequisites: None.
Principles of Management studies the people, principles and practices of management in the 19th and 20th centuries, and also looks at the present trends in management. The course investigates the early managerial theorists, whose principles helped develop the Tayloristic styles of management prevalent in American organizations throughout most of the last century and traces the managerial revolution through today’s learning organizations.
CHEMISTRY

CHEM 1020 INTRODUCTION TO CHEMISTRY
Credits: 4
Prerequisites: MATH 0971 or equivalent.
MNTC goal area: (3) Natural Science.
Introduction to Chemistry is meant for students who have never taken a chemistry course. Topics include measurement, energy, atomic structure, chemical bonds, chemical re-actions, stoichiometry, nuclear chemistry, gases, solutions, acids and bases and organic chemistry. Introduction to Chemistry is intended for non-science majors and may serve as a prerequisite for General Chemistry. General Chemistry 1 (CHEM 1610) may not be taken for credit if the student has already completed CHEM 1300 or equivalent.

CHEM 1300 INVESTIGATING CHEMISTRY THROUGH FORENSIC SCIENCE
Credits: 3
Prerequisites: None.
MNTC goal area: (3) Natural Science.
Investigating Chemistry through Forensic Science is an introduction to chemistry using forensic science as the primary theme. Topics include measurement and observation, atomic structure, chemical bonding and re-actions, properties of solutions, nuclear chemistry, drug chemistry, arson investigation, chemistry of explosions, poisons and DNA analysis. This course is intended for non-science majors who have never taken a chemistry course and may serve as a prerequisite for General Chemistry I (Chemistry 1610). May not be taken for credit if student has already completed CHEM 1020 or equivalent.

CHEM 1610 GENERAL CHEMISTRY 1
Credits: 5
Prerequisites: High school chemistry or CHEM 1110, high school algebra or equivalent, or consent of instructor.
MNTC goal areas: (3) Natural Science.
General Chemistry 1 is a study of the fundamental theories and principles of chemistry. Topics include measurement, nomenclature, basic chemical reactions, stoichiometry, thermodynamics, kinetics, equilibrium, electron configurations, and periodic properties. General Chemistry 1 is meant for students majoring in engineering, science, or medicine, as well as liberal arts studies.

CHEM 1611 GENERAL CHEMISTRY 2
Credits: 5
Prerequisites: CHEM 1610.
MNTC goal areas: (3) Natural Science.
General Chemistry 2 is a continuation of General Chemistry 1. Topics include chemical bonding, molecular geometry, isomerism, properties of gases, liquids and solids, intermolecular forces, solutions, acids and bases, electrochemistry, nuclear chemistry, and an introduction to organic chemistry. General Chemistry 2 is meant for students majoring in science, medicine, certain branches of engineering, as well as liberal arts studies.

CHEM 2710 ORGANIC CHEMISTRY 1
Credits: 5
Prerequisites: CHEM 1611.
Organic Chemistry 1 is a study of the chemistry of carbon compounds emphasizing the theories and mechanisms which account for their physical and chemical properties. Techniques of purification, separation, and synthesis are practiced in the laboratory. Organic Chemistry 1 is meant for students planning to major in biology, chemistry, chemical engineering, pharmacy, and certain medical fields.

CHEM 2720 ORGANIC CHEMISTRY 2
Credits: 5
Prerequisites: CHEM 2710.
Organic Chemistry 2 is a continuation of Organic Chemistry 1. The chemistry of carbon compounds emphasizing the theories and mechanisms which account for their physical and chemical properties is again studied. Techniques of purification, separation, and synthesis are practiced in the laboratory. Organic Chemistry 2 is meant for students planning to major in biology, chemistry, chemical engineering, pharmacy, and certain medical fields.

CISCO NETWORK TECHNICIAN

CNT 1005 IT SECURITY AWARENESS
Credits: 2
Prerequisites: None.
IT Security Awareness will discuss security awareness and will walk users through every aspect of Information Security in a very broad, easy-to-understand way and explain the value of securing data, both for the user and the organization. The class will collect legislation, local, state, and federal privacy policies, and liability of individuals and
institutions related to data confidentiality and integrity. The course will introduce risk management, security policies, and common threats and countermeasures. The course will also present best practices in access control and password policies.

**CNT 1010 NETWORKING FUNDAMENTALS**  
**Credits:** 3  
**Prerequisites:** CAPP 1518 and CAPP 1519 or instructor consent. Web browsing experience helpful for browsing online curriculum from web server and taking online web based exams. Basic mathematical operations of whole numbers, per cents, binary to decimal to hexadecimal conversions, and exponential functions desired. Networking Fundamentals offers students an opportunity to learn appropriate terminology, concepts necessary to use a network, and hands-on training with various networking tools.

**CNT 1020 ROUTER THEORY AND ROUTER TECHNOLOGIES**  
**Credits:** 3  
**Prerequisites:** CNT 1010.  
Router Theory and Router Technologies provides students an opportunity to learn concepts of network communications and to practice hands-on setup of networking devices.

**CNT 1030 ADVANCED ROUTING AND SWITCHING**  
**Credits:** 3  
**Prerequisites:** CNT 1020.  
Advanced Routing and Switching provides students an opportunity to perform advanced configuration of networking devices. Topics include LAN switching, VLANs, LAN design, IGRP, firewalls, and Novell IPX.

**CNT 1040 ADVANCED NETWORKING AND MANAGEMENT**  
**Credits:** 3  
**Prerequisites:** CNT 1030.  
Advanced Networking and Management provides students an opportunity to learn Wide Area Networking and Design, PPP, ISDN, and Frame Relay concepts.

**CNT 2010 INFORMATION ASSURANCE**  
**Credits:** 3  
**Prerequisites:** CNT 1010, CNT 1020, ITNS 2010, ITNS 2020.  
Information Assurance I will introduce students to computer network vulnerabilities and threats and how to safeguard computer networks from those vulnerabilities and threats. This course will expose the student to network security planning, network security technology, network security organization and the legal and ethical issues associated with network security. In this class, students will learn the skills necessary for Security + certification.

**CNT 2070 DIGITAL FORENSICS I**  
**Credits:** 3  
**Prerequisites:** ITNS 1543, ITNS 1545 or A+ Hardware and Software certification; CAPP 2018, ITNS 2040, ITNS 2010.  
Digital Forensics I covers the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include evidence handling, chain of custody, collection, preservation, identification and recovery of computer data. This course will feature the use of NTI forensics tools.

**COMMERCIAL DRIVERS LICENSE/TRUCK DRIVING**

**CDL 1500 COMMERCIAL DRIVERS’ LICENSE**  
**Credits:** 4  
**Prerequisites:** None.  
Commercial Drivers’ License includes rules and regulations covered by the Federal Motor Carrier Administration. Provide education and training to take the CDL skills test.

**CDL 1515 BEHIND THE WHEEL DRIVING**  
**Credits:** 2  
**Prerequisites:** CDL permit, DOT physical, Risk Management Approval  
Behind the Wheel Driving provides students the hands-on experience needed to operate a semi-truck and trailer. Students will gain behind the wheel experience; drive various routes and in multiple conditions.
CDL 1520  CALCULATIONS FOR COMMERCIAL TRUCKING  
Credits: 2  
Prerequisites: None.  
Calculations for Commercial Trucking is designed to give drivers the skills necessary to properly manage fuel, loads, and log books, and many other operations that require calculating skills to make informed decisions.

CDL 1530  HAZARDOUS MATERIALS TRAINING FOR TRANSPORTATION  
Credits: 1  
Prerequisites: None.  
Hazardous Materials Training for Transportation presents the requirements for the transportation of hazardous materials by private, common, and contract motor carriers.

CDL 1535  CARGO SECUREMENT  
Credits: 1  
Prerequisites: None.  
Cargo securement is designed to give the student the tools to safely load cargo, distribute weight, and secure against movement. Common practices in class will be securing cargo in a van-type trailer as well as a flatbed-type trailer. Additional training will be conducted with other commodities such as liquid, livestock, equipment, and removable gooseneck trailers.

CDL 1540  CDL PRE-TRIP  
Credits: 1  
Prerequisites: None.  
CDL pre-trip will prepare students to perform the pre-trip inspection efficiently and safely. Topics include proper wheel chocking, current brake inspection procedures and walk around requirements.

CDL 1545  CDL PERMIT  
Credits: 1  
Prerequisites: None.  
This course will enable the student to adequately prepare to take the state permit test, or review state permit requirements required to drive (with a trainer) a commercial motor vehicle. Topics covered will be: Commercial Motor Vehicle General Knowledge, Air Brakes, and Combination vehicle handling.

CDL 1550  PASSENGER TRANSPORTATION  
Credits: 2  
Prerequisites: None.  
Passenger Transportation is designed for those students wishing to obtain a commercial driver's license as well as a passenger endorsement in order to operate school bus or motor coach vehicle.

CDL 1555  ELECTRONICS FOR TRUCK DRIVING  
Credits: 1  
Prerequisites: None.  
Electronics for Truck Driving will include the basic use of Electronic logs, On-board recording devices, GPS, Qualcomm and PeopleNet, and Rand McNally electronic mapping.

CDL 1560  ADVANCED DRIVING TECHNIQUES  
Credits: 2  
Prerequisites: None.  
Advanced Driving Techniques is a follow-on course to the behind-the-wheel course. In advanced driving we will spend time honing skills already learned, and will place an emphasis on split shifting, engine braking, mountain driving and DOT roadside and fix place inspection stations.

CDL 1570  Healthy Living for Today's Truck Driver  
Credits: 1  
Prerequisites: None.  
Healthy Living for Today's Truck Driver is a course in basic skills concerning lifestyle choices in diet, exercise, and emotional well-being for truck drivers. Students will learn basic concepts of calorie counting and healthy dietary choices. Students will learn basic concepts of mobility and flexibility. Student will learn coping mechanisms to deal with real life situations pertaining to mental health and stress typically associated with a truck driver's lifestyle.

COMMUNICATIONS

COMM 1100  PROFESSIONAL AND PERSONAL COMMUNICATIONS  
Credits: 3  
Prerequisites: None.  
The Professional and Personal Communications course focuses on practical knowledge and experience in communication. Students will explore communication concepts and skills including understanding self, culture, listening, verbal and nonverbal communication, and
conflict. In addition, students will learn effective teamwork and presentational skills including preparation, organization, and delivery of "how to" presentations.

COMPUTER APPLICATIONS

CAPP 1510 COMPUTER APPLICATIONS
Credits: 1
Prerequisites: None. (Keyboarding preferred).
Computer Applications is a hands-on course covering basic information about computer hardware and software and the use of computer software as a productivity tool. Students are given hands-on training on word processing, databases, and spreadsheet software applications, using the most up-to-date software.

CAPP 1515 SPREADSHEET APPLICATIONS
Credits: 2
Prerequisites: None. (Keyboarding preferred)
Spreadsheet Applications introduces the personal computer spreadsheet software used to analyze financial data. Topics include data operations, data transfer, and various calculation commands.

CAPP 1518 WINDOWS I
Credits: 1
Prerequisites: None. (Keyboarding preferred)
Microsoft Windows I has emerged as the interface standard for the personal computer. Windows provides a consistent interface for all programs available in this environment. Topics include the basic common window elements, mouse importance and usage, Windows Explorer, My Computer, desktop accessories, file maintenance, and interface familiarity.

CAPP 1519 WINDOWS II
Credits: 1
Prerequisites: None. (CAPP 1518 and keyboarding experience preferable.)
Microsoft Windows is the interface standard for the personal computer. Windows provides a consistent interface for all programs available in this environment. Topics include understanding the operating system, file and data searching, object linking and embedding, control panel capabilities, network neighborhood, and disk maintenance using system utilities.

CAPP 1520 SPREADSHEET APPLICATIONS
Credits: 1
Prerequisites: None. Keyboarding skills are preferred.
Spreadsheet Application introduces the personal computer spreadsheet software used to analyze financial data. Topics include data operations, data transfer, and various calculation commands.

CAPP 1521 ADVANCED SPREADSHEET APPLICATIONS
Credits: 1
Prerequisites: CAPP 1520.
Advanced Spreadsheet Applications continues with spreadsheet software used to analyze financial data. Topics include database management within a spreadsheet, what-if analysis, extensive use of multiple worksheets, extensive use of charts and maps, and setting range variables using PivotTables and PivotCharts.

CAPP 1530 DATABASE
Credits: 1
Prerequisites: None.
Database covers the utilization of an electronic database management system for applications which include electronic files, file creation, flexible stored procedures, fixed/hard concepts, and software installation. This will allow students to gain a confidence and efficiency in their daily employment.

CAPP 1540 WORD PROCESSING
Credits: 2
Prerequisites: None. Keyboarding skills are recommended.
Word Processing focuses on the introduction of word processing applications to create and edit text using Microsoft Word for Windows.

CAPP 1541 ADVANCED WORD PROCESSING
Credits: 2
Prerequisites: CAPP 1540 or equivalent.
Advanced Word Processing provides students an opportunity to learn advanced features of Microsoft Word or WordPerfect. Students explore additional functions in word processing such as macros, frames and borders, draw and fill, charts, tables, indexes, sorting, advanced formatting, and desktop publishing.
CAPP 1560 PRESENTATION GRAPHICS

Credits: 1
Prerequisites: None. Keyboarding preferred.
Presentation Graphics covers preparation of graphics for visualization and presentation. Students learn to create overheads, electronic flipcharts, and computer-generated slide shows using PowerPoint, input devices, and source files with pre-set output techniques.

CAPP 1561 ADVANCED PRESENTATION GRAPHICS

Credits: 1
Prerequisites: CAPP 1560. Keyboarding preferred.
Advanced Presentation Graphics covers preparation of graphics for visualization and presentation. Students will learn to create overheads, electronic flipcharts, and computer-generated slide shows using PowerPoint, input devices, and source files with pre-set output techniques.

CAPP 1590 DESKTOP PUBLISHING CONCEPTS

Credits: 2
Prerequisite: CAPP 1540 or equivalent.
Desktop Publishing Concepts is designed to introduce students to the concepts, terminology, techniques, and applications of desktop publishing. The student integrates word processing and graphics and manipulates text and graphics to produce professional-quality publications.

CAPP 1595 COMPUTERIZED ACCOUNTING

Credits: 3
Prerequisites: BUS 2105.
Computerized Accounting is designed to educate students in the application of accounting principles to the electronic computer technology.

CAPP 1600 EMERGING INFORMATION TECHNOLOGIES

Credits: 2
Prerequisites: Placement Exam or grade of C or better in IST 1350.
Emerging Information Technologies provides an overview of information technologies and how they are used in an industrial setting. Students will learn to effectively use various information technologies to gather, manage, analyze, and process data. The information technologies taught in this course will be used by students to solve a variety of industry-related problems.

CAPP 2019 WINDOWS OS

Credits: 2
Prerequisites: CAPP 1518, CAPP 1519 or instructor consent.
Microsoft Windows has emerged as the newest interface standard for the personal computer. Windows OS provides a consistent interface for all programs available in this environment. Topics include understanding operating systems, command line operations, troubleshooting tools, batch programs, and networking and Internet connecting.

CAPP 2510 MULTIMEDIA CONCEPTS

Credits: 2
Prerequisites: None. CAPP 1560 preferred.
Multimedia Concepts covers advanced topics in working with multimedia and presentations. Students gain confidence in preparing and presenting to specific audiences on various topics.

COMPUTER SCIENCE

CSCI 1010 COMPUTER LITERACY

Credits: 3
Prerequisites: None.
MNTC goal area: (4) Math/Logical Reasoning.
Computer Literacy provides students with an introduction to ways in which information technology is being used in society. It assists students in developing a general understanding of the information technology terminology and the ways in which it can be effectively used. Included in the course are hands-on experiences with operating systems and as well as applications software for word processing, spreadsheets, database management, electronic mail, and World Wide Web usage.

CSCI 1030 INTRODUCTION TO SOFTWARE ENGINEERING TECHNOLOGIES

Credits: 2
Prerequisites: None.
Introduction to Software Engineering Technologies is designed to introduce students to the tools, techniques, and strategies used in the engineering and development of computer software. Students will learn the technologies used to build and deploy Websites as well as computer software applications for personal computers and mobile devices.
**CSCI 1070  INTRODUCTION TO GAME PROGRAMMING**

*Credits: 3*

*Prerequisites:* None.

Introduction to Game Programming introduces students to computer game development and game development technologies. Students will use a programming language and existing game libraries to develop two dimensional games that respond to keyboard and mouse input. Prior programming experience is not required for this course.

**CSCI 1081  FUNDAMENTALS OF COMPUTER SCIENCE**

*Credits: 4*

*Prerequisites:* CSCI 1100, MATH 1040, or instructor’s consent.

Fundamentals of Computer Science 1 is an introduction to computer systems, computer problem-solving using structured and object-oriented techniques, program development and testing, and abstract data types.

**CSCI 1100  FOUNDATIONS OF COMPUTER SCIENCE**

*Credits: 3*

*Prerequisites:* None.

Foundations of Computer Science introduces students to the many disciplines within computer science. Students will learn how data is represented within a computer, discuss computer hardware, examine aspects of computer software, learn fundamental software development principles, and learn various ways in which data can be organized.

**CSCI 1250  C++ PROGRAMMING**

*Credits: 3*

*Prerequisites:* MATH 1020 or equivalent or instructor’s consent.

C++ Programming introduces students to problem-solving and program development using object-oriented design, structured programming techniques, and the C++ programming language. Students will design, construct, and test programs with primarily scientific and mathematical applications.

**CSCI 1410  WEB AUTHORING 1**

*Credits: 2*

Web Authoring 1 is a course designed to introduce students to the design, development, deployment, and maintenance of Web pages using the HTML5, CSS3, and related technologies. The focus of this course will be on Web page development for both mobile and desktop devices.

**CSCI 1451  ADVANCED WEB AUTHORING**

*Credits: 3*

*Prerequisites:* CSCI 1410 or instructor’s consent.

Advanced Web Authoring is an introduction to the programming tools required to build and maintain server sites on the Web. Popular Web development tools will be examined and students will use selected Web technologies to do both client-side and server-side development. Web technologies examined in this course include, but are limited to: JavaScript, XML, Perl/CGI, ASP.NET, and Ajax.

**CSCI 1470  PHP PROGRAMMING**

*Credits: 3*

*Prerequisites:* CSCI 1400, CSCI 1701.

PHP Programming introduces student to the server-side, HTML-embedded scripting language PHP. Emphasis is placed on programming techniques required to create dynamic Web pages. Students will learn how to use PHP functions and control structures, do string manipulation, work with files and directories, manipulate arrays, and work with databases using MySQL.

**CSCI 1500  JAVA PROGRAMMING 1**

*Credits: 3*

*Prerequisites:* Prior experience working in a Windows environment, MATH 0971 or equivalent.

Java Programming 1 provides students who have little or no programming experience with the basics of programming using the Java programming language. This course teaches the significance of object-oriented programming, the keywords and constructs of the Java programming language, and the steps required to create simple Java technology programs. Students taking this course receive a solid basis in the Java programming language upon which to base continued work and training. This course is a first course or students intending to major or minor in computer science or related fields.
**CSCI 1600  INTRODUCTION TO UNIX/LINUX**

*Credits: 2*

*Prerequisites:* CAPP 1518, CAPP 1519 or instructor's consent.

Introduction to UNIX/Linux is an introduction to the Linux operating system. Linux is a powerful, versatile, and freely distributable clone of the Unix operating system. Students learn and use common Linux commands and techniques to do file/directory management, process control, and environmental management.

**CSCI 1701  SQL PROGRAMMING**

*Credits: 3*

*Prerequisites:* None.

SQL Programming provides an overview of database concepts and programming based on relational database concepts. Students will learn to use the Structured Query Language (MySQL) to design and access relational databases. Topics include table creation, data insertion, table modification, single and multiple-table queries, data updating, and essentials of database administration.

**CSCI 2080  FUNDAMENTALS OF COMPUTER SCIENCE 2**

*Credits: 4*

*Prerequisites:* CSCI 1081 or instructor's consent.

Fundamentals of Computer Science 2 is the second course of a sequence for students intending to major or minor in computer science or a related field. It is an advanced study of computer problem solving using structured and object-oriented techniques, program development and testing, and abstract data types.

**CULINARY ARTS MANAGEMENT**

**CAMT 1600  INTRODUCTION TO FOOD SERVICE**

*Credits: 6*

*Prerequisites:* None.

Introduction to Food Service includes an introduction to the food service industry, culinary terms, counter service, ware washing techniques, and meat, poultry, and fish or shellfish identification. This course also covers basic cooking techniques, knife identification and use, and basic kitchen first aid and safety.

**CAMT 1601  BREAKFAST AND PANTRY PREPARATION**

*Credits: 3*

*Prerequisites:* CAMT 1600: Introduction to Food Service and CAMT 1603: Institutional Food Production I

Breakfast and Pantry Preparation includes the production techniques used in the preparation of breakfast foods, salads, salad dressings, and sandwiches. Proper care and handling of ingredients and finished products are emphasized.

**CAMT 1602  BASIC FOOD PRODUCTION PRINCIPLES**

*Credits: 6*

*Prerequisites:* None.

Food Production Principles teaches the preparation and serving of stocks, sauces, soups, meats, and poultry using various cooking methods and techniques. This course also includes basic baking methods and uses for the preparation of finished products such as quick breads, yeast breads, pies, cakes, and cookies.

**CAMT 1603  INSTITUTIONAL FOOD PRODUCTION 1**

*Credits: 4*

*Prerequisites:* Concurrent enrollment in CAMT 1600.

Institutional Food Production 1 is a supervised course covering the actual production learned in basic food production principles. Students are responsible for preparation and service of soups, sauces, and meat, fish, and poultry items using various moist and dry heat methods. This course also covers identification and preparation of vegetables, rice, and pasta products.

**CAMT 1604  QUALITY ASSURANCE**

*Credits: 1*

*Prerequisites:* None.

Quality Assurance develops an understanding of the basic principles of sanitation and safety in order to protect the consumer by maintaining a safe and healthy environment in the food service industry. The laws and regulations related to safety, fire and sanitation in food service operation are also covered.
CAMT 1605 INSTITUTIONAL FOOD PRODUCTION 2
Credits: 4
Prerequisites: CAMT 1600, CAMT 1602, CAMT 1603.
Institutional Food Production 2 reviews the basic production skills acquired in the previous courses; Introduction to Food Service Production, Basic Food Production Principles, and Institutional Food Production 1.

CAMT 1606 CULINARY MATH
Credits: 1
Prerequisites: None.
Culinary Math is designed to aid the Culinary Arts student with the basic math skills that are used in the day-to-day operations in the food service industry.

CAMT 2400 FOOD SERVICE PROCUREMENT AND COST CONTROL
Credits: 3
Prerequisites: None.
Food Service Procurement and Cost Control covers the basic food service cost control techniques for the modern kitchen. Menu development, cost factor, food procurement, receiving, and storage are included.

CAMT 2410 HOTEL AND RESTAURANT FOOD PRODUCTION 1
Credits: 4
Prerequisites: None.
Hotel and Restaurant Food Production 1 provides experience in production speed, skill, and development in the assigned meal preparation stations in a working kitchen and restaurant. Students plan and prepare menu items and serve menu items as a team under the direction of a certified culinary arts instructor. Students follow and perform sanitation procedures as part of the daily operation.

CAMT 2420 HOTEL AND RESTAURANT FOOD PRODUCTION 2
Credits: 5
Prerequisites: CAMT 1800, CAMT 2410.
Hotel Restaurant Food Production 2 provides an advanced level of meal preparation in a working restaurant. The student plans, prepares, and serves required menu items while following a set station rotation. The student follows set clean up and sanitation procedures as part of daily operations.

CAMT 2430 ADVANCED CULINARY SKILLS 1
Credits: 6
Prerequisites: CAMT 1600.
In Advanced Culinary Skills 1, the student plans, supervises, and manages the execution of any specialty buffets or banquets. The student is responsible for the planning, preparation, demonstration, and service of all aspects of the event.

CAMT 2440 ADVANCED CULINARY SKILLS 2
Credits: 6
Prerequisites: CAMT 1600, CAMT 2430.
Advanced Culinary Skills 2 helps to prepare the student to enter the job market by refining skills previously addressed with further emphasis placed on applying managerial skills in a working restaurant lab.

CAMT 2450 SPECIALTY FOODS PREPARATION
Credits: 5
Prerequisites: CAMT 1600.
Specialty Foods Preparation covers a review and application of the quantity cooking methods used in the production of menu items for buffets and institutional operations.

CULINARY ASSISTANT

CUL 1000 BASICS OF FOOD PREPARATION 1
Credits: 4
Prerequisites: Instructor approval required.
Basics of Food Preparation 1 covers basic sanitation, kitchen safety, ware washing, tool and equipment identification, select tool and equipment operation procedures, food identification, food handling techniques, measuring techniques, and introductory recipe-following procedures.

CUL 1005 FOOD PREPARATION EXPERIENCE 1
Credits: 4
Prerequisites: Instructor approval required.
Food Preparation Experience 1 offers an opportunity for students to practice kitchen safety and sanitation techniques; ware washing; identification, operation and cleaning of some hand tools and equipment; and preparation of selected salad items, salad dressing, and cold sandwich items.
CUL 1010  BASICS OF FOOD PREPARATION 2  
Credits: 4  
Prerequisites: Instructor approval required.  
Basics of Food Preparation 2 reviews and expands the skills and concepts practiced in Basics of Food Preparation 1. These skills include basic sanitation and kitchen safety techniques, ware washing, tool and equipment identification, tool and equipment operation, equipment cleaning and maintenance, food identification, food handling, following a basic recipe, reading a menu, and customer service.

CUL 1015  FOOD PREPARATION EXPERIENCE 2  
Credits: 4  
Prerequisites: Instructor approval required.  
Food Preparation Experience 2 offers students an expanded opportunity to practice kitchen safety and sanitation techniques; ware washing; identification, operation and cleaning of hand tools and equipment; preparation of salad items, salad dressing, and cold sandwich items; and fundamentals of counter service, dining room preparation and dining room service.

DENTAL ASSISTING

DAS 1501  X-RAY 1  
Credits: 2  
Prerequisites: None.  
X-Ray 1 is designed to teach the students the diagnostic importance of dental X-rays. The student will expose, process and evaluate x-rays. The student will first take x-rays on mannequins using the parallel technique. The student will utilize radiation safety and infection control guidelines. This course is a prerequisite for X-Ray 2.

DAS 1504  NUTRITION AND DENTAL HEALTH  
Credits: 1  
Prerequisites: None.  
Nutrition and Dental Health studies the basic concepts and principles of nutrition as they apply to the Dental profession. Topics include digestion, nutrients, the Food Pyramid, energy exchange, and health risks related to diet. Vitamins and minerals are discussed in addition to deficiencies seen intra-orally and extra-orally. Preventive dentistry nutrition is also included.

DAS 1507  DENTAL ANATOMY 1  
Credits: 3  
Prerequisites: READ 0920.  
Dental Anatomy 1 is an introduction to all the oral structures and their functions within the human body. The student becomes aware of cell structure and formation and the development of the head and dental structures. This course is a prerequisite for Dental Anatomy 2.

DAS 1512  CHAIR-SIDE ASSISTING 1  
Credits: 3  
Prerequisites: None.  
Chair-side Assisting 1 is an introduction to the dental operatory, equipment, and materials. It provides general background knowledge and skill development for the basics of all assisting in general dentistry. Also included are endodontic and oral surgery. This course is a prerequisite for Chair-side Assisting 2.

DAS 1517  DENTAL LAB  
Credits: 2  
Prerequisites: None.  
Dental Lab provides the basic necessary information on dental materials and the skills necessary to handle lab equipment.

DAS 1520  DENTAL SCIENCE  
Credits: 2  
Prerequisites: None.  
Dental Science introduces applied psychology and its relationship to the dental office. This course also prepares the dental assistant to deal with medical and dental emergencies. Pharmacology is included to help students better understand the medications used in dentistry.

DAS 1525  EXPANDED DUTIES 1  
Credits: 3  
Prerequisites: Admittance into Dental Assisting program or current certification.  
Expanded Duties 1 covers skill development and knowledge of the legal Expanded Duties for Dental Assistants in the State of Minnesota.

DAS 1528  INFECTION CONTROL  
Credits: 1  
Prerequisites: None.  
Infection Control covers the major classifications of microorganisms, disease transmission, and infection control in the dental office. Compliance with current
Occupational Safety and Health Agency (OSHA) and Center for Disease Control and Prevention (CDC) guidelines is discussed and practiced.

**DAS 1529 EXPANDED DUTIES 2**

*Credits: 3*

**Prerequisites:** Successfully completed DAS 1525.

Expanded Duties 2 provides background knowledge and skill development in the orthodontics and periodontics specialty areas of dentistry. Local dentists are on duty to evaluate the students and give them direction with expanded duties.

**DAS 1530 OFFICE MANAGEMENT**

*Credits: 1*

**Prerequisites:** None.

Office Management is designed to acquaint the student with clinical and business record keeping of a dental practice. This includes the patients’ data, appointment control, telephone and written communications, dental insurance, supplies, and dental forms.

**DAS 1542 X-RAY 2**

*Credits: 2*

**Prerequisites:** DAS 1501.

X-Ray 2 is designed to teach the production of X-rays, the biological changes radiation can cause, tubehead components, bisect and parallel technique, extra-oral and digital radiography, and quality assurance. The student will expose, process, and evaluate x-rays on patients using parallel and digital technique, using asepsis and safety guidelines.

**DAS 1547 DENTAL ANATOMY 2**

*Credits: 2*

DAS 1507.

Dental Anatomy 2 is designed to teach the students the development of the teeth, supporting structures, and the face. It will also cover the disease processes, cause, manifestations and effects of disease on living tissue as it relates to the oral cavity.

**DAS 1552 CHAIR-SIDE ASSISTING 2**

*Credits: 3*

**Prerequisites:** DAS 1512.

Chair-side Assisting 2 deals only with the specialty areas of dentistry. It gives students the knowledge and skills to assist dentists in these specialized positions.

**DAS 1572 EXTRAMURAL 1**

*Credits: 7*

**Prerequisites:** 2.00 G.P.A., CPR for Health Care Providers

Extramural 1 enables students to work in private dental offices with dentists and staff and to assist with office and patient-related duties. The student will fulfill the role of an employed dental assistant.

**DAS 1582 NITROUS OXIDE-OXYGEN INHALATION SEDATION**

*Credits: 1*

**Prerequisites:** DAS 1525 or be a Minnesota Registered Dental Assistant or Minnesota Licensed Dental Hygienist; CPR for Health Care Providers.

Nitrous Oxide-Oxygen Inhalation Sedation provides the basic necessary information on inducing and monitoring nitrous oxide analgesia and the skills necessary to handle patients and equipment in a clinical setting.

**DAS 2653 REMEDIAL EXPANDED FUNCTIONS/ X-RAY**

*Credits: Variable 1-8*

**Prerequisites:** Failure of MN Licensure exam twice

Remedial Expanded Functions/X-Ray provides the necessary additional education required by the Board of Dentistry Section 150A.06. Credits are contingent upon the number of categories failed per portion of the MN Registration Exam and such categories indicated by the testing agency. This course would be a maximum of 4 credits in the Expanded Duties portion and or 4 credits maximum in the Radiology portion. If the student failed both the Expanded Duties section and the Radiology section of the exam with 4 or more areas per section, the student would be required to register for 2 courses of DAS 2653 with a maximum of 8 credits total. Upon successful completion, the instructor will send the required documentation to the Board of Dentistry needed for the student to re-apply for the MN Licensure Exam.

**DAS 2655 SPECIAL PROJECT**

*Credits: 3*

**Prerequisites:** Graduation from Dental Assisting program.

Special Project covers a special project related to dentistry. This project may be a research paper, presentation, field project or anything else that is acceptable to all parties involved. The project must be approved by the instructor before beginning the course.
DAS 2657 EXTRAMURAL 2
Credits: 4
Prerequisites: 2.00 G.P.A.
Extramural 2 enables students to work in private dental offices with dentists and staff and to assist with office and patient related duties. The student fulfills the role of an employed dental assistant.

DIESEL MECHANICS/HEAVY EQUIPMENT MAINTENANCE

DSL 1500 ORIENTATION AND TRADE KNOWLEDGE
Credits: 1
Prerequisites: None.
Orientation and Trade Knowledge teaches shop procedures and safety in the Heavy Equipment and Diesel Shop. Safety in the use of hand tools, power tools, jacks, hoists, overhead cranes, and other equipment used by the technician are covered. The Minnesota Right-to-Know Law is presented. Shop procedures are covered with emphasis on safety and personal protection equipment. Emergency first aid procedures are covered.

DSL 1501 GENERAL SHOP PRACTICES 1
Credits: 1
Prerequisites: None.
General Shop Practices teaches shop procedures, and safe shop administration in the Heavy Equipment and Diesel Shop. Safety in the use of hand tools, electric tools, and other equipment used by the technician are covered. The Minnesota Right-to-Know Law is presented. Shop procedures are covered with emphasis on safety and personal protection equipment. Emergency first aid procedures are covered.

DSL 1502 DIESEL SYSTEMS AND TROUBLESHOOTING
Credits: 3
Prerequisites: DSL 1510, DSL 1500.
Diesel Systems and Troubleshooting covers the operation, maintenance, and service procedures for the air, cooling, fuel, and lubrication systems. A complete tune-up of Detroit Diesel engines including troubleshooting, testing the air system and fuel system, and replacing a fuel injector. This course features the two-valve or four-valve Detroit Diesel 71 series engine. Students work on “running engines” in the lab. Experiments on the engine including the four flow systems are done.

DSL 1510 BASIC DIESEL ENGINES
Credits: 4
Prerequisites: None.
Basic Diesel Engines covers the fundamentals of diesel engine construction and operating principles. A major disassembly of a Detroit Diesel two-cycle engine is performed by the students with a study of the internal components, their functions, and operation. Measurements and analyses of all parts are made.

DSL 1525 MOBILE AND STATIONARY EQUIPMENT INSPECTION
Credits: 1
Prerequisites: None.
The Mobile and Stationary Equipment Inspection course helps students recognize problems in mobile and stationary equipment and enables them to write a report explaining the problem and communicate it to a service manager, customer, etc.

DSL 1526 CUMMINS AND CATERPILLAR SERVICE OVERHAUL
Credits: 4
Prerequisites: Instructor approval.
Cummins and Caterpillar Service Overhaul covers Cummins and Caterpillar engine service, operation, construction and in-frame repair procedures. Students remove and replace a cylinder kit, inspect and measure parts, and rebuild accessory components.

DSL 1527 WELDING FOR DIESEL MECHANICS
Credits: 2
Prerequisites: None.
Welding for Diesel Mechanics is designed to give the diesel mechanic a basic understanding of the most commonly used welding equipment in the diesel mechanic field. Arc and gas welding safety are covered. Students experience various types of welding equipment.

DSL 1529 DIESEL FUEL SYSTEMS
Credits: 3
Prerequisites: None.
Diesel Fuel Systems includes a study of the theory and principles of the pump line nozzle fuel system and its components including fuel pumps, injection nozzles, fuel injectors, and governors. Diagnosis, adjustments, and testing using both mechanical and electronic engines are used. Electronic diagnostic tools are used by students.
**DSL 1530 HEAVY EQUIPMENT HYDRAULICS**

*Credits: 3*

**Prerequisites:** None.

Heavy Equipment Hydraulics covers the fundamentals of hydraulics including the application of Pascal’s Law and the operation, construction, troubleshooting, and repair of various system components.

**DSL 1535 ELECTRONICS/ELECTRICAL SYSTEMS**

*Credits: 6*

**Prerequisites:** None.

Electronics/Electrical Systems focuses on atomic structure, electron theory of electricity, testing conductors, semiconductors and insulators, construction and operation of storage batteries, telematics-remote monitoring, Ohm’s law theory, the applications to series, parallel, and series/parallel DC circuits, 12/24 volt DC components, operation, troubleshooting, repair, 12/24 volt charging circuits, components, operation, troubleshooting, repair, lighting, accessory and control systems, components, operation, troubleshooting, repair, electrical schematics/diagrams, SAE computer Can-Buss standards, and diagnostics/systems troubleshooting.

**DSL 1560 HEAVY EQUIPMENT AIR CONDITIONING**

*Credits: 1*

**Prerequisites:** None.

Heavy Equipment Air Conditioning covers the basic fundamentals of air conditioning and their application to heavy duty equipment such as semi-tractors, delivery trucks, and off-road equipment. Students learn the operating principles and apply them in troubleshooting and servicing on actual equipment.

**DSL 2500 GENERAL SHOP PRACTICES 2**

*Credits: 1*

**Prerequisites:** DSL 1501

General Shop Practices demonstrates shop procedures, and safe shop administration in the Heavy Equipment and Diesel Shop. Safety in the use of hand tools, electric tools, and other equipment used by the technician are covered. The Minnesota Right-to-Know Law is presented. Shop procedures are covered with emphasis on safety and personal protection equipment. Emergency first aid procedures are covered.

**DSL 2515 MACHINE TOOL TECHNOLOGY**

*Credits: 3*

**Prerequisites:** None.

Machine Tool Technology will address the operation, maintenance and application of machine tools used in the Heavy Duty Truck and Off Road Equipment industry. The course will focus on the application of critical measuring, comparison and repair procedures needed to repair component parts.

**DSL 2524 POWER SHIFT TRANSMISSIONS & TORQUE CONVERTERS**

*Credits: 3*

**Prerequisites:** DSL1530.

Power Shift Transmissions & Torque Converters focuses on the Allison automatic transmissions and converters and the theory of operation and their repair.

**DSL 2531 HEAVY DUTY AIR BRAKES**

*Credits: 5*

**Prerequisites:** None.

Heavy Duty Air Brakes focuses on the operation, repair and rebuild procedures of the air handling system and foundation brakes found on the Heavy Duty Trucks and Off Road Equipment.

**DSL 2535 UNDERCARRIAGE**

*Credits: 1*

**Prerequisites:** None.

Evaluation and maintenance of undercarriage used on earthmoving equipment.

**DSL 2540 STANDARD TRANSMISSION/CLUTCHES**

*Credits: 4*

**Prerequisites:** None.

Standard Transmissions/Clutches focuses on theory, operation, repair and rebuild procedures for manual transmissions and clutches that are used in on/off highway vehicles and heavy equipment.

**DSL 2543 DIFFERENTIALS/DRIVELINES**

*Credits: 3*

**Prerequisites:** None.

Differentials/Drivelines focuses on the operation, repair/rebuild procedures for the differential used in the Heavy Duty Truck and Off Road Equipment and the principles, operation and repair procedures for drivelines used to connect the transmission to the differential.
DSL 2545 STEERING/ALIGNMENT AND TIRES
Credits: 2
Prerequisites: None.
Steering/Alignment and Tires focuses on the operation and repair of the steering systems used on the Heavy Duty Truck and Off Road Heavy Equipment and correct alignment factors critical to proper operation. This course also focuses on theory of design and operation for truck and off-road tires.

DSL 2547 CUSTOMER REPAIR
Credits: 3
Prerequisites: Students are required to demonstrate competency for repair required and approval from the instructor.
Customer Repair allows the student to perform required repairs on selected customer equipment. This enables the individual student to apply the skills learned from courses and to complete repair work in accordance with manufacturers' guidelines and to customer satisfaction.

DSL 2550 CUSTOMER REPAIR
Credits: 5
Prerequisites: Students are required to demonstrate competency for the repair required and approval from the instructor.
Customer Repair allows the student to perform required repairs on selected customer equipment. This enables the individual student to apply the skills learned from courses and to complete repair work in accordance with manufacturers' guidelines and to customer satisfaction.

ECONOMICS

ECON 1010 MACROECONOMICS
Credits: 3
Prerequisites: College level reading strongly recommended.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
Macroeconomics examines the market system (supply and demand), the business cycle, inflation, unemployment, classical economics, Keynesian economics, Monetarism, fiscal and monetary policy, the national debt, and international trade, international finance, and developing and transitional economies.

ECON 1030 INTRODUCTION TO ECONOMICS
Credits: 3
Prerequisites: None.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
Introduction to Economics covers the basics of both micro and macroeconomics: circular flow model, demand and supply, various market structures, money, Federal Reserve, income expenditure model, classical economics, economic policies, international trade, international aid, and balance if international payments. This is a liberal arts, introductory course which provides an overview of the economic system.

ECON 1050 MICROECONOMICS
Credits: 3
Prerequisites: College level reading strongly recommended.
MNTC goal area: (5) History/Social/Behavioral Sciences.
Microeconomics examines the market system, elasticity, utility analysis, costs of production, market structures, resource markets, capital, corporate finance, market regulation, income distribution, and externalities.

ELECTRICAL MAINTENANCE

ELM 1005 ELECTRICAL MATH APPLICATIONS
Credits: 2
Prerequisites: None.
Electrical Math Applications includes basic math, formula solutions, and technical applications needed to succeed in the electrical field.
This class requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing a one credit make-up class. This credit must be pre-approved by the course instructor. Three less than full days (tardy or leaving early) will equal one full day absence. Without 95% attendance and not taking the one credit make-up class will result in retaking the course.

ELM 1006 ALGEBRA FOR ELECTRICIANS
Credits: 1
Prerequisites: ELM 1005.
Algebra for Electricians presents algebraic skills essential in the Electrical field. Algebra solutions, simultaneous equations, graphing and vectors are included. Electrical applications and projects will be incorporated.
ELM 1006 requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing a one credit make-up class. This credit must be pre-approved by the course instructor. Three less than full days (tardy or leaving early) will equal one full day absence. Without 95% attendance and not taking the one credit make-up class will result in retaking the course.

**ELM 1101 DC ELECTRICAL THEORY AND APPLICATIONS**

**Credits:** 5

**Prerequisites:** None.

DC Electrical Theory and Applications covers the introduction of direct current, its production, Ohm’s Law, series, parallel and combination circuits and applicable National Electrical Code articles.

ELM 1101 requires students to maintain a minimum of 95% attendance. Attendance below 95%, may be made up by completing 1-credit make-up classes. The 1-credit make-up class will equal 3 days of attendance. This course must be pre-approved by the course instructor. Three days that are less than full days (tardy or early leave) will equal one full day absence. Course attendance below 95% will result in retaking this course.

**ELM 1102 AC ELECTRICAL AND ELECTRONIC THEORY AND APPLICATIONS**

**Credits:** 6

**Prerequisites:** ELM 1101 and ELM 1201 or permission of the instructor.

AC Electrical and Electronic Theory and Applications covers the introductory elements of AC circuits, resistive, inductive, capacitive circuits, VARs, power factor, filter circuits and solid-state devices according to applicable National Electrical Code articles. This course is the second in a series of two related courses.

ELM 1102 requires students to maintain a minimum 95% attendance. Attendance below 95% may be made up by completing a 1-credit class. The 1-credit class will equal three days of absence. This credit must be pre-approved by the course instructor. Three less than full days (tardy or leaving early) will equal a full day absence. Attendance of less than 95% and not taking the 1-credit makeup class will result in retaking the course.

**ELM 1201 AC/DC ELECTRICAL CIRCUITS AND CALCULATIONS:**

**Credits:** 5

**Prerequisites:** None.

AC/DC Electrical Circuits and Calculations covers the basics of electrical circuit construction, components, calculations, and analysis.

ELM 1201 requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing a one credit make-up class. The one credit class will equal three days of attendance. This credit must be pre-approved by the course instructor. Three less than full days (tardy or leaving early) will equal one full day absence. Without 95% attendance and not taking the one credit make-up class will result in re-taking the course.

**ELM 1202 TRANSFORMERS, GENERATORS, ALTERNATORS AND MOTORS**

**Credits:** 6

**Prerequisites:** ELM 1101, ELM 1201, and ELM 1301 or consent of the instructor.

Transformers, Generator, Alternators, and Motors covers the basic operation and construction of: 1-phase and 3-phase transformers, generators, alternators, DC motors, 1-phase AC motors and 3-phase AC motors.

This class requires students to attend 95% of the classes. If 95% attendance cannot be met, a 1-credit make-up class will be required to be taken. The 1-credit class will be equal to three days of attendance. For every three less than full days (tardy or leaving early) will count as one day absence. If the 95% attendance is not maintained and the 1-credit make-up class is not taken, the student will need to re-take the course.

**ELM 1301 RESIDENTIAL WIRING AND CODE 1**

**Credits:** 5

**Prerequisites:** None.

Residential Wiring and Code 1 covers some of the skills and knowledge necessary to apply practical residential wiring procedures as they relate to the National Electrical Code (NEC).

This class requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing 1-credit make-up classes. The 1-credit make-up class will equal 3 days of attendance. This course must be pre-approved by the course instructor. Three days that are less than full days (tardy or early leave) will equal one full-day absence. Course attendance below 95% will result in retaking this class.
**ELM 1302 RESIDENTIAL WIRING AND CODE 2**

*Credits: 6*

*Prerequisites:* ELM 1301, ELM 1101, ELM 1201.

Residential Wiring and Code 2 covers the skills and knowledge necessary to apply practical residential wiring procedures as they relate to the National Electrical Code. This class requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing 1-credit make-up classes. The 1-credit make-up class will equal 3 days of attendance. This course must be pre-approved by the course instructor. Three days that are less than full days (tardy or early leave) will equal one full-day absence. Course attendance below 95% will result in retaking this class.

**ELM 2101 PRINT-READING / SPECIFICATIONS AND LIGHTING SYSTEMS**

*Credits: 5*

*Prerequisites:* ELM 1101, ELM 1201, ELM 1301, ELM 1102, ELM 1202, ELM 1302 or instructor’s approval.

Print-reading / Specifications and Lighting Systems instructs the students in the identification and usage of blueprints and specifications and the identification, installation and maintenance of lighting systems. This class requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing 1-credit make-up classes. The 1-credit make-up class will equal 3 days of attendance. This course must be pre-approved by the course instructor. Three days that are less than full days (tardy or early leave) will equal one full-day absence. Course attendance below 95% will result in retaking this class.

**ELM 2102 COMMERCIAL/INDUSTRIAL WIRING METHODS**

*Credits: 5*

*Prerequisites:* ELM 1101, ELM 1201, ELM 1301, ELM 1102, ELM 1202, ELM 1302, ELM 2101, ELM 2201, ELM 2301 or instructor approval.

Commercial/Industrial Wiring Methods covers the design and installation of wiring methods used in commercial and industrial applications. This class requires students to attend 95% of the classes. If 95% attendance cannot be met, a 1-credit make-up class will be required to be taken. The 1-credit class will be equal to three days of attendance. For every three less than full days (tardy or leaving early) will count as one day absence. If the 95% attendance is not maintained and the 1-credit make-up class is not taken, the student will need to re-take the course.

**ELM 2201 AC/DC MOTOR CONTROL 1**

*Credits: 5*

*Prerequisites:* ELM 1102.

AC/DC Motor Control 1 covers the function, operation, installation, protection, maintenance and troubleshooting of motor controls, various starting circuits and motors according to applicable National Electrical Code articles. ELM 2201 requires students to maintain a minimum 95% attendance. Attendance below 95% may be made up by completing a 1-credit class. The 1-credit class will equal three days of absence. This credit must be pre-approved by the course instructor. Three less than full days (tardy or leaving early) will equal a full day absence. Attendance of less than 95% and not taking the 1-credit makeup class will result in retaking the course.

**ELM 2202 AC/DC MOTOR CONTROL 2**

*Credits: 5*

*Prerequisites:* ELM 2201 or approval of the instructor.

AC/DC Motor Control 2 covers the installation, maintenance and troubleshooting of motor and process controls, motors, variable frequency drives, and programmable logic controllers according to applicable National Electrical Code articles. ELM 2202 requires students to maintain a minimum of 95% attendance. Attendance below 95%, may be made up by completing 1-3 credits make-up classes. The 1-3 credits make up class will equal 3 days of attendance. This course must be pre-approved by the course instructor. Three days that are less than full days (tardy or early leave) will equal one full day absence. Course attendance below 95% will result in retaking this course.

**ELM 2311 POWER LIMITED CIRCUIT AND INSTRUMENTATION**

*Credits: 5*

*Prerequisites:* ELM 1302, ELM 1102, ELM 1202, or the approval of the instructor.

Power Limited Circuits and Instrumentation covers the installation, maintenance and repair of low voltage circuits and the fundamentals of instrumentation. ELM 2311 requires students to maintain a minimum of 95% attendance. Attendance below 95%, may be made up by completing 1-3 credits make-up classes. The 1-3 credits make up class will equal 3 days of attendance. This course must be pre-approved by the ELM 2311 Instructor. Three days that are less than full days (tardy or early leave) will equal one full day absence. Course attendance below 95% will result in retaking this course.
ELM 2312 RENEWABLE ENERGY SYSTEMS AND HOUSE PROJECT
Credits: 5
Prerequisites: ELM 2311.
The Renewable Energy Systems and House Project course covers the basic types, purposes and installations of wind and solar systems. The course also involves the wiring of a residential house project.
ELM 2312 requires students to maintain a minimum of 95% attendance. Attendance below 95% may be made up by completing 1-3 credits make-up classes. The 1-3 credits make up class will equal 3 days of attendance. This course must be pre-approved by the ELM 2312 Instructor. Three days that are less than full days (tardy or early leave) will equal one full day absence. Course attendance below 95% will result in retaking this course.

ELM 2401 PHOTOVOLTAIC SYSTEMS THEORY AND DESIGN
Credits: 4
Prerequisites: ELM 1005, 1101, 1201 classes or approval of instructor.
Photovoltaic (PV) Systems Theory and Design covers the introduction of photovoltaic fundamentals, terms, applications and applicable National Electrical Code articles. This is the first of two courses to prepare students for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Certificate of Knowledge test.

ELM 2402 PHOTOVOLTAIC SYSTEMS INSTALLATION, MAINTENANCE AND TROUBLESHOOTING
Credits: 4
Prerequisites: ELM 1101, ELM 1201, ELM 1005, and ELM 2401.
Photovoltaic (PV) Systems Installation and Maintenance covers the installation and commissioning of various photovoltaic systems and applicable National Electrical Code articles. This is the second of two courses to prepare students for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Certificate of Knowledge test.

EMERGENCY MEDICAL SERVICES
EMS 1500 FIRST AID AND CPR (ADULT, CHILD AND INFANT)
Credits: 1
Prerequisites: None.
First Aid and CPR (Adult, Child and Infant) covers basic first aid and CPR care to the injured. It provides the essential information for developing the functional first-aid capabilities required by automotive technicians, culinary arts, and other interested groups.

EMS 1510 FIRST RESPONDER
Credits: 2
Prerequisites: CPR for the Healthcare Provider is highly encouraged.
The First Responder is an integral part of the Emergency Medical Services System. This course follows the current National Standard Curriculum developed by the Department of Transportation (DOT). The goal is to provide students with the core knowledge, skills, and attitudes to function in the capacity of a First Responder. The First Responder uses limited amounts of equipment to perform initial assessment and intervention and is trained to assist other EMS providers. This level is not intended to be utilized as the minimum staffing for a Basic Life Support (BLS) ambulance. It is recognized there may be additional specific education, i.e., vital signs, oxygen, advanced airways, automated external defibrillators, and spineboards which may differ from locality to locality via medical direction.

EMPLOYMENT SKILLS
EMPL 1120 CHOOSING A MAJOR / CAREER
Credits: 1
Prerequisites: None.
Choosing a Major/Career provides students the opportunity to explore personality profiles and to assess interests, values, aptitudes, and skills. Using career selection inventories and classification exercises, students will define goals and plan educational pursuits. Registration priority is given to those students in the Student Support Services Program.
**EMPL 2515 EMPLOYMENT SKILLS**

*Credits: 1*

**Prerequisites:** None.

Employment Skills is designed to help students obtain employment in their field upon completion of their college program. They will identify their employment objectives and career goals, along with their strongest skills and abilities. Basic information about employee benefits will be presented. Students will learn about effective job search techniques. They will complete a job application properly and will produce formal job search documents including a resume, cover letter, references and thank you letter. Students will learn how to conduct themselves in a job interview, will practice answering interview questions, and will participate in a professional mock interview. They will be presented with information about positive work ethic, job keeping skills and appropriate on-the-job behavior. They will be exposed to information about diversity in the workplace.

**ENGINEERING**

**ENGR 1010 INTRODUCTION TO ENGINEERING**

*Credits: 2*

**Prerequisites:** None.

Introduction to Engineering is an introduction to problem solving methods, engineering curriculum, and computer applications in engineering. In addition, students will explore educational and professional career opportunities.

**ENGR 1110 ENGINEERING ETHICS**

*Credits: 3*

**Prerequisites:** None.

Engineering Ethics covers the philosophical basis for ethical decision-making in the practice of engineering. Topics include professional responsibilities and the social impacts as they relate to engineering teamwork skills, design and engineering careers, case studies, and code of conduct for engineers.

**ENGR 1510 DIGITAL LOGIC**

*Credits: 3*

**Prerequisites:** MATH 2101 or instructor consent.

Digital Logic introduces the fundamentals of digital circuits design, including logic gates, Boolean algebra, Karnaugh maps, mathematical operations, flip-flops, and counters. This course is intended for electrical engineering majors and includes laboratory.

**ENGR 2010 STATICS**

*Credits: 3*

**Prerequisites:** Physics 2010.

Statics focuses on statics of particles, equivalent systems of forces, rigid bodies, equilibrium of rigid bodies, centroids and center of gravity, analysis of structures, friction, and the method of virtual work. This is the first course in the mechanics sequence for engineers and includes open-ended engineering design.

**ENGR 2020 DYNAMICS**

*Credits: 3*

**Prerequisites:** PHYS 2010.

Dynamics focuses on the application of principles of particle motion, conservation principles, dynamics of particle systems and plane rigid bodies, and technical applications. This course is intended for engineering majors and includes open-ended design.

**ENGR 2030 MECHANICS OF MATERIALS**

*Credits: 3*

**Prerequisites:** ENGR 2010.

Mechanics of Materials includes the study and analysis of simple stress and strain, shear and bending moment, flexural and shearing stresses in beams, combined stresses, deflection of beams, statically indeterminate members, and columns.

**ENGR 2061 ELECTRICAL ENGINEERING FUNDAMENTALS WITH LABORATORY**

*Credits: 4*

**Prerequisite:** PHYS 2020.

**Corequisite:** MATH 2210.

Electrical Engineering Fundamentals with Laboratory is the first course in electrical circuits for all engineering majors. The foundations of electrical engineering introduced. These concepts are used in developing the fundamentals of energy conversions, electronics, and circuit theory. The lab component provides hands-on learning of the lecture concepts and introduces proper use of the laboratory equipment.

**ENGR 2071 LINEAR ELECTRIC CIRCUITS WITH LABORATORY**

*Credits: 4*

**Prerequisites:** ENGR 2061.

Linear Electric Circuits with Laboratory examines linear electric circuits in steady-state and transient conditions,
single and polyphase systems, transformers, filter design
wave analysis, and digital circuits. This course is intended
for electrical and some mechanical engineering majors.
The lab component provides hands-on learning of the
lecture concepts and introduces proper use of the
laboratory equipment.

ENGLISH

ENGL 0900 BASIC ENGLISH 2
Credits: 3
Prerequisites: Minimum grade of "C" in ENGL 0890 or
placement examination.
Basic English 2 is a writing course which progresses from
composition of expository paragraphs to composition of
expository essays using several methods of rhetorical
development. Students will also review rules of grammar
and techniques for writing clear, fluent sentences.

ENGL 1060 FRESHMAN COMPOSITION
Credits: 3
Prerequisites: Satisfactory performance on English
placement examination and/or completion of ENGL 0900
with a grade of "C" or higher
MNTC goal area: (1) Communications.
Freshman Composition focuses on learning the process of
writing expository essays, including cause and effect,
classification, comparison and contrast, illustration and
description, definition, argumentation and persuasion, and
analysis. Writing assignments emphasize collaborative
learning, peer editing, and individual evaluation.

ENGL 1070 TECHNICAL REPORT WRITING
Credits: 3
Prerequisites: None.
MNTC goal area: (1) Communications.
Technical Report Writing is a course that covers the
practice of writing various technical documents ranging
from the memorandum, letter of application and resume,
reports, analysis/description to the major analytical
research project. This course is designed for students in
professional, technical, and science programs.

ENGL 1090 ADVANCED COMPOSITION
Credits: 3
Prerequisites: Completion of ENGL 1060 with a grade of
C or better.
MNTC goal area: (1) Communications.
Advanced Composition is an advanced freshman-level
composition course which places particular emphasis upon
the development of writing and discussion skills which
reflect library research and analytical procedures, critical
thinking, persuasive writing, argumentation and logical
reasoning, synthesis, evaluation, and problem solving.

ENGL 1130 SCIENCE FICTION
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C; (9)
Ethic and Civic Responsibility.
Science Fiction provides students an opportunity to think
critically and creatively about the values, ethics and
choices that shape the future. Students evaluate works by
leading science fiction writers and examine the major
patterns and trends in the genre. Science fiction is a genre
that has grown out of the rapid change brought about by
modern technology, and in this course students discover a
mythology that explains who we are, what possible futures
await, and humankind’s ethical and civic responsibility for
shaping change rather than blindly accepting it.

ENGL 1150 MULTI-CULTURAL LITERATURE
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C; and
(7) Human Diversity.
Multi-Cultural Literature provides the student an opportunity
to gain an understanding and an awareness of cultural
diversity in America. The study includes the conflicts and
motivations, successes and failures, dreams and
nightmares of those from different ethnic origins, economic
backgrounds, and religious beliefs. This course offers the
student an opportunity to further develop both the ability to
analyze the readings as works of literature and to write
clear and convincing prose.
ENGL 1170 FILM
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C; and (8) Global Perspective.
Film is an introductory course in which students analyze American and foreign films in order to gain an understanding and appreciation of film as an art form. The course focuses on how cinematic techniques affect production, quality, and meaning. Films representative of realism, classicism, and formalism and the directors who produced them are analyzed. Students will gain an understanding of film through the development of written and oral communication skills.

ENGL 1180 ENVIRONMENTAL LITERATURE
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C; (10) People and the Environment.
Environmental Literature focuses on the understanding and analysis of humanity's relationship to its environment, as revealed through particular genres, such as the short story, essay, diary, and poetry. Major themes studied are gaining environmental awareness; understanding spiritual, symbolic, and practical responses to the environment; conflicting attitudes toward the environment; and achieving harmony with the environment.

ENGL 1190 LIVES THROUGH LITERATURE
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C; and (8) Global Perspective.
Lives Through Literature introduces students to short stories, essays, poems, plays, and a contemporary novel. The course focuses on the analysis of selected works of world literature with reference to plot, character, conflict, myth, imagery, and structural patterns and forms. Students develop critical reading, writing, and oral communication skills by using the language of literary interpretation. Emphasis is on understanding and appreciating a wide range of culturally diverse and gender-balanced literatures and the universal themes contained therein.

ENGL 2100 CREATIVE WRITING
Credits: 3
Prerequisites: ENGL 1060 or equivalent.
MNTC goal area: (6) Humanities & Fine Arts, Area B.
Creative Writing is a course in the writing of poetry, fiction, creative non-fiction and/or drama, depending on students' needs and interest. Participants will be responsible both for submission of and critical attention to a variety of manuscripts, which will be assigned in different points-of-view and forms. Critical skills will be developed by close reading of outside and inside texts.

ENGL 2110 ENGLISH LITERATURE: 700-1700
Credits: 3
Prerequisites: ENGL 1060.
In English Literature: 700-1700, students will read major works of English poetry, prose, and drama from the eighth through the seventeenth centuries, including The Canterbury Tales, a Shakespearean play, and Paradise Lost. Through class discussion, writing, and analysis, students will be introduced to literary interpretation and the evolution of English language and literature from their beginnings to the late 1600s and to the cultural and historical contexts of these works.

ENGL 2120 ENGLISH LITERATURE: 1700-1920
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C.
In English Literature: 1700-1920, students will read important English poetry, prose, and drama of the late seventeenth, eighteenth, nineteenth, and early twentieth centuries. Through reading, writing, and class discussion, students will be introduced to literary interpretation and develop an understanding of the evolution of English language and literature and to the cultural and historical contexts of these works.

ENGL 2210 AMERICAN LITERATURE TO 1865
Credits: 3
Prerequisites: ENGL 1060.
MNTC goal area: (6) Humanities & Fine Arts, Area C.
American Literature to 1865 is a study of representative writers from the Colonial Period to the Romantic Period. The course introduces students to literary interpretation as they examine the works and literary characteristics of these writers from a historical perspective. Emphasis is on
discovering the cultural and social relationships that shaped the emerging American literature.

**ENGL 2220 AMERICAN LITERATURE 1865 TO 1980**

*Credits:* 3  
*Prerequisites:* ENGL 1060.  
*MNTC goal area:* (6) Humanities & Fine Arts, Area C.

American Literature: 1865 to 1980 is a study of representative writers from the Age of Realism to contemporary literature after the Vietnam War. The course introduces students to literary interpretation as they examine the works and literary characteristics of these writers. Emphasis is on tracing the development of a major national literature and discovering the ideas and the cultural and social relationships that shaped it.

**ENVIRONMENTAL SCIENCE**

**ENSC 1050 ENVIRONMENTAL SCIENCE**

*Credits:* 3  
*Prerequisites:* None.  
*MNTC goal area:* (3) Natural Science; (10) People and the Environment.

Environmental Science emphasizes the relationship of humans to the environment. Topics covered include ecological principles, energy use, pollution, waste, population, and natural resources. Causes, effects, and solutions dealing with environmental problems will be emphasized. Environmental sampling and laboratory investigations of environmental problems are important components of this course. Field trips to various sites in the region will be taken.

**GEOGRAPHY**

**GEOG 1100 HUMAN GEOGRAPHY**

*Credits:* 3  
*Prerequisites:* College-level reading ability required.  
*MNTC goal area:* (5) History/Social/Behavioral Sciences, (8) Global Perspective.

Human Geography is an introductory survey which examines how humankind has shaped its environment and how that environment continues to shape daily life. Topics include population change and growth, migration, culture’s impact on the natural environment and the environment’s role in shaping culture. Language and geography, religion and natural surroundings, political units and the environment, the land and agricultural and industrial societies, urban geography in the modern age, humankind’s impact on the environment, and the future of our global geographic world are also discussed.

**HEALTH**

**HLTH 1030 STRESS MANAGEMENT**

*Credits:* 3  
*Prerequisites:* None.  

Stress Management is a course designed to expose students to a holistic approach to managing stress. Principles, theories, and skills needed to effectively manage personal stress will be explored. Both cognitive (coping) skills and a host of relaxation strategies and techniques with the intention to prevent and/or alleviate the symptoms of stress will also be addressed. This course is intended for students interested in applying effective strategies for stress reduction.

**HLTH 1150 WELLNESS**

*Credits:* 2  
*Prerequisites:* None.  

Wellness is an introductory class exploring basic wellness and fitness concepts and their application to daily life. Students assess personal levels of flexibility, muscular strength and endurance, cardio-respiratory endurance, body composition, nutritional intake and needs, stress, and risks of contracting various diseases. Students actively participate in lab activities and design and implement a personal wellness program.
**HLTH 2010  FUNDAMENTALS OF NUTRITION**

*Credits: 2*

*Prerequisites: None.*

Fundamentals of Nutrition is the study of the basic concepts and principles of nutrition. Topics covered are energy, carbohydrates, fats, proteins, vitamins, minerals, water, and the diet through the life-cycle. Personal nutritional analysis and the relationship between diet and disease are also addressed. This class is intended for nursing students, allied health majors, and the general public.

**HEATING AND COOLING TECHNICIAN**

**HCT 1500  INTRODUCTION TO ELECTRICITY**

*Credits: 3*

*Prerequisites: None.*

Introduction to Electricity covers basic electricity and the circuits, wiring diagrams, schematic diagrams and electrical symbols that a service technician will encounter when servicing heating, air-conditioning and refrigeration equipment. Apply Ohm’s law to solve problems in series, parallel and series/parallel circuits. Describe basic safety rules to measure electrical circuits.

**HCT 1505  REFRIGERATION THEORY**

*Credits: 3*

*Prerequisites: None.*

In Refrigeration Theory, the student will study the theory of refrigeration involving temperature/pressure relationship, heat transfer, sensible and latent heat, and laws of refrigeration. Students will study the mechanical refrigeration cycle, including compressors, metering devices, evaporators and condensers. Students will demonstrate and become proficient in the use of specialty hand tools and power equipment used to service, install and maintain refrigeration equipment.

**HCT 1510  RESIDENTIAL REFRIGERATION TECHNOLOGY**

*Credits: 2*

*Prerequisites: HCT 1500, HCT 1505.*

Residential Refrigeration Technology covers residential refrigeration systems, refrigerants, electrical components, refrigeration system construction, proper methods of evacuation and charging. Procedural troubleshooting and repair skills for electrical and sealed system repair of domestic refrigerators and freezers.

**HCT 1515  LIGHT COMMERCIAL REFRIGERATION SYSTEMS**

*Credits: 3*

*Prerequisites: HCT1500, HCT1505, HCT1510.*

Light Commercial Refrigeration Systems covers troubleshooting, repair, maintenance of light commercial refrigeration equipment including walk-in/reach-in coolers, freezers and commercial ice machines. Instruction will be given on various electrical and mechanical components specific to commercial refrigeration and ice machine service. The electrical and mechanical systems will be connected, operated observed and tested.

**HCT 1520  REFRIGERANT CERTIFICATION**

*Credits: 2*

*Prerequisites: None.*

Refrigerant Certification covers the information required to successfully pass section 608 of the Clean Air Act (1990). This course also covers information regarding the recovery, recycling, and reclamation of refrigerants, as well as new laws governing the use of refrigerants. Students are given the opportunity to take an EPA refrigerant certification exam after completion of this course.

**HCT 1530  AIR CONDITIONING/HEAT PUMP SYSTEMS**

*Credits: 5*

*Prerequisites: HCT1500, HCT1505, HCT1510, HCT1520* 

Air Conditioning and Heat Pump Systems covers residential air conditioning and the characteristics and operation of heat pump systems. The electrical and mechanical systems will be studied and analyzed. In this course the student will study the procedures for the installation, maintenance, troubleshooting and repair of room air conditioners, split systems, and air to air heat pumps.

**HCT 1535  GAS HEATING SYSTEMS**

*Credits: 5*

*Prerequisites: HCT1500*

Gas Heating Technology provides the student an opportunity to study different types of gas furnaces, gas fuels, combustion theory and components associated with gas furnaces, safety devices, venting and piping. High efficiency furnaces are also discussed at great length. The student will be studying troubleshooting, repair, and maintenance of forced air gas-fired heating equipment.
HIST 1540 OIL HEATING SYSTEMS
Credits: 2
Prerequisites: HCT1500
Oil Heating Systems covers the operating principles of forced air oil-fired heating equipment. Combustion theory, component identification, operating characteristics troubleshooting, repair and maintenance of fuel oil burners will be covered.

HIST 1545 RADIANT HEATING SYSTEMS
Credits: 3
Prerequisites: HCT1500, HCT1535, HCT1540
Radiant Heating Systems offers the student an opportunity to examine hydronic (water) boiler theory of operation and identify various types of radiant heating systems. The student will perform proper installation, troubleshooting, and maintenance procedures to radiant heating systems.

HISTORY

HIST 1055 EUROPEAN HISTORY: ANCIENT TO 1789
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
European History: Ancient to 1789 is a survey of European history from ancient times to the French Revolution (1789). The events of this era are examined from political, economic, military, and social perspectives.

HIST 1060 EUROPEAN HISTORY: 1789 TO THE PRESENT
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
European History: 1789 to the Present is a survey of European history from the French Revolution (1789) to the present. The events of this era are examined from political, economic, military, and social perspectives.

HIST 1150 AMERICAN INDIAN HISTORY
Credits: 3
Prerequisites: College-level reading is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
American Indian History surveys the history of American Indians in North America from pre-Columbian times to the present. Topics include pre-Columbian history and cultural adaptations; cultural clashes in colonial America; U.S. expansion on the frontier; the Indian wars (1783-1890); reservation life; assimilation and adaptation; and cultural revival in the 20th century.

HIST 1250 U.S. HISTORY TO 1877
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
U.S. History to 1877 is a survey of U.S. history from European discovery in the 1400s to Reconstruction (1865-1877). The events of this era are examined from political, economic, military, and social perspectives. Detailed attention will be given to the process of exploration and settlement; cultural clashes in colonial North America; diversity in colonial settlements; the American Revolution and its outcomes; formation of the Constitution and new nation; industrialization and the movement westward; the era of reform; the path to the Civil War; the Civil War; and Reconstruction.

HIST 1260 U.S. HISTORY: 1877 TO THE PRESENT
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
U.S. History: 1877 to the Present is a survey of U.S. history from the end of Reconstruction (1877) to the present. The events of this era are examined from political, economic, military, and social perspectives. Detailed attention will be given to industrial and political developments, urbanization, and immigration in the Gilded Age; the conquest of the Great Plains and the diverse western frontier; the Progressive Era and reform; the Roaring 20s; the Great Depression and the New Deal; World War II and its aftermath; suburban life in the Cold War years (1945-1960); Cold War rivalries; the tempestuous 1960s and 1970s; a conservative shift in the 1980s and 1990s; America in the 21st century.
HIST 1300 THE HISTORY OF FOOD AND CULTURE
Credits: 3
Prerequisites: None.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
The History of Food and Culture is a course designed to introduce students to food’s place in the culture and history of selected world geographical areas (regions may change with each new offering of the course). The student will mix learning in the classroom and/or online and in the culinary lab. Elements of culinary science, history, anthropology, religion, and geography will be included in course materials. This class may be repeated once for elective credit.

HIST 1400 MODERN ASIA
Credits: 3
Prerequisites: College-level reading ability is required.
Modern Asia is a survey of cultural, political, economic, and social developments in modern Asia since the 1600s and provides an introduction to Asian religion, philosophy, and culture. Readings and lectures focus on East (China, Japan, Korea), Southeast (Indochina, Indonesia, Philippines, Malaysia, Thailand, Burma), and South (India, Pakistan, Bangladesh, Sri Lanka) Asia. Recent and contemporary changes in Asia are emphasized.

HIST 2100 DIVIDED AMERICA 1960-1980
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
Divided America 1960-1980 is a survey of political, economic, social, and cultural events from the election of John Kennedy in 1960 to Ronald Reagan’s election in 1980. A significant portion of the course focuses on the major social movements of the era.

HIST 2200 MINNESOTA HISTORY
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
Minnesota History offers a general survey of the state’s political, cultural, social, economic, and intellectual history from prehistoric times to the present. This class is especially suited for prospective elementary and secondary teachers and for anyone with a general interest in the State’s history.

HIST 2300 WORLD WAR II
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
World War II surveys the history of the era from 1933 to 1945. The emphasis is on a global perspective on the war’s causes and effects. The events of 1933-1945 are examined from political, economic, military, intellectual, and social perspectives. The war’s course in Europe, East Asia, Southeast Asia, the Americas, Africa, and the Middle East is examined. The course will also focus on life on the homefront during the war, on the impact of the Holocaust, and on the era’s major personalities (i.e. Roosevelt, Churchill, Mussolini, Tojo, Hitler, Ho Chi Minh, Gandhi, Mao Zhe Dung, Jiang Jieshi). The course concludes with a detailed look at the war’s effects on the 20th and 21st century world.

HIST 2310 THE AMERICAN WEST
Credits: 3
Prerequisites: College-level reading ability is required.
The American West surveys the history of the Trans-Mississippi West, focusing particularly on the period from 1800 to the present. The events of this era are examined from political, economic, military, intellectual, and social perspectives. The interaction between Euro-Americans and Hispanic, American Indian, African American, and Asian immigrant populations and the impact of the mining, timber, ranching, and farming industries on the environment will be examined in some detail.

HIST 2580 THE VIETNAM WAR
Credits: 3
Prerequisites: College-level reading ability is required.
MNTC goal area: (5) History/Social/Behavioral Sciences, (8) Global Perspective.
The Vietnam War examines the Vietnam conflict as a divisive event in world history that had far-reaching repercussions for modern America and Southeast Asia. This course surveys America’s involvement in Southeast Asia from the early 1900s to the present and the war’s impact on America and Indochina since the 1940s.
INDUSTRIAL SYSTEMS TECHNOLOGY

IST 1050 INTRODUCTION TO INDUSTRIAL SYSTEMS TECHNOLOGY
Credits: 3
Prerequisites: None.
Introduction to Industrial Systems Technology introduces students to the careers, skill requirements, production practices and economic considerations important in today's industry. The course covers industrial operations with a total systems approach, safety and worker's rights, employee/employer ethics, economics, and lean production through a combination of lecture, labs and tours of regional employers.

IST 1150 WELDING TECHNOLOGIES
Credits: 3
Prerequisites: None.
Welding Technologies introduces students to occupational welding and cutting processes and the related safety practices. Students will become familiar with welding principles and techniques, ANSI/AWS Z49.1 safety standards, metallurgy, electrical principles, and filler metal types and application.

IST 1250 MOBILE AND PROCESS EQUIPMENT 1
Credits: 3
Prerequisites: None.
Mobile and Process Equipment Operations 1 provides a hands-on introduction to safe and efficient industrial equipment operations. Students will learn basic preventive maintenance, troubleshooting, and operation of equipment such as forklifts, skidsteers, carrydeck cranes, and simulators.

IST 1350 INDUSTRIAL TECHNOLOGY MATH LAB 1
Credits: 3
Prerequisites: Grade of C or better in Math 0921 or placement exam.
Industrial Technology Math Lab 1 presents essential math concepts as they relate to industrial technologies through lab-based work. Students will learn critical thinking and problem-solving working through industry-specific examples and actual applications. Topics include essential math concepts, 2D and 3D measurement, and blueprint reading and sketching.

IST 1450 INDUSTRIAL TECHNOLOGY MATH LAB 2
Credits: 3
Prerequisites: IST 1350.
Industrial Technology Math Lab 2 builds upon the skills learned in Math Lab 1 with continued industry-specific, lab-based mathematics work. Students will apply critical thinking and problem solving as they solve real-world mathematical applications. Topics include advanced mathematic concepts, measurement, blueprint reading and sketching, and rigging.

IST 1550 MECHANICAL SYSTEMS 1
Credits: 3
Prerequisites: None.
Mechanical Systems 1 provides a foundation upon which courses in Industrial Systems Technology are built. Students will learn the fundamentals of bearings, lubrication, rigging, and basic mechanical troubleshooting.

IST 1950 INTEGRATED PROJECTS 1
Credits: 1
Prerequisites: None.
Integrated Projects 1 provides an accumulated, hands-on application of academic skills learned in Semesters 1 and 2 through a large-scale, project-based learning assignment. Students will prepare and complete a project (with instructor's approval) from inception to finished product.

IST 2050 INDUSTRIAL FLUID POWER
Credits: 3
Prerequisites: IST 1350.
Industrial Fluid Power 1 introduces the principles and importance of pressure, flow, speed, and efficiency rating factors in fluid power. Students will learn the basic concepts of hydraulics, the connection and operation of simple practical hydraulic circuits, design and operation of these simple circuits, and the connection and operation of functional hydraulic circuits using accumulators, hydraulic motors, pressure-reducing valves, and remotely controlled pressure relief valves.
**IST 2150 INDUSTRIAL MACHINE TOOL TECHNOLOGY**  
*Credits: 2*

**Prerequisites:** IST 1450.

Industrial Machine Tool Technology introduces the fundamental concepts and procedures necessary for the safe and efficient use of basic machine tools. Topics include safety and terminology, tools usage, precision layout and measurements, quality control processes, and operations of equipment such as drill presses, metal lathes, vertical milling machines, and bench grinders.

**IST 2250 MOBILE AND PROCESS EQUIPMENT OPERATIONS 2**  
*Credits: 3*

**Prerequisites:** None.

Mobile and Process Equipment Operations 2 continues students’ hands-on education in equipment operations. Students will learn basic predictive maintenance, troubleshooting and operations of equipment such as articulating loaders, manlifts, skidsteer implements, mini excavators, dump trucks, conveyors, and stationary boilers.

**IST 2350 INDUSTRIAL ELECTRICAL SYSTEM**  
*Credits: 3*

**Prerequisites:** IST 1450.

Industrial Electrical Systems introduces the student to practical electrical knowledge needed in an industrial setting. The course will encompass basic electrical theory, electrical safety and motor control.

**IST 2450 INDUSTRIAL FLUID POWER 2**  
*Credits: 3*

**Prerequisites:** IST 2050.

Industrial Fluid Power 2 continues the study of pressure, flow, speed, and efficiency rating factors in fluid power systems design and operation. Students will troubleshoot simple hydraulic circuits and perform hands-on applications of programmable and electrically controlled hydraulic systems.

**IST 2550 MECHANICAL SYSTEMS 2**  
*Credits: 3*

**Prerequisites:** IST 1550.

Mechanical Systems 2 builds upon concepts learned in Mechanical Systems 1 with advanced applications in bearings, rigging techniques, and troubleshooting.

Students will explore the principles of pumps, valves, and product conveying systems.

**IST 2650 MECHANICAL SYSTEMS 3**  
*Credits: 3*

**Prerequisites:** IST 2550.

Mechanical Systems 3 advances the study of mechanical systems with applications in troubleshooting and predictive/proactive maintenance. Students will explore the principles of lubrication systems, alignment, and drive components.

**IST 2750 INTEGRATED PROJECTS 2**  
*Credits: 1*

**Prerequisites:** IST 1950.

Integrated Projects 2 provides hands-on application of academic skills learned in first semester of year two through a project-based learning assignment. Students will prepare and complete a project (with instructor’s approval) from inception to finished project.

**IST 2950 INTEGRATED PROJECTS 3**  
*Credits: 2*

**Prerequisites:** IST 2750.

Integrated Projects 3 (Capstone) advances the hands-on application of program learning with the assembly, testing, troubleshooting, and dismantling of individual capstone projects. Students will prepare and complete a project (with instructor’s approval).

**INFORMATION STUDIES**

**INFS 1000 INFORMATION LITERACY - A BASIC FOUNDATION**  
*Credits: 1*

**Prerequisites:** College reading level recommended.

Information Literacy provides a basic foundation and introduction to developing information skills. The course will include: an understanding of how information and knowledge are produced and organized, how to find information, how to locate information using print and non-print resources, how to evaluate print and non-print resources, and an overview of intellectual freedom and copyright alongside the political and societal movements that influence them.
LAW ENFORCEMENT

LAW 0900 LAW ENFORCEMENT PROGRAM PREPARATION
Credits: 3
Prerequisites: None.
Law Enforcement Program Preparation focuses on reading of case law, statutes and program specific textbook material to acquire the skills necessary for effective college reading. These skills are achieved through both discussion and written analysis. Vocabulary expansion is achieved through learning context clues and individual practice. Regular practice to improve reading and comprehension skills is provided.

LAW 1510 INTRODUCTION TO CRIMINAL JUSTICE
Credits: 3
Prerequisites: None.
Introduction to Criminal Justice covers the philosophy, history, organization, and function of the criminal justice system in the United States. Topics include foundations of crime, justice and law, federal, tribal and state elements, victimization, victim rights, crime statistics and the extent of crime, police issues, juvenile justice system, juvenile delinquency, court systems, corrections, community corrections, professional career opportunities, and future trends.

LAW 1512 MINNESOTA TRAFFIC CODE
Credits: 2
Prerequisites: None.
Minnesota Traffic Code is an introduction to the elements of traffic offenses. These elements are analyzed and applied to hypothetical situations. Included are definitions and terms. This course covers instruction in Minnesota automobile insurance law (Chapter 65B), motor vehicle registration law (Chapter 168), traffic law (Chapter 169), and driver's license law (Chapter 171).

LAW 1516 MINNESOTA CRIMINAL CODE
Credits: 4
Prerequisites: None.
Minnesota Criminal Code covers a study of MN Chapter 609 of the Minnesota Criminal Code and the selected statutes used more frequently by law enforcement officers. These statutes are analyzed and applied to hypothetical situations. Included are definitions and terms.

LAW 1528 POLICE AND THE COMMUNITY
Credits: 3
Prerequisites: LAW1510: Intro to Criminal Justice.
Police and the Community provides a practical overview of key issues, questions and concepts related to police interaction with communities. Topic areas include ethics, leadership, diversity, problem-solving and communication.

LAW 1538 JUVENILE JUSTICE AND DELINQUENCY
Credits: 3
Prerequisites: None.
Juvenile Justice and Delinquency emphasizes the origin, development, organization, functions, and jurisdiction of the Juvenile Justice System in America, with emphasis on the MN Juvenile Justice System. Topic areas include processes and detention of juveniles; constitutional protections extended to juveniles; case disposition, juvenile statutes and court procedures relative to juvenile offenders, laws and procedures regarding child abuse, child neglect, juvenile records and juvenile court process.

LAW 1544 POLICE REPORT WRITING
Credits: 3
Prerequisites: ENGL 1060 or instructor approval.
Police Report Writing is a study of the importance of taking effective complete notes, then transcribing the information into clear, complete, concise, police reports. This includes preserving a chain of evidence through accurate reports. The common types of report forms currently in use are included. Writing complete and accurate police reports will be required.

LAW 1548 POLICE AND HUMAN BEHAVIOR
Credits: 3
Prerequisites: LAW 1510 and LAW 1528
Police and Human Behavior provides a practical overview of the interaction between police and the communities they serve. Topic areas include victimization, hate/bias motivated crimes, domestic abuse, people with disabilities and persons in crisis.

LAW 1550 STREET SURVIVAL
Credits: 2
Prerequisites: None. This course must have a doctor’s sign-off for physical activity.
Street Survival is designed for the new law enforcement cadet and is designed to enhance their physical fitness level with physical conditioning utilizing a rigorous exercise.
program combined with a martial arts style conditioning including sparring. The class will be taught in a disciplined martial arts atmosphere and will be structured to teach the cadet the skills they need to survive a street encounter using hand and foot striking techniques. The cadet will learn how to block and strike with their hands and feet though sparring exercises. The cadet should expect to be hit and to hit back in the exercises however, special equipment will be required.

This course is a prerequisite for the defensive tactics program.

**LAW 1595 CRIMINAL AND CIVIL PROCEDURE**

*Credits: 4*

*Prerequisites: LAW 1510, LAW 1515.*

Criminal and Civil Procedure provides a framework for criminal procedure including individual rights, the criminal court system, arrest, probable cause, admissions, confessions, identification procedures, and evidence. This course includes the study of the Bill of Rights, search and seizure, the exclusionary rule. The focus is to provide the entry level peace officer with a practical working knowledge of the constitutional issues that relate to the collection, recovery, and preservation of evidence in criminal cases. In addition, students will become familiar with the basics of law enforcement’s role in civil issues.

**LAW 2421 TRAFFIC ENFORCEMENT**

*Credits: 3*

*Prerequisites: LAW 1512 and LAW 1515*

Traffic Enforcement covers instruction and practical experience in radar operation, accident investigation, radio procedures, and defensive/evasive driving.

**LAW 2440 FIREARMS**

*Credits: 3*

*Prerequisites: LAW 1515, LAW 1544, LAW 1590, LAW 2531, and completion of the first year Law Enforcement program.*

Firearms covers the use of deadly force, firearms safety, care and cleaning of service weapons, and firearms shooting principles.

**LAW 2452 INTERVIEWING TECHNIQUES**

*Credits: 3*

*Prerequisites: LAW 1515, LAW 1534, and LAW 1590*

Interviewing Techniques covers proper procedures for interviewing and interrogation of victims, witnesses, and suspects. This course explores interviewing burglary victims, robbery victims, sexual assault victims, and child victims as well as victims of other types of crime. Taking statements from victims, witnesses, and suspects will be included. Written reports will be expected on all projects.

**LAW 2460 STANDARDIZED FIELD SOBRIETY TESTING**

*Credits: 1*

*Prerequisites: LAW 1512 & LAW 1515*

Standardized Field Sobriety Testing covers instruction in DWI traffic enforcement, field sobriety testing, horizontal gaze nystagmus, and divided attention testing.

**LAW 2511 DEFENSIVE TACTICS & PHYSICAL PREPARATION**

*Credits: 3*

*Prerequisites: LAW 1550 and pass the Minnesota POST Board Physical Assessment with a minimum score of 70% or instructor approval.*

Defensive Tactics and Physical Preparation includes basic techniques on how to best defend against certain common types of attack and the reasonable force necessary to overcome the resistance being offered. Analyses of physical confrontations and principles are demonstrated with practical exercises. This course aids in reducing the likelihood of injury to the peace officer, minimizing the use of excessive force, and creating a positive self image with physical and mental conditioning.

**LAW 2534 DRUG AND GANG INVESTIGATION**

*Credits: 3*

*Prerequisites: LAW 1515*

Drug and Gang Investigation follows a lecture and discussion format. Both licit and illicit substances and implications for their use and abuse are presented. Drug abuse prevention, enforcement, and drug identification are explored. The social and health consequences of these drugs are discussed followed by an in-depth review of the drugs most commonly abused in our schools and neighborhoods. An overview of the international and domestic drug trafficking problem is offered providing an understanding of the origins of illicit drugs. Finally, drug-related crime is discussed in the context of predatory, political, and criminal behavior related to the drug trade.
**LAW 2536 POLICE OPERATIONS**

*Credits: 4*

**Prerequisites:** LAW 1515, LAW 1512, LAW 2511, LAW2421, LAW 1590, LAW 2531, or Instructor Approval

Police Operations covers the types and methods of patrol and factors involved in one's perception and observation of others. Factors, duties related to patrol, and basic communication systems are included. Proper patrol techniques relative to pedestrian approaches and field interrogations as well as handling inebriates and crisis situations are explored. This course also provides an opportunity to experience training for night conditions. Traditional law enforcement training has found to limit night training for various reasons. Considerations should be given to provide training not only during daylight but in night conditions also. Training that reflects actual work conditions assists in identifying problem areas that require special attention of officers to conduct their duties both effectively and safely. This course also covers the knowledge and skills to preserve the peace and tranquility of the community and to protect the lives and property of the people who live in and visit that community. The focus of this course is on patrol functions and patrol techniques relative to beat patrol. Practical exercises are used to demonstrate safe and effective tactics. Officer survival, crime in progress, felony in progress, person searches, vehicle stops, building searches, disturbance, handcuffing, hostages and barricaded suspects, and field problems are demonstrated with examples and lecture.

**LAW 2540 P.O.S.T. PREP**

*Credits: 1*

**Prerequisites:** Completion of 50 credits of Law Enforcement Program.

P.O.S.T. Prep covers a review of the Minnesota Professional Peace Officer Education Program objectives. The purpose of this course is to prepare the student to take the peace officer licensing exam.

**LAW 2550 FIELD TRAINING EXPERIENCE**

*Credits: 2*

**Prerequisites:** Completion of 32 first year credits or equivalent of same.

Field Training Experience provides practical training by the Hibbing Police Department Field Training Officers. Students will ride along with full-time officers. Students will be expected to complete the daily task of a police officer.

**LAW 2555 ADVANCED STREET SURVIVAL**

*Credits: 2*

**Prerequisites:** LAW 1550 - Street Survival and pass the HCC Law Enforcement physical test with a minimum of 74% or instructor approval

This course is designed for the law enforcement cadet who is finishing their degree and is designed to enhance their physical fitness level with physical conditioning utilizing a rigorous exercise program combined with a martial arts style conditioning including sparring. The class will be taught in a disciplined martial arts atmosphere and will be structured to teach the cadet the skills they need to survive a street encounter using hand and foot striking techniques. This will be a continuation of all content in Street Survival, where the cadet will continue to show proficiency in blocking and striking with their hands and feet though sparring exercises. In addition, cadets will be exposed to ground avoidance and ground escape techniques. The cadet should expect to be hit and to hit back in the exercises however, special equipment will be required. The goal of this course is to enhance the cadet's physical and mental attributes, in order to best prepare them for a career in Law Enforcement. This course must have a doctor’s sign-off for physical activity.

RESTRICTED TO LAW ENFORCEMENT STUDENTS ONLY.

**LAW 2595 CRIMINAL INVESTIGATION**

*Credits: 3*

**Prerequisites:** Pre-req or Co-req of Police Report Writing or Instructor Approval

Criminal Investigation is a study of the responsibilities and duties of the first officer on the scene conducting a preliminary investigation. This course also includes techniques to investigate the crimes of theft, forgery, auto theft, burglary, robbery, assaults, sexual assaults, arson, bombs, explosives, vice, and death.

**LAW 2596 CRIME SCENE PROCESSING**

*Credits: 2*

**Prerequisites:** LAW 1515, LAW 1590, LAW 1534, LAW 2595 (may take concurrently)

Crime Scene Processing is a study of the responsibilities and duties of the first officer on the scene conducting a preliminary investigation of a crime scene. Included are the recognition, preservation, and recovery of physical evidence, crime scene photography, sketching, and the recovery of latent fingerprints. Students will learn skills needed to “book” prisoners such as taking rolled fingerprints.
LAW 2597 SPONTANEOUS KNIFE DEFENSE  
Credits: 1  
Prerequisites: Enrolled in Law Enforcement Program.  
Spontaneous Knife Defense includes understanding the different forms of knife attacks and how to defend against those attacks. This course aids in reducing the likelihood of serious injury to the officer while creating a positive self-image with physical and mental conditioning.

SKILLS COURSES FOR LAW ENFORCEMENT  
SKL 2661 PATROL PRACTICALS  
Credits: 3  
Prerequisites: LAW 1515, LAW 2510, LAW 2595. Must meet current eligibility requirements.  
Patrol Practicals covers the types and methods of patrol and factors involved in one’s perception and observation of others. Factors and duties relative to patrol and basic communication systems are covered. Proper patrol techniques relative to pedestrian approaches and field interrogations are explored. Handling inebriates and crisis situations are included. This course includes knowledge and skills to preserve the peace and tranquility of the community and to protect the lives and property of the people who live in and visit that community. This course focuses on patrol functions and patrol techniques relative to beat patrol. Practical exercises are used to demonstrate safe and effective tactics. Officer survival, crime in progress, felony in progress, person searches, vehicle stops, building searches, disturbance, handcuffing, hostages, and barricaded suspects, and field problems are demonstrated with examples and lecture.

SKL 2664 FIREARMS  
Credits: 3  
Prerequisites: LAW 1515, LAW 1534, LAW 2510. Must meet current eligibility requirements.  
Firearms covers the use of deadly force, firearms safety, care and cleaning of service weapons, and firearms shooting principles. The course focuses on students’ decision-making ability and firearms shooting ability.

SKL 2666 TRAFFIC ENFORCEMENT  
Credits: 2  
Prerequisites: LAW 1512. Must meet current eligibility requirements.  
Traffic Enforcement covers instruction and practical experience in radar operation and DUI detection, testing, and processing. Accident investigation and evasive driving are also components. Students demonstrate their ability in simulated situations through the use of appropriate methods and by preparing concise, accurate reports. Elements of traffic offenses are analyzed and applied to hypothetical situations. Definitions and terms are included. Students learn the basic theory and use of radar and current trends of violations and arrest. Accident investigations focus on basic on-scene investigations of traffic accidents. Evasive driving focuses on driving maneuvers.

SKL 2667 DEFENSIVE TACTICS  
Credits: 2  
Prerequisites: LAW 1515. Must meet current eligibility requirements. Must meet all physical agility requirements.  
Defensive Tactics includes basic techniques on how to best defend against certain common types of attack and reasonable force necessary to overcome the resistance being offered. Analyses of physical confrontations and principles are demonstrated with practical exercises. This course aids in reducing the likelihood of injury to the peace officer, minimizing the use of excessive force, and creating a positive self image with physical and mental conditioning.

SKL 2668 CRIME SCENE PROCESSING & INVESTIGATION  
Credits: 2  
Prerequisites: LAW 1515, LAW 2595. Must meet current eligibility requirements.  
Crime Scene Processing covers a study of responsibilities and duties of officers conducting a preliminary investigation of a crime scene including recognition, preservation, recovery of physical evidence, crime scene photography, sketching and recovery of latent fingerprints. The course focuses on lab activities, developing skills relative to crime scene processing, and evidence preservation. The course also covers proper procedures for interviewing and interrogation of victims, witnesses, and suspects.
MASS COMMUNICATION

MACO 1400 DIGITAL PHOTOGRAPHY
Credits: 3
Prerequisites: None.
Digital Photography will introduce students to the technical and aesthetic aspects of digital photography, with emphasis on artistic expression and photographic composition. Topics include: camera handling, exposure control, lenses, film, lighting, and digital imaging techniques. This course requires work in the Multimedia computer labs and assignments that may require photography off campus. The student must have access to a digital camera with manual control of focus, aperture, and shutter speed, and will be required to purchase printing supplies throughout the semester.

MATHEMATICS

MATH 0961 ALGEBRA FOR LIBERAL ARTS
Credits: 5
Prerequisites: Placement exam
Algebra for Liberal Arts is a course designed to prepare students for liberal arts mathematics courses. Topics covered include solving equations, inequalities and applied problems, graphing functions, finding equations of functions, determining domain and range for functions, solving systems of equations and applied problems, polynomial operations, and polynomial factoring.

MATH 0971 BEGINNING ALGEBRA
Credits: 4
Prerequisites: MATH 0920 with a grade of “C” or better, placement exam, or equivalent.
Beginning Algebra is designed to study operations on real numbers, manipulations of basic algebraic expressions, operations with linear and absolute value expressions, solving equations and inequalities, graphs, functions, solving systems of equations and inequalities, operations on polynomials and polynomial functions including factoring, and applications. The use of graphing utilities to solve equations and graph functions will be investigated. Beginning Algebra may not be taken for credit by students who have earned credit with a grade of “C” or better in courses for which Beginning Algebra is a prerequisite.

MATH 1020 ADVANCED ALGEBRA
Credits: 3
Prerequisites: MATH 0971 with a grade of “C” or better, or placement exam, or equivalent.
Advanced Algebra is designed to study manipulation of rational expressions, solving rational equations, manipulation of radical expressions and rational exponents, solving radical equations, complex numbers, solving quadratic equations, parabolas, exponential and logarithmic functions, inverse and composite functions, conic sections, nonlinear systems of equations, and applications.

MATH 1040 COLLEGE ALGEBRA
Credits: 4
Prerequisites: MATH 1020 with a grade of “C” or better, or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
College Algebra topics include fundamentals of algebra, graphs, functions, equations, inequalities, polynomial and rational functions, exponential and logarithmic functions, systems of equations and matrices, conic sections, and the binomial theorem.

MATH 1140 LIBERAL ARTS MATHEMATICS
Credits: 3
Prerequisites: MATH 0971 with a grade of “C” or better, or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
Liberal Arts Mathematics topics include problem solving and critical thinking, sequences, consumer mathematics and financial management, measurement, geometry, counting methods and probability theory, and statistics.

MATH 1145 INTRODUCTION TO THE MATHEMATICAL SCIENCES
Credits: 3
Prerequisites: MATH 0971 with a grade of “C” or better or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
Introduction to the Mathematical Sciences integrates the study of algebra, statistics and computing in a laboratory-instruction environment. Topics include functions, graphical and tabular analysis, rate of change, syntax and semantics, the process of computing, data manipulation, sampling, statistical measures, basic probability, correlation. Examples are drawn from a wide range of disciplines and content will be taught within the framework of discipline-specific examples. Students will learn to use the software package Microsoft Excel.
MATH 1200 SURVEY OF CALCULUS
Credits: 4
Prerequisites: MATH 1020 with a grade of “C” or better or MATH 1040 with a grade of “C” or better.
Survey of Calculus is a course that covers topics of calculus important for business applications. Topics studied include functions, limits, derivatives, techniques of differentiation, applications of the derivative, the integral, techniques of integration, differentiation and integration of logarithmic and exponential functions, and partial derivatives. Varied applications in business fields are covered.

MATH 1300 TRIGONOMETRY
Credits: 2
Prerequisites: MATH 1020 with a grade of “C” or better or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
In Trigonometry, students study right triangles, trigonometric functions and their graphs, trigonometric identities, inverse trigonometric functions and their graphs, trigonometric equations, oblique triangles, the Law of Sines, the Law of Cosines, complex numbers, DeMoivre’s Theorem, vectors, and polar coordinates.

MATH 2010 STATISTICS
Credits: 4
Prerequisites: A grade of C or better in MATH 1020 or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
Statistics is a course designed to study descriptive statistics, probability, probability distributions, the normal distribution, sampling distributions, the central limit theorem, hypothesis testing, analysis of variance, correlation analysis, regression analysis, multiple regression analysis, chi-square distributions, nonparametric hypothesis testing, and quality charting. A statistical software package will be used by the student.

MATH 2101 CALCULUS 1
Credits: 5
Prerequisites: Math 1040 with a grade of “C” or better and MATH 1300 with a grade of “C” or better; or MATH 1501 with a grade of “C” or better; or placement exam.
MNTC goal area: (4) Math/Logical Reasoning.
Calculus 1 covers rates of change, limits, vertical asymptotes, continuity, tangents, basic derivatives, differentiation rules, the derivative as a rate of change, derivatives of trigonometric functions, the chain rule, parametric equations, implicit differentiation, related rates, linearization and differentials, extreme values, the Mean Value Theorem, monotonic functions and the First Derivative Test, concavity and curve sketching, optimization problems, indeterminate forms, L’Hospital’s Rule, Newton’s method, anti-derivatives, finite sums, sigma notation, limits of finite sums, the definite integral, the fundamental theorem of calculus, indefinite integrals, the substitution rule, area between curves, and applications of integrals.

MATH 2111 CALCULUS 2
Credits: 5
Prerequisites: MATH 2101 with a grade of “C” or better or equivalent.
MNTC goal area: (4) Math/Logical Reasoning.
Calculus 2 covers applications of definite integrals including volume, length, moments, centers of mass, surface area, the Theorems of Pappus, work, fluid pressures and forces; inverse functions and their derivatives; differentiation and integration of logarithmic, exponential, trigonometric, inverse trigonometric, hyperbolic, and inverse hyperbolic functions; techniques of integration including formulas, integration by parts, partial fractions, and numerical integration; improper integrals; conic sections; polar coordinates; sequences; series; and convergence tests.

MATH 2122 CALCULUS 3
Credits: 4
Prerequisites: MATH 2111 with a grade of “C” or better or equivalent.
MNTC goal area: (4) Math/Logical Reasoning.
Calculus 3 focuses on three-dimensional coordinate systems, vectors, dot and cross products, lines and planes in space, cylinders and quadric surfaces, vector functions, projectile motion, arc length and the unit tangent vector, curvature and the unit normal vector, torsion and the unit binormal vector, functions of several variables, limits and continuity in higher dimensions, partial derivatives, the chain rule, directional derivatives and gradient vectors, tangent planes and differentials, extreme values and saddle points, Lagrange multipliers, partial derivatives with constrained variable, Taylor’s formula for two variables, double integrals, double integrals in polar form, triple integrals in rectangular, cylindrical, and spherical form; areas, moments, and centers of mass, substitutions in multiple integrals; line integrals; vector fields, work, circulation, and flux; path independence, potential functions, and conservative fields; Green’s Theorem; surface area and surface integrals; parameterized surfaces; Stokes’ Theorem; and the Divergence Theorem.
MATH 2211 DIFFERENTIAL EQUATIONS WITH INTRODUCTORY LINEAR ALGEBRA
Credits: 5
Prerequisites: A grade of C or better in MATH 2111 or equivalent.
MNTC goal area: (4) Math/Logical Reasoning.
Differential Equations with Introductory Linear Algebra focuses on first and second-order differential equations, higher order differential equations, Laplace transforms, vectors, matrix algebra, eigenvectors and eigenvalues, systems of differential equations, numerical methods, series solutions, and mathematical models.

MEDICAL CODING

MEDC 1120 INTRODUCTION TO HEALTH INFORMATION MANAGEMENT WITHIN HEALTHCARE DELIVERY SYSTEMS
Credits: 4
Prerequisites: None.
Introduction to Health Information Management introduces the students to the history of the Health Information Management profession. The students will have an understanding of the importance of the legal, ethical, security, and confidentiality practices of the medical record in the healthcare delivery systems today.

MEDC 1123 CODING AND REIMBURSEMENT FOR PHYSICIAN SERVICES
Credits: 3
Prerequisites: MEDC 1122.
Coding and Reimbursement for Physician Services introduces the students to the CPT (Current Procedural Terminology) codes which are used to bill physician procedures and services. The students will have an understanding with the communication between the physician and third party payers.

MEDC 1124 ADVANCED CODING AND REIMBURSEMENT
Credits: 3
Prerequisites: MEDC 1122.
Advanced Coding and Reimbursement is a continuation of the ICD-10-CM Coding course which allows the students to have a deeper understanding of diagnostic and procedural codes within the healthcare delivery systems.

MEDC 1125 ADVANCED PHYSICIAN CODING
Credits: 3
Prerequisites: MEDC 1122 and MEDC 1123.
Advanced Physician Coding uses coding scenarios and case studies together to create skill development and review of guidelines and conventions applied in code selection. The primary focus of this class is Evaluation and Management Coding.

MEDC 1126 PROFESSIONAL PRACTICE FOR CODING SPECIALIST
Credits: 2
Prerequisites: ALHE 1600, MEDC 1122, MEDC 1123, MEDC 1124, MEDC 1127.
Professional Practice for Coding Specialist will allow the students to experience coding processes in a real-world setting. This course gives the students an opportunity to practice the skills they have learned throughout the coding curriculum.

MEDC 1127 APPLIED MEDICAL TERMINOLOGY
Credits: 2
Prerequisites: ALHE 1600.
Applied Medical Terminology will show students how to communicate within healthcare organizations. The students will study the terminology of each body system in detail to include structures, functions, pathology, diagnostic, and procedural terminology. Each student will be able to interpret medical terms within medical charts and reports.

MEDC 1132 ICD-10-CM CODING
Credits: 3
Prerequisites: None.
ICD-10-CM (International Classification of Disease, 10th Revision, Clinical Modification) introduces students to diagnostic and procedural codes within the healthcare delivery systems. The students will have an understanding of how the codes influence healthcare data collected for medical research, statistics, evaluation of medical care and reimbursement.
MEDICAL LABORATORY TECHNICIAN

MLT 1408 INTRODUCTION TO THE MEDICAL LABORATORY
Credits: 1
Prerequisites: None.
Introduction to the Medical Laboratory is designed to provide students with an overview of the structure and organization of the current health care system and their role as a future healthcare practitioner in an integrated system. Discussions will include such topics as ethical and professional conduct, general organization and operational activities of a clinical laboratory, career opportunities for MLT graduates, continued professional development, licensure, lab safety, and laboratory regulation. Students will be exposed to actual clinical settings and meet with practicing laboratory personnel.

MLT 1412 HEMATOLOGY 1
Credits: 3
Prerequisites: College level reading is required
This course introduces students to fundamental concepts in hematology including red blood cell development, normal physiology of red blood cells, and red blood cell disorders. The laboratory component complements the lecture and includes microscopic examination of blood and bone marrow slides and common laboratory testing by both manual and automated methods. Phlebotomy skills are introduced and are integrated throughout the course.

MLT 1422 LABORATORY TECHNIQUES
Credits: 3
Prerequisites: A score of 69 or higher is required in arithmetic portion of placement exam
Laboratory Techniques is an introductory course in basic medical laboratory techniques. The equipment and techniques to be studied include laboratory glassware, pipetting, balances, centrifuges, solution chemistry, titration, spectrophotometry, and basic laboratory mathematics. This is the first in a series of clinical chemistry courses designed to teach fundamental concepts in clinical laboratory procedures.

MLT 1424 MEDICAL MICROBIOLOGY 1
Credits: 4
Prerequisites: None.
Medical Microbiology 1 is the study of a wide variety of bacterial microorganisms frequently isolated in the clinical laboratory. Emphasis of the course is safety, staining, isolation, and identification of bacteria.

MLT 1425 CLINICAL CHEMISTRY 1
Credits: 2
Prerequisites: None.
Clinical Chemistry 1 covers detailed theory and representative laboratory analysis of carbohydrates, lipids and lipoproteins, proteins, clinical enzymology and metabolic analytes including ammonia, bilirubin, blood urea nitrogen, creatinine, and uric acid. Basic quality control concepts are introduced.

MLT 1432 HEMATOLOGY 2
Credits: 3
Prerequisites: None
This course covers peripheral blood and bone marrow abnormalities of white blood cells relating to malignancies such as leukemia, lymphoma, and multiple myeloma. The role of the laboratory in diagnosis, classification, and assessment of treatment outcomes will be stressed. This course also introduces students to the principles and disorders of hemostasis and thrombosis and reviews hematology instrumentation and analysis of instrumental data. Laboratory time is devoted to microscopic examination of blood and bone marrow slides and performing common laboratory tests by both manual and automated methods.

MLT 1445 IMMUNOLOGY
Credits: 3
Prerequisites: None.
Immunology covers the basic theory of cellular and humoral immunity with emphasis on antigen – antibody reactions in specific disease. Diagnostic principles and procedures involving the various laboratory techniques with disease correlations are emphasized.

MLT 2424 MEDICAL MICROBIOLOGY 2
Credits: 4
Prerequisites: MLT 1424.
Medical Microbiology 2 is an advanced course which introduces clinically significant fungi, mycobacterium, parasites, viral agents, and less common bacterial organisms by organ system of the body. This course also covers specimen collection, specimen processing, and automated microbiology systems.
MLT 2435 URINALYSIS AND BODY FLUID ANALYSIS
Credits: 2
Prerequisites: None.
Urinalysis and Body Fluid Analysis is designed to introduce the student to the importance of urinalysis and body fluids in the medical laboratory. Emphasis is on routine analysis including physical, chemical, and microscopic examination of urine specimens and related tests on other body fluids. Manual and semi-automated laboratory procedures are performed in the student laboratory.

MLT 2445 CLINICAL CHEMISTRY 2
Credits: 2
Prerequisites: None.
Clinical Chemistry 2 covers detailed theory and representative laboratory analyses of electrolytes; arterial blood gases; vitamins and vitamin deficiencies; trace elements such as calcium and magnesium; endocrine function, and therapeutic drug monitoring.

MLT 2466 BLOOD BANK
Credits: 4
Prerequisites: MLT 1445.
Blood Bank introduces students to the theory and lab analyses of blood group antigens and antibodies of the ABO, Rh, and other major blood group systems. Introduction to blood banking practice includes antihuman globulin theory, and procedures including antibody detection and identification, compatibility testing, donor selection and testing, component processing and storage as well as hemolytic disease of the newborn, Rh immune globulin workup, and quality control.

MLT 2510 MLT SEMINAR
Credits: 2
Prerequisites: Student must be internship eligible.
MLT Seminar provides students with an opportunity to apply their technical knowledge to laboratory case studies and to review major areas of the MLT curriculum with an emphasis on critical thinking skills. Students will have access to practice examinations in preparation for a comprehensive final. These review exams will cover the areas of: Immunohematology, Hematology, Coagulation, Clinical Chemistry, Microbiology, Urinalysis, Immunology, and Laboratory Operations. The examination questions will be developed from course test banks.

MLT 2590 CLINICAL PRACTICUM
Credits: 10
Prerequisites: Completion of all MLT program courses with a letter grade of C or above.
Clinical Practicum is a continuation of the cooperative learning experience provided by Hibbing Community College and affiliated clinical facilities. It consists of supervised application of learned theory and practice and acquisition of new skills in a clinical setting.

IT NETWORKING AND SECURITY
ITNS 1400 FIBER OPTICS TECHNICIAN PREP
Credits: 1
Prerequisites: None.
Fiber Optics Technician Prep provides instruction with hands on fiber optics splicing and terminations. Individuals will be prepared to meet the Certified Fiber Optic Technician (CFOT)

ITNS 1500 I-NET+
Credits: 3
i-Net+ covers Internet basics, Internet clients, development, networking, security and business concepts. i-Net+ emphasizes vendor-neutral TCP/IP concepts. This course is designed to prepare students for the i-Net+ CompTIA certification.

ITNS 1543 A+ HARDWARE
Credits: 3
Prerequisites: Consent of instructor if taken out of usual sequence.
A+ Hardware introduces students to the theory, terminology, operation, and troubleshooting of the main sections of the PC microcomputer. Coverage is background information needed by those intending to take core COMPtIA A+ Exam 220-101.

ITNS 1545 A+ SOFTWARE
Credits: 3
Prerequisites: Consent of instructor if taken out of usual sequence.
A+ Software introduces students to the theory, terminology, operation, and main applications of DOS and Win9x software. Coverage is background information needed by those intending to take the COMPtIA A+ Exam 220-102.
ITNS 1557 COMMUNICATION CABLELING & TERMINATION
Credits: 2
Prerequisites: None.
Communication Cabling & Termination provides instruction with hands-on training in copper cabling and terminations along with fiber optics splicing and terminations. Students will be prepared to meet the Certified Fiber Optic Technician (CFOT) exam requirements and learn how to install and terminate Cat 3/5/5e/6 properly per EIA/TIA standards.

ITNS 1601 TECHNICAL WRITING APPLICATIONS
Credits: 2
Prerequisites: Keyboarding & word processing experience preferred. Consent of instructor if taken out of usual sequence.
Technical Writing Applications covers writing documents needed in technical research, outlines, descriptions, tables, and various reports encountered in the MicroComputer industry. Included are different technical environments, writing styles, and oral reports.

ITNS 2010 LINUX INSTALLATION AND ADMINISTRATION
Credits: 3
Prerequisites: CSCI 1600 or consent of instructor.
Linux Installation and Administration covers the basic methods used to install, configure, maintain, administer and troubleshoot the Linux operating system. Hands-on projects and exercises will reinforce installation and administration procedures. This course is designed to prepare students for Exams 1 and 2 of the SAIR/GNU Linux Certification-Level 1.

ITNS 2019 WINDOWS OS
Credits: 2
Microsoft Windows has emerged as the newest interface standard for the personal computer. Windows OS provides a consistent interface for all programs available in this environment. Topics include understanding operating systems, command line operations, troubleshooting tools, batch programs, and networking and Internet connecting.

ITNS 2020 LINUX NETWORKING AND SECURITY
Credits: 3
Prerequisites: CSCI 1600 and MCT 2010.
Linux Networking and Security covers the basic methods to configure, maintain and troubleshoot the Linux operating system to provide network connectivity and protect against security and privacy compromises. Hands-on projects and exercises will reinforce the importance of networking and security issues. This course is designed to prepare students for Exams 3 and 4 of the SAIR/GNU Linux certifications-Level 1.

ITNS 2080 MYSQL PROGRAMMING
Credits: 2
Prerequisites: None.
MySQL Programming provides a comprehensive introduction to the SQL language using MySQL. This course not only covers the syntax of SQL, but also shows how it can be used in MySQL to create and maintain a database and retrieve information from it. It also provides an introduction to relational database concepts. In addition to explaining concepts, the course uses a variety of assignments and exercises to reinforce the material in each chapter.

ITNS 2090 INTRO TO MYSQL
Credits: 3
Prerequisites: None.
Intro to MySQL provides a comprehensive introduction to the MySQL Server. This course covers installation, tuning, administration and security for the MySQL server. Instruction will be provided on how to install, maintain, and secure MySQL servers on both the UNIX/Linux and Microsoft servers.

ITNS 2140 MICROSOFT MTA SERVER
Credits: 6
Prerequisites: None.
Windows Server provides coverage of the Microsoft Windows Server operating system. Hands-on projects and case projects reinforce the lessons on planning, installing, and managing Microsoft’s flagship network operating system – skills that are in high demand in today’s business environment. Microsoft-approved material is used/designed to prepare individuals for Microsoft’s MTA Windows Server certification exam.
**ITNS 2536 PC SYSTEMS I (PERIPHERALS)**

*Credits: 2*

**Prerequisites:** Consent of instructor if taken out of usual sequence.

PC Systems I covers typical microcomputer systems and related peripherals, such as mother boards, drives and monitors. Topics include student repair and diagnostics of PC Systems and related peripherals. Included are industry standards, trends installation procedures, and maintenance procedures.

**ITNS 2537 PC SYSTEMS II (PERIPHERALS)**

*Credits: 2*

**Prerequisites:** Must have completed MCT 2536.

PC Systems II covers typical microcomputer systems and related peripherals, such as mother boards, drives and monitors. Topics include student repair and diagnostics of PC Systems and related peripherals. Included are industry standards, trends installation procedures, and maintenance procedures. PC Systems II is a work like atmosphere from which the students learn to work in a real time environment.

**ITNS 2550 A+ CERTIFICATION PREP**

*Credits: 6*

A+ Certification Prep offers an introduction to the theory, terminology, operation, and troubleshooting of the main sections of an ISA microcomputer. Coverage is background information needed by those intending to take the current COMPTIA A+ certifications.

**ITNS 2560 WIRELESS NETWORK ADMINISTRATION**

*Credits: 3*

**Prerequisites:** None.

Wireless Network Administration training course offers detailed instruction on the foundation concepts and technologies of wireless data networking. Students will be trained in Site Survey, Hardware Installation, LAN Security, Antenna Design and Troubleshooting. Upon completion of the Wireless Network Administration course, students will be prepared to pass the CWNA Certification Exam (Exam #PWO-100) at Prometric or Vue testing centers.

**ITNS 2580 IT PROJECT MANAGEMENT**

*Credits: 3*

**Prerequisites:** None.

The objective of this course is to prepare Information Technology (IT) students and employees with project management skills needed to develop and implement an IT project plan. This course will explain how to successfully manage an IT project and will also prepare students for Comp TIA Project + certification. Students use MS Project 2013 and will learn techniques to help them deliver IT projects on time, on budget and within the original project scope.

**MULTI-CULTURAL STUDIES**

**MCS 1010 INTRODUCTION TO INDIAN STUDIES**

*Credits: 2*

**Prerequisites:** None.

Introduction to Indian Studies is an overview of Native American people and their culture. The course begins with lifestyles of North American Indian people before European contact and moves on to how those lives changed after contact. The course addresses how Indian peoples maintain their places as a distinct cultural group in a multicultural society.

**MCS 1071 AMERICAN INDIAN ART**

*Credits: 3*

**Prerequisites:** None.

**MNTC goal area:** (6) Humanities & Fine Arts, Area B; (7) Human Diversity.

American Indian Art is designed to give students an introduction to the various art forms of the North American Indian. The lecture portion of the course introduces students to the variety of Indian art from the Northeast, Southeast, Plains, Northwest, and Southwest, with a separate section for Great Lakes Indian art. A historical overview of Indian art is included. The lab introduces students to a variety of Indian art methods including bead weaving, loom work, appliqué work, porcupine quill work, bark and pine needle baskets.

**MCS 1105 MULTICULTURAL STUDIES SPECIAL TOPIC: HISTORICAL TRAUMA AND AMERICAN INDIANS**

*Credits: 2*

**Prerequisites:** English 1060: Freshman Composition

**MNTC goal areas:** (5) History, the Social and Behavioral Science and (7) Human Diversity.

Historical Trauma and American Indians introduces students to the boarding school system that American Indians experienced, the legacy of that system, and the trauma resulting to American Indian families. Students will share their understanding of this experience through a readers’ theater performance.
MCS **** STUDY ABROAD
Credits: 2
Prerequisites: A student in good academic standing at least 18 years old.
MNTC goal area: (6) Humanities & Fine Arts, Area B; (8) Global Perspective.
Study Abroad courses are short-term study abroad experiences with a concentration on the history, religion, and culture of a variety of countries through visits to historical sites, art centers, churches, and villages. Past trips have included Canada, Italy, Greece, France, England, Wales, Ireland, Scotland, Germany, Austria, and Switzerland. The classroom portion prior to departure includes research, study, lecture, and classroom discussion. The travel segment following includes lectures by native guides who provide the background necessary to enable students to envision centuries of history and ancient civilizations. The guides provide an insider’s look at the history, cultural trends, and unique stories of a locale, and will establish a frame of reference for the class research and the travel experience. For more information on Study Abroad opportunities, please see an advisor.

MUSIC

MUSC 1010 MUSIC THEORY
Credits: 4
Prerequisites: Keyboard understanding and basic performance is strongly recommended. Students lacking such abilities are advised to take piano lessons along with this course.
MNTC goal area: (6) Humanities & Fine Arts, Area A.
Music Theory is a basic study of the elements involved in the reading, writing, and understanding of tonal music. Elementary sight-singing, ear training, and dictation are stressed during laboratory.

MUSC 1050 AMERICA’S POPULAR MUSIC
Credits: 3
Prerequisites: None.
MNTC goal area: (6) Humanities & Fine Arts, Area A; (7) Human Diversity.
America’s Popular Music provides students a cultural background in America’s music from the 1830s to the present time. The focus will be upon various styles of music, including theater, folk, popular, country and western, rock and roll, rock, disco, rap, and hip-hop. The techniques of music listening will be developed.

MUSC 1100 MUSIC APPRECIATION
Credits: 3
Prerequisites: None.
MNTC goal area: (6) Humanities & Fine Arts, Area A; (8) Global Perspective.
Music Appreciation focuses upon student development of a cultural background in music through the study of many of the great masterpieces of music and their composers, the styles of the various eras, and the techniques of music listening. Western and non-Western music will be presented.

MUSC 1110 ROCK ’N ROLL: A SHORT HISTORY
Credits: 3
Prerequisites: None.
MNTC goal area: (7) Human Diversity.
Rock ’n Roll: A Short History is designed to provide students a cultural background in the history of rock music styles. The techniques of critical music listening will be developed along with a focus on the many types of rock music from the 1940s to present time.

MUSC 1150 FUNDAMENTALS OF MUSIC
Credits: 3
Prerequisites: None.
MNTC goal area: (6) Humanities & Fine Arts, Area B.
Fundamentals of Music is a basic study of the fundamentals of melody, rhythm, harmony, conducting techniques, and basic piano playing for students who have very little musical training. The course is designed for liberal education students as well as prospective elementary school teachers who do not presently read music with fluency.

MUSC 1300 CHOIR
Credits: 2
Prerequisites: 1 year of choir experience and/or instructor consent.
MNTC goal area: (6) Humanities & Fine Arts, Area B.
Choir is the study and performance of representative choral literature from all periods of music history. At least two public performances will be presented representing a cross-section of the musical language of different cultures and countries. Choir may be repeated for credit; four credits of Choir may be applied toward the Humanities requirement.
MUSC 1400 APPLIED MUSIC LESSONS IN BEGINNING PIANO
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1410 APPLIED MUSIC LESSONS IN VOICE
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1415 BEGINNING VOICE
Credits: 3
Prerequisites: High school choir or other previous vocal experience or permission of instructor.
Beginning Voice is for students with little or no voice training, as well as those who wish to continue voice training. Class is designed to offer the opportunity to study the voice as a solo instrument and within a small group setting. Students will develop fundamental singing skills through performances in class of standard and student-driven vocal literature.

MUSC 1420 APPLIED MUSIC LESSONS IN ADVANCED PIANO
Credits: 1
Prerequisites: MUSC 1400 or equivalent.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1430 APPLIED MUSIC LESSONS IN ORGAN
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1440 APPLIED MUSIC LESSONS IN STRING
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1450 APPLIED MUSIC LESSONS IN WOODWINDS
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1460 APPLIED MUSIC LESSONS IN BRASS
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

MUSC 1470 APPLIED MUSIC LESSONS IN PERCUSSION
Credits: 1
Prerequisites: None.
Applied Music Lessons provide individual instruction by qualified college-approved instructors. The student is expected to practice a minimum of 48 hours per semester. Applied Music Lessons may be repeated for credit.

NATURAL SCIENCE
NSCI 1945 THE HISTORY OF SCIENCE--THE ATOMIC BOMB
Credits: 3
Prerequisites: None.
The History of Science--The Atomic Bomb traces the scientific and historic developments which led to the creation of the first atomic bombs at the end of World War II. Scientific topics such as atomic structure, radioactivity, and nuclear fission will be explored. The formation and organization of the Manhattan Project will be examined as well as the personalities of the scientists and military men
involved. In addition, the decision to use the bomb and the legacy of nuclear weapons will be analyzed. Though primarily a lecture and discussion course, students will perform a number of simple experiments in order to better understand the theoretical concepts presented.

**NSCI 2000 SPECIAL TOPICS IN SCIENCE: NOBEL CONFERENCE**

*Credits: 1*

*Prerequisites: Students must be in good academic standing.*

Special Topics in Science: Nobel Conference is designed to explore the role of science in our daily lives, as exemplified by the Nobel Conference at Gustavus Adolphus College, St. Peter, Minnesota. Students will explore a current scientific topic by participating in pre and post-conference seminars at HCC and by attending lecture sessions and associated activities at the Nobel Conference.

**NURSING**

**NURS 0950 ESSENTIAL MATHEMATICS FOR NURSES**

*Credits: 1*

*Prerequisites: A minimum score of 69 on the mathematics portion of the Accuplacer exam and acceptance into the nursing program.*

The course covers mathematics for clinical calculations which includes: arithmetic review, drug measure systems, and reading medication labels. Ratio-proportion will be used to teach dosage calculations. This course is intended for students who have been admitted to the Nursing Program.

**NURS 1250 FOUNDATIONS OF NURSING**

*Credits: 8*

*Prerequisites: Acceptance into the HCC Nursing Program.*

Foundations of Nursing presents a blend of fundamental nursing concepts that enable students to apply knowledge in nursing practice. The nursing process is the foundation of the course. Utilizing a holistic approach, students focus on assessment techniques, communication skills, and nursing interventions in assisting the client to manage health stressors across the lifespan. Students build clinical expertise through demonstration, implementation, and evaluation of nursing skills in a variety of healthcare settings.

**NURS 1350 CARE OF THE CLIENT AFFECTED BY CHRONIC STRESSORS**

*Credits: 8*

*Prerequisites: Completion with grade C or better of NURS 0950 and NURS 1250.*

Care of the Client Affected by Chronic Stressors presents common chronic stressors across the lifespan with a focus on primary, secondary, and tertiary prevention. Emphasis is placed on recognizing the interrelationship between chronic stressors and the nursing process as a means of planning and providing holistic client care. Students demonstrate clinical competence while applying theory to practice in a variety of clinical settings.

**NURS 1750 NURSING BRIDGE**

*Credits: 5*

*Prerequisites: Acceptance into the Advanced Standing nursing program track of the nursing program at HCC.*

The Nursing Bridge course builds on the foundation of knowledge acquired during previous nursing education. It is designed to facilitate the transition of the practical nurse to a level consistent with that of the student being prepared to write the NCLEX-RN. Utilizing a holistic approach, students focus on developing expertise in the steps of the nursing process. Nursing care of select chronic stressors will be presented through case study methodologies. Students demonstrate clinical competence while applying theory to practice in the clinical setting.

**NURS 1755 CLINICAL SIMULATION IN NURSING**

*Credits: 1*

*Prerequisites: Completion of NURS 0950 and NURS 1250 with a satisfactory grade (C or better) or consent of the instructor.*

**NURS 2050 CARE OF WOMEN AND CHILDREN**

*Credits: 4*

*Prerequisites: Completion with grade of C or better in NURS 1350 or NURS 1750.*

Care of Women and Children presents principles and concepts of maternal child nursing. Focuses include care of women of childbearing age, neonatal nursing, pediatric topics, and women’s healthcare. Emphasis is placed on recognizing the interrelationship between stressors and the nursing process as a means of planning and providing holistic client care. Students demonstrate clinical competence while applying theory to practice in a variety of clinical settings.
NURS 2150 CARE OF THE CLIENT AFFECTED BY ACUTE STRESSORS
Credits: 5
Prerequisites: Completion with grade of C or better in NURS 1350 or NURS 1750.
Care of the Client Affected by Acute Stressors presents acute stressors across the lifespan with a focus on primary, secondary, and tertiary prevention. Emphasis is placed on recognizing the interrelationship between acute stressors and the nursing process as a means of planning and providing holistic client care. Students demonstrate clinical competence while applying theory to practice in a variety of clinical settings.

NURS 2250 CARE OF THE CLIENT AFFECTED BY COMPLEX STRESSORS
Credits: 6
Prerequisites: Completion of grade C or better in NURS 2150.
Care of the Client Affected by Complex Stressors presents complex stressors across the lifespan with a focus on primary, secondary and tertiary prevention. Emphasis is placed on recognizing the interrelationship between complex stressors and the nursing process as a means of planning and providing holistic client care. Students demonstrate clinical competence while applying theory to practice in a variety of clinical settings.

NURS 2350 FOUNDATIONS OF LEADERSHIP
Credits: 1
Prerequisites: Completion with grade C or better in NURS 2150.
Foundations of Leadership presents a framework for applying entry level leadership and management concepts to nursing practice. Emphasis is placed on the analysis of current issues affecting nursing, personal and professional development, and role transition. Students demonstrate clinical competence while applying beginning leadership skills in various clinical settings.

NURS 2900 TRANSITION TO PRACTICE ESSENTIALS
Credits: 1
Prerequisites: Current enrollment in the final semester of the Nursing Program and approval by nursing faculty.
Transition to Practice Essentials provides the second year nursing student opportunities to gain knowledge and skills necessary to successfully transition from student to registered nurse. The relationship between nursing education and current nursing practice is explored. Trends and issues in nursing will be integrated into the course. Self-selected job shadow of a registered nurse provides students a chance to examine the nurse’s role in delivering quality and cost-effective, patient-centered care in a clinical setting of interest.

NURS 2902 CULTURAL DIVERSITY IN HEALTH CARE: COMMUNITY & GLOBAL CONNECTIONS
Credits: 2
Prerequisites: Current enrollment in the final semester of the Nursing Program and approval by nursing faculty.
Cultural Diversity in Health Care is designed to provide the second year nursing students and/or practicing RNs an opportunity to develop skills working with culturally diverse individuals/groups and to attain cultural competence in the classroom and globally through a travel abroad clinical experience. The principles of best practice in relationship to work with vulnerable and marginalized communities including compassion, curiosity, courage, collaboration, creativity, capacity building, and competence will be explored.

PERSONAL DEVELOPMENT
PDEV 8083 SERVICE-LEARNING EXPERIENCE
Credits: 1
Prerequisites: Permission of instructor required.
Service-Learning Experience will examine concepts of community service and the responsibilities of today’s citizens. Students will explore and develop personal viewpoints on community service through classroom discussions and a direct service experience. Students, with instructor’s approval, will select their semester-long community service site/project. Students are expected to perform 1 – 2 hours of community service at their chosen community agency per week.

PHARMACY TECHNICIAN
PHAR 1010 PHARMACY LAW AND ETHICS
Credits: 3
Prerequisites: None.
Pharmacy Law and Ethics will provide students with the Federal and State laws as they pertain to pharmacy. The ethics content of this course will address the principles of ethical thought as applied within the area of pharmacy practice. It will assist in preparing for the Pharmacy Technician Certification Exam.
**PHAR 1015 FUNDAMENTAL CONCEPTS OF PHARMACY**  
*Credits: 5*

**Prerequisites: None.**  
Fundamental Concepts of Pharmacy includes basic principles of prescription processing. This class will provide students with the information necessary for preparation of the Pharmacy Technician Certification Exam in prescription processing.

**PHAR 1021 FUNDAMENTAL PHARMACEUTICAL CALCULATIONS 1**  
*Credits: 2*

**Prerequisites: Placement exam of 69 in arithmetic or instructor approval**  
This course will introduce the student to fundamental mathematical calculations utilized in community pharmacy practice. This course will teach mathematical calculation and problem solving for production of pharmaceutical products.

**PHAR 1022 FUNDAMENTAL PHARMACEUTICAL CALCULATIONS 2**  
*Credits: 2*

**Prerequisites: PHAR 1021 with a grade of “C” or better**  
This course will introduce the student to fundamental mathematical calculations utilized in institutional pharmacy practice. This course will teach mathematical calculation and problem solving for production of pharmaceutical products.

**PHAR 1030 PRINCIPLES OF PHARMACY**  
*Credits: 5*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020 with a minimum grade of C.**  
Principles of Pharmacy includes didactic review of prescription processing with laboratory application. Skill development and problem solving in non-sterile product preparation is included.

**PHAR 1035 PHARMACY MEDICATION TECHNOLOGY**  
*Credits: 1*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020 with a minimum grade of C.**  
Pharmacy Medication Technology will familiarize students with technology utilized within the scope of pharmacy practice.

**PHAR 1040 PHARMACOTHERAPY OF DISEASE PROCESSES**  
*Credits: 4*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020 with a minimum grade of C.**  
Pharmacotherapy of Disease Processes covers the basic concepts of diseases and the mechanisms of disease. It will include the general physiologic principles for the following systems: nervous, endocrine, skeletal, muscular, cardiovascular, respiratory, gastrointestinal, renal, reproductive, skin, hematologic. The course will discuss immune disorders and immune system responses along with infectious diseases and effects of nutrition and heredity on disease.

**PHAR 1055 EXPERIENTIAL 1 (RETAIL)**  
*Credits: 3*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020, PHAR 1030, PHAR 1035, PHAR 1040 with a minimum grade of C.**  
Experiential 1 covers the pharmacy practice experience in the retail setting to polish skills necessary for employment as a pharmacy technician.

**PHAR 2010 FUNDAMENTAL CONCEPTS OF PHARMACY 2**  
*Credits: 5*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020, PHAR 1030, PHAR 1035, PHAR 1040, PHAR 1055 with a minimum grade of C.**  
Fundamental Concepts of Pharmacy 2 covers the systems, regulations, and applications of pharmacy practice in institutional settings.

**PHAR 2020 PHARMACY STERILE PRODUCTS LAB**  
*Credits: 5*

**Prerequisites: PHAR 1010, PHAR 1015, PHAR 1020, PHAR 1030, PHAR 1035, PHAR 1040, PHAR 1055, PHAR 2010 with a minimum grade of C.**  
Pharmacy Sterile Products Lab provides students with the knowledge and skills to prepare, calculate, or produce sterile products for pharmaceutical use.
PHAR 2060 EXPERIENTIAL 2  
(HOSPITAL/INSTITUTIONAL)  
Credits: 3  
**Prerequisites:** PHAR 1010, PHAR 1015, PHAR 1020, PHAR 1030, PHAR 1035, PHAR 1040, PHAR 1055, PHAR 2010, PHAR 2020 with a minimum grade of C. 
Experience in the institutional/hospital setting to polish skills learned in the previous pharmacy technician coursework.

PHILOSOPHY

PHIL 1200 INTRODUCTION TO PHILOSOPHY  
Credits: 3  
**Prerequisites:** None.  
**MNTC goal area:** (6) Humanities & Fine Arts, Area A; (9) Ethic and Civic Responsibility.  
Introduction to Philosophy is designed to familiarize students with the general concepts and theories of the major philosophers. The course focuses on metaphysics, epistemology, ethics, and human nature, and examines pertinent concepts such as reality, God, truth, and the human condition. Special attention will be given to the theories of Plato, Aristotle, Descartes, Kant, Bergson, James and Berkeley. From this foundation of basic ideas, the course guides students to examine their personal philosophies by emphasizing the importance of critical thinking and analysis while respecting differing opinions.

PHIL 1250 LOGIC  
Credits: 3  
**Prerequisites:** MATH 0971.  
**MNTC goal area:** (4) Math/Logical Reasoning.  
Logic introduces fundamentals of informal, traditional, symbolic, and inductive logic. The course requires the student to explore the different types of logic and apply those skills to critical thinking and problem solving. The student examines the uses of language in argumentation, the importance of definition, the place of fallacy in arguments, as well as the foundations of deductive logic, traditional or Aristotelian logic, symbolic or modern logic, and inductive logic. The course provides the student with the fundamentals of analytic reasoning providing the foundation for further logical study.

PHIL 1300 ETHICS  
Credits: 3  
**Prerequisites:** None.  
**MNTC goal area:** (6) Humanities & Fine Arts, Area A; (9) Ethic and Civic Responsibility.  
Ethics, utilizing the foundation of moral thinking dating back to the Classical Greeks, examines the thinking of the great philosophers of history and applies these concepts to contemporary problems facing today’s citizens. The issues of euthanasia, capital punishment, abortion, the environment, and AIDS are examined using the traditional concepts of good, right, free will, and responsibility. Using ethical theories such as consequentialism, virtue ethics, deontological ethics, and the thinking of Aristotle, Aquinas, Kant, Bentham, and others, the student will develop a personal perspective for dealing with today’s moral dilemmas. Students apply critical thinking skills to the development of an objective, empathic, value-based view of the world.

PHIL 1350 HUMAN NATURE  
Credits: 3  
**Prerequisites:** None. College level reading recommended.  
**MNTC goal area:** (6) Humanities & Fine Arts, Area A; (8) Global Perspective.  
Human Nature is intended to provide students the opportunity to explore classic questions about human nature and the answers that different cultures and thinkers have come to throughout history. Students will read works from the traditions of Confucianism, Upanishadic Hinduism, the Christian theological tradition, and Muslim tradition, as well as classic works in the Western tradition. Evaluation of examples from modern brain science and psychology will allow students to learn about how the brain shapes our ideas of ourselves and the world around us. Finally, the course will examine issues such as the impact of technology and the informational revolution on human living and the prospect of human development in the future. This course is intended for all students.

PHIL 1400 CRITICAL THINKING  
Credits: 3  
**Prerequisites:** None. College level reading recommended  
**MNTC goal area:** (6) Humanities and Fine Arts  
This course is intended to provide students the opportunity to develop better critical thinking skills. These skills will assist students in thinking critically within a field or discipline. Emphasis is on developing an awareness of
thinking in relation to others and the assimilation of reasoning skills into life. Students will learn about inductive and deductive arguments. Students will learn about argument forms, parts of arguments, how to distinguish good arguments from poor arguments, as well as diagramming and building arguments. Special attention will be paid to informal fallacies and common reasoning errors. The course will present many examples of everyday arguments for students to assess as they develop their critical thinking skills.

PHYSICAL EDUCATION

PE 1020 VARSITY VOLLEYBALL
Credits: 1
Prerequisites: Must meet NJCAA eligibility requirements. Varsity Volleyball emphasizes the application of offensive and defensive strategies, advanced skill techniques, teamwork, and participation at a competitive level. Enrollment must be concurrent with membership on the HCC varsity volleyball team. This class may be repeated one time for an elective credit.

PE 1040 VARSITY BASKETBALL
Credits: 1
Prerequisites: Must meet NJCAA eligibility requirements. Varsity Basketball focuses on the application of offensive and defensive strategies, advanced skill techniques, teamwork, and participation at a competitive level. Enrollment must be concurrent with membership on the HCC varsity basketball team. This class may be repeated one time for an elective credit.

PE 1050 VARSITY SOFTBALL
Credits: 1
Prerequisites: Must meet NJCAA eligibility requirements. Varsity Softball focuses on the application of offensive and defensive strategies, advanced skill techniques, teamwork, and participation at a competitive level. Enrollment must be concurrent with membership on the HCC varsity softball team. This class may be repeated one time for an elective credit.

PE 1060 VARSITY BASEBALL
Credits: 1
Prerequisites: Must meet NJCAA eligibility requirements. Varsity Baseball focuses on the application of offensive and defensive strategies, advanced skill techniques, teamwork, and participation at a competitive level. Enrollment must be concurrent with membership on the HCC varsity baseball team. This class may be repeated one time for an elective credit.

PE 1085 TRAP SHOOTING
Credits: 1
Prerequisites: Students enrolled in this class must be members of the Hibbing Community College trap team. Trap Shooting is a class concentrating on the techniques and skills needed to shoot clay targets. Proper handling of the firearm, proper shooting procedure and scoring will be taught in this class through participation in practices and competition events.

PE 1110 SOFTBALL
Credits: 1
Prerequisites: None. Softball class covers the basic softball fundamentals of catching, throwing, hitting, fielding, and base running. Basic offensive and defensive strategies and teamwork will be applied during game situations.

PE 1200 STRENGTH AND CONDITIONING
Credits: 1
Prerequisites: None. Strength and Conditioning provides an opportunity for development of total body fitness for various sports and fitness-related activities. Fitness equipment, weight machines, free weights and cardiovascular equipment will be incorporated to promote improvement in several fitness components including muscular strength, cardiorespiratory endurance, stability, agility and power. Students will learn basic health and fitness concepts as well as recognize behaviors that lead to a healthy lifestyle and prevent illness and disease. This course can be repeated for elective credit.

PE 1220 MIND BODY FITNESS
Credits: 1
Prerequisites: None. Mind Body Fitness is a fitness class focusing on muscular strength, muscular endurance, flexibility and balance through mind body fitness activities. Students will participate in different styles of yoga, Pilates, mental focus and relaxation techniques. Students will learn basic health and fitness concepts as well as recognize behaviors that lead to a healthy lifestyle and prevent illness and disease.
**PE 1250 BOWLING**

**Credits:** 1  
**Prerequisites:** None. 
Bowling emphasizes the basic bowling fundamentals of approach, stance, delivery, scoring, and converting splits. Classes will be held at a local bowling center.

**PE 1270 ARCHERY**

**Credits:** 1  
**Prerequisites:** None. 
Archery is a beginning class concentrating on basic archery skills of stance, draw, anchor, release, and aiming. The emphasis of the class will be on target archery.

**PE 1340 CURLING**

**Credits:** 1  
**Prerequisites:** None. 
Beginning Curling introduces the history, rules, etiquette, technique, strategy, and scoring of curling. Students will perform on-ice drills and participate in games at a local curling rink.

**PE 1380 OUTDOOR ACTIVITIES**

**Credits:** 1  
**Prerequisites:** None. 
Outdoor Activities includes outdoor recreational activities such as adventure ropes, rock climbing, snowshoeing, cross-country skiing, and hiking on the Superior Trail. This class is held at an environmental learning center with an emphasis on environmental awareness.

**PE 1530 HUNTING METHODS AND TECHNIQUES**

**Credits:** 2  
**Prerequisites:** Student must possess a MN small game license. 
This course is an introduction to all aspects of hunting from primitive techniques to new and more modern styles of hunting. All students will get hands on experience in the field as well as in the classroom. Topics include small and big game, waterfowl and predator hunting. Firearms safety, hunter ethics and rules and regulations will be discussed at length. A Minnesota small game hunting license is required to take the class.

**PE 1560 FITNESS WALKING**

**Credits:** 1  
**Prerequisites:** None. 
Fitness Walking emphasizes walking as a fitness-enhancing activity. Topics covered include aerobic conditioning, target heart rates, selection of clothing and footwear, stretching exercises, planning personal programs, motivational factors, nutrition and fitness, and keeping a walking log book.

**PE 1570 WEIGHT TRAINING**

**Credits:** 1  
**Prerequisites:** None. 
Weight Training emphasizes the proper lifting techniques for free weights and machines, safety factors, the terminology, stretching exercises, and record keeping. Students will actively participate in developed workouts, and design and implement a personal weight-training routine.

**PE 1800 PHYSICAL EDUCATION FOR LAW ENFORCEMENT**

**Credits:** 2  
**Prerequisites:** Admission to HCC Law Enforcement Program. 
Physical Education for Law provides a conditioning program that emphasizes the importance of proper physical fitness for a police officer. The conditioning program includes running, a body drag and carry, low crawl, various timed exercises, obstacle courses, physical exercises, and aerobic activities. Enrollment must be concurrent with the HCC Law Enforcement Program.

**PHYSICS**

**PHYS 1005 PHYSICS CONCEPTS**

**Credits:** 4  
**Prerequisites:** MATH 0971, or IST 1350 and IST 1450, or instructor’s consent. 
**MNTC goal area:** (3) Natural Science. 
Physics Concepts is an overview of the basic principles of physics from a conceptual and practical viewpoint with a minimal amount of math. Topics include mechanics, waves, sound, fluids, thermodynamics, electricity, magnetism, and light. It is designed for students in general education or those who are preparing to take additional physics courses. A laboratory component is included.
PHYS 1010 INTRODUCTION TO PHYSICS 1  
Credits: 4  
Prerequisites: MATH 1020 or instructor’s consent.  
MNTC goal area: (3) Natural Science.  
This course addresses that part of physics dealing with motion, rotation, materials, thermal sciences, and waves. Computer simulations and lab investigations are emphasized. Laboratory is included.

PHYS 1020 INTRODUCTION TO PHYSICS 2  
Credits: 4  
Prerequisites: PHYS 1010 or instructor’s consent.  
MNTC goal area: (3) Natural Science.  
This course addresses that part of physics dealing with electricity, magnetism, optics, and modern physics. Through discussion of lecture topics and laboratory investigations, students examine relationships between environmental systems including transportation, energy production, and nuclear power. This course requires a working knowledge of elementary algebra. Laboratory is included.

PHYS 2010 GENERAL PHYSICS 1  
Credits: 5  
Corequisite: MATH 2101.  
MNTC goal area: (3) Natural Science.  
General Physics 1 is the first course in the physics sequence for students majoring in physical science or engineering. This course focuses on the study of mechanics of particles and rigid bodies including kinematics, dynamics, conservation laws, linear momentum, and angular momentum. In addition the topics of fluid mechanics, mechanical waves, and thermodynamics are covered. Laboratory is included.

PHYS 2021 GENERAL PHYSICS 2  
Credits: 5  
Prerequisites: PHYS 2010.  
MNTC goal area: (3) Natural Science.  
General Physics 2 is the second course in the physics sequence for students majoring in physical science and engineering. This course focuses on electricity, magnetism, and optics. Laboratory is included.

PHYS 2030 MODERN PHYSICS  
Credits: 3  
Prerequisites: PHYS 2021.  
Modern Physics is the third course in the physics sequence for students majoring in physics or engineering. This course focuses on physical discoveries made during the 20th Century, including relativity, particle physics, quantum mechanics, and nuclear physics.

POLITICAL SCIENCE  

PSCI 1100 AMERICAN GOVERNMENT  
Credits: 3  
Prerequisites: College-level reading ability required.  
MNTC goal area: (5) History/Social/Behavioral Sciences; (9) Ethic and Civic Responsibility.  
American Government focuses on three basic documents of our democracy and looks in a detailed way at how they work. Particular attention will be paid to civil and personal liberties, how the Declaration, Constitution, and Bill of Rights were created, our federal system, the roles, powers, and functions of the executive, legislative, and judicial branches of government, the origins and roles of political parties, the operation of interest groups, the media’s role as watchdogs, and the development of public policy.

PSCI 1300 STATE AND LOCAL GOVERNMENT  
Credits: 3  
Prerequisites: College-level reading ability required.  
State and Local Government examines the organization and operation of city, county, local, and state government, with particular attention to Minnesota. Topics include the state-federal relationship, intergovernmental relations, the functions of state governments, state constitutions, voting, political parties and interest groups, state legislative, executive, and judicial branches, county and city governments and their operation, urban politics in modern America, state and local government finance, and challenges facing state and local governments in the 21st Century.

PSCI 1500 ALTERNATIVE SPRING BREAK  
Credits: 3  
Prerequisites: Student must be at least 18 years of age to participate on the trip. Students must participate in off-campus service projects and the class may include out-of-state travel. All students must show proof of health insurance, sign release forms, and sign a substance-free agreement. There will be a minimum fee of $50.00 for expenses associated with this class. This fee will be paid at registration for the class.  
MNTC goal area: (5) History/Social/Behavioral Sciences; (9) Ethic and Civic Responsibility.  
Alternative Spring Break will examine the relationships
between social issues and civic action responsibility through both classroom studies and hands-on service experiences. The course is a designated service-learning course, combining theory and practice to examine the civic and ethical responsibilities of a democratic society. The course requires participation in lab experiences at local, regional, and/or national sites. Students may repeat the class one time for elective credit.

**PSYCHOLOGY**

**PSYC 1010 PSYCHOLOGY OF ADJUSTMENT**

*Credits: 2*

**Prerequisites:** None.

**MNTC goal area:** (5) History/Social/Behavioral Sciences.

Psychology of Adjustment focuses upon applications of psychological principles to human development and adjustment. Emphasis is on self-concept and healthy adjustment versus maladjustment as applied to casual, work, and intimate relationships. The importance of effective communication, problem-solving skills, and maximizing human potential is also stressed.

**PSYC 1205 GENERAL PSYCHOLOGY**

*Credits: 4*

**Prerequisites:** College level reading ability.

**MNTC goal area:** (5) History/Social/Behavioral Sciences.

General Psychology is an introduction to the scientific study of human behavior. The course includes child, adolescent, and adult development, sensation, perception, consciousness, learning, memory, thinking and language, intelligence, motivation, emotion, personality, psychological disorders, therapy, stress, health, and social behavior. This course has a research methodology component: Methodology provides students with the opportunity to participate in the process of discovery used by researchers to learn more about human behavior, using a hands-on application of experimental methods. The course is intended for students majoring in psychology or related social science fields.

**PSYC 1350 LIFESPAN DEVELOPMENT**

*Credits: 3*

**Prerequisites:** PSYC 1205.

**MNTC goal area:** (5) History/Social/Behavioral Sciences.

Lifespan Development is a scientific and theoretical examination of physical, cognitive, emotional and social development which occurs across the life span: infancy, early to late childhood, adolescence, early to late adulthood, and death and dying.

**PSYC 1400 ABNORMAL PSYCHOLOGY**

*Credits: 3*

**Prerequisites:** PSYC 1205.

**MNTC goal area:** (5) History/Social/Behavioral Sciences.

Abnormal Psychology is the study of mental and behavioral disorders: their theoretical perspectives, classification, description, assessment and intervention methods. Emotional, social, psychotic/organic, and developmental disorders are included, along with diagnosis and research methods.

**READING**

**READ 0920 PREPARATION FOR COLLEGE READING AND WRITING 1**

*Credits: 4*

**Prerequisites:** Reading Placement Examination.

Preparation for College Reading and Writing 1 introduces students to effective methods of basic reading and writing skills. Reading skills practice focuses on finding main ideas, identifying major and minor supporting details, finding implied main ideas, and identifying patterns of organization. Writing skills practice focuses on recognizing parts of a sentence and increasing proficiency in composing them. Writing assignments will emphasize skills in sentence and paragraph construction. Vocabulary expansion is achieved through a study of words and their use in reading and writing context.

**READ 0950 PREPARATION FOR COLLEGE READING 1**

*Credits: 3*

**Prerequisites:** Reading Placement Examination.

Preparation for College Reading 1 introduces students to effective methods of reading and studying college texts. Skill practice focuses on finding main ideas, identifying major and minor supporting details, finding implied main ideas, identifying patterns of organization, and learning critical reading techniques. Vocabulary expansion is achieved through a study of words, their use in context, and practice with reading a novel.
READ 0960  PREPARATION FOR COLLEGE READING 2
Credits: 3
Prerequisites: Successful completion of READ 0950 ('C' grade or better) or placement examination.
Preparation for College Reading 2 focuses on the reading of poetry, fiction, essays, and textbook chapters to acquire the skills necessary for effective college reading. These skills are achieved through both discussion and written analysis. Vocabulary expansion is achieved through learning context clues and word part clues to meaning. Regular practice to improve reading and comprehension skills is provided.

READ 1320  EFFICIENT COLLEGE READING
Credits: 2
Prerequisites: Placement examination or successful completion ('C' grade or better) of READ 0960.
Efficient College Reading assists the average or above average reader to become a flexible, thoughtful, and sophisticated reader. Students develop reading comprehension, build vocabulary, improve critical reading skills, and increase their reading speed through classroom instruction and practice.

SAFETY AND HEALTH
SHA 1561  MSHA NEW MINER
Credits: 1
Prerequisites: None.
New Miner includes the Mine Safety and Health Act (MSHAct) of 1977 requirements for 30 CFR Part 48 New Miner Training of inexperienced, newly-employed miners. Through the combination of lecture, slides, videos, discussion, demonstration, and occupational experience, participants will identify mine safety and health hazards and how to protect themselves from these hazards.

SHA 1600  INTRODUCTION TO INDUSTRIAL SAFETY AND HEALTH
Credits: 2
Prerequisites: None.
Introduction to Industrial Safety and Health will introduce the student to the history and principles of industrial safety and health. The student will identify the components of an effective workplace safety and health program. The student will describe the function of federal and state safety and health agencies. The student will recognize, evaluate, and control workplace hazards.

SHA 2010  ANNUAL REFRESHER/FIRE SAFETY/FIRST AID
Credits: 1
Prerequisites: None.
Annual Refresher Training includes the Mine Safety and Health Act (MSHAct) of 1977 requirements for 30 CFR Part 48 Annual Refresher Training for miners. Through the combination of lecture, slides, transparencies, videos, discussion, demonstration, and “interactive clickers” participants will identify mine safety and health hazards and how to protect themselves from these hazards. Basic First Aid and Fire Safety will be reviewed.

SOCIOLOGY
SOC 1100  INTRODUCTION TO SOCIOLOGY
Credits: 3
Prerequisites: None.
MNTC goal area: (5) History/Social/Behavioral Sciences; (7) Human Diversity.
Introduction to Sociology is a general introduction to the study of human relationships, group aspects of behavior, and social institutions. Special attention is given to the basic terms, concepts, and theories used in the discipline of sociology.

SOC 1200  SOCIAL PROBLEMS
Credits: 3
Prerequisites: None.
MNTC goal area: (5) History/Social/Behavioral Sciences; (9) Ethic and Civic Responsibility.
Social Problems is a critical evaluation of American culture and social structure as an underlying cause of American and global social problems. The course is presented from the perspective that individuals have an ethical responsibility to change social structures that result in inequalities among persons, destruction of the environment, and individual deviance.

SOC 1300  CRIMINOLOGY
Credits: 3
Prerequisites: None.
MNTC goal area: (5) History/Social/Behavioral Sciences; (9) Ethic and Civic Responsibility.
Criminology studies the nature and extent of juvenile delinquency and adult criminality. Theories of deviance will be offered from biological, psychological, and sociological perspectives. The course investigates how law enforcement, the courts, and correctional systems react to crime.
**SOC 1400 MARRIAGE AND THE FAMILY**

*Credits: 3*

**Prerequisites:** None.

**MNTC goal area:** (5) History/Social/Behavioral Sciences; (7) Human Diversity.

Marriage and the Family is the study of various patterns of marriage and family throughout U.S. history. Dating, sexuality, divorce, remarriage, and alternatives to traditional marriage and families are examined. Special attention is given to the impacts of class, race, and gender on marital relations.

**SOC 2200 RACE AND ETHNICITY**

*Credits: 3*

**Prerequisites:** None.

**MNTC goal area:** (5) History/Social/Behavioral Sciences; (7) Human Diversity.

Race and Ethnicity will examine the relationships of racial and ethnic minorities to the dominant American society. Major topics will include the basic concepts of race and ethnicity and their origins, theoretical perspectives on race and ethnic relations, racial and ethnic conflicts and their historical roots, as well as the role of social institutions in the lives of minority groups.

**SOC 2300 AGING**

*Credits: 3*

**Prerequisites:** None.

**MNTC goal area:** (5) History/Social/Behavioral Sciences; (9) Ethic and Civic Responsibility.

Aging presents a study of aging in modern society. Biological, psychological, and sociological perspectives will be utilized to gain an understanding of the aging process and its impacts on the individual and society.

**SPEECH**

**SPCH 1010 FUNDAMENTALS OF SPEECH**

*Credits: 3*

**Prerequisites:** ENGL 1060 recommended.

**MNTC goal area:** (1) Communications.

Fundamentals of Speech is designed to help the student become a more efficient communicator in public speaking situations. Emphasis is on developing skills in basic research, organization, audience analysis, delivery, and listening. Students will examine and articulate their personal ethical views while respecting the values of others. Students will also be responsible for the construction and presentation of speeches and active participation in small group discussions.

**SPCH 1030 INTERCULTURAL COMMUNICATION**

*Credits: 3*

**Prerequisites:** ENGL 1060 recommended.

In today's technology-driven, global world, students interact and will work with people with diverse backgrounds. 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.

**SPCH 1040 INTRODUCTION TO COMMUNICATION**

*Credits: 3*

**Prerequisites:** ENGL 1060 recommended.

**MNTC goal area:** (1) Communications.

Introduction to Communication helps the student become a more efficient communicator in interpersonal and presentation situations. Through reading and participating in practical class exercises, students will explore the basic elements of interpersonal communication including critical thinking, self-concept, perception, listening, verbal and nonverbal expression, relationships and conflict management. In addition, students will learn to present speeches with emphasis on developing skills in basic research, organization, audience analysis, delivery, and listening. Students will examine and articulate their research findings and personal views while respecting the work and values of others.

**STUDY SKILLS**

**STSK 1001 COLLEGE SUCCESS STRATEGIES**

*Credits: 2*

**Prerequisites:** None.

College Success Strategies is designed to aid the student in improving motivation for success in college and in developing general study skills. Students will practice key study skills such as time management, effective listening, studying a text, note taking, and preparing for examinations. In addition to the instructor, people from within and outside of the college will be invited to share expertise with the students. This course is designed for students wishing to improve their study skills. Credit may be earned for only one of the following: STSK 1001, STSK 1100.
**STSK 1100 TRANSITION TO COLLEGE**

*Credits: 2*

**Prerequisites:** Student must be eligible for membership in the Student Support Services (SSS) Program. Consult with an SSS staff member to determine eligibility.

Transition to College provides new students with the tools necessary to increase their success in college. It provides information about college and college survival skills, study skills on test-taking, reading, memorization, and note-taking. The class also facilitates self-assessment using career and academic inventories as well as personality and learning styles assessments. Credit may not be earned for more than one of the following classes: STSK 1100, STSK 1200.

**STSK 1200 COLLEGE SUCCESS STRATEGIES FOR HEALTH CAREERS**

*Credits: 2*

**Prerequisites:** None.

College Success Strategies for Health Careers is to aid the student considering health careers to improve success in college and develop study skills. Students will practice key study skills such as time management, effective listening, studying a technically-based text, note taking and preparing for examinations. In addition to the instructor, people from various health professions will be invited to share their expertise and insights. This course is primarily designed for freshmen considering health careers. Credits may be earned for only one study skills class.