This catalog was prepared before the 2011-12 academic year. For the most current information after May 2011, see the catalog on the Web at bismarckstate.edu/academics

This catalog is designed to be user-friendly for students and prospective students. The table of contents and two indexes in the back should help you find information you seek.

The catalog was prepared by the faculty and staff of Bismarck State College and was edited and organized by Crystal Forster, Graphic Artist, and Jordis Conrad, Director of Communications.

The announcements, tuition rates, fees, and course descriptions in this catalog are subject to change without notice and may not be regarded as binding obligations on BSC or the state of North Dakota. In times of changing conditions, it is especially necessary to have this definitely understood.
Welcome to Bismarck State College, where high quality, student-centered learning and student success are hallmarks of our community college mission.

The College is continuously changing and improving, adding new programs to meet the employment needs of area business and industry, and thus providing educational programs to prepare students for the workforce in North Dakota and beyond.

BSC’s offerings include:
• the first and second year of studies leading to a bachelor’s degree,
• more than 40 career and technical programs,
• a baccalaureate degree in energy management,
• workforce training for business and industry, and
• professional development and personal enrichment programs.

A leader in distance learning, BSC offers more than 250 courses and nearly 20 programs online. In addition, more than 20 baccalaureate degree programs are available on our campus through collaboration with universities in the North Dakota University System.

I know your experience at Bismarck State College will fulfill your educational goals and set the course for your future success. Thank you for making BSC an important part of your Beyond.

Sincerely,

Larry C. Skogen, Ph.D.
President

Seize your future at BSC!
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, August 22</td>
<td>Classes begin at 4 p.m.</td>
</tr>
<tr>
<td>Tuesday, August 23</td>
<td>First full day of classes</td>
</tr>
<tr>
<td>Monday, August 23</td>
<td>Labor Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Monday, September 5</td>
<td>Veterans Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Thursday-Friday, November 24-25</td>
<td>Thanksgiving Vacation, no classes, BSC open Friday</td>
</tr>
<tr>
<td>Monday-Friday, December 12-16</td>
<td>Final Exams</td>
</tr>
<tr>
<td>December 17-January 8</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>Monday, January 9</td>
<td>Classes begin at 4 p.m.</td>
</tr>
<tr>
<td>Tuesday, January 10</td>
<td>First full day of classes</td>
</tr>
<tr>
<td>Monday, January 16</td>
<td>Martin Luther King Jr. Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Monday, February 20</td>
<td>Presidents Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Monday-Friday, March 12-16</td>
<td>Spring Break</td>
</tr>
<tr>
<td>Friday, April 6</td>
<td>Good Friday, no classes, BSC closed</td>
</tr>
<tr>
<td>Monday, April 9</td>
<td>Easter Monday, no classes, BSC open</td>
</tr>
<tr>
<td>Monday-Friday, May 7-11</td>
<td>Final Exams</td>
</tr>
<tr>
<td>Friday, May 11</td>
<td>Commencement</td>
</tr>
<tr>
<td>Monday, May 14</td>
<td>Summer session/Third semester begins</td>
</tr>
<tr>
<td>Monday, May 14</td>
<td>Memorial Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Wednesday, July 4</td>
<td>Independence Day observed, no classes, BSC closed</td>
</tr>
<tr>
<td>Friday, August 3</td>
<td>Summer session/Third semester ends</td>
</tr>
<tr>
<td>Monday, August 20</td>
<td>Classes begin at 4 p.m.</td>
</tr>
<tr>
<td>Tuesday, August 21</td>
<td>First full day of classes</td>
</tr>
<tr>
<td>Monday, September 3</td>
<td>Labor Day, no classes, BSC closed</td>
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<tr>
<td>Monday, November 12</td>
<td>Veterans Day, no classes, BSC closed</td>
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<td>Thanksgiving Vacation, no classes, BSC open Friday</td>
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<tr>
<td>Monday-Friday, December 10-14</td>
<td>Final Exams</td>
</tr>
<tr>
<td>December 17-January 7</td>
<td>Christmas Break</td>
</tr>
<tr>
<td>Monday, January 7</td>
<td>Classes begin at 4 p.m.</td>
</tr>
<tr>
<td>Tuesday, January 8</td>
<td>First full day of classes</td>
</tr>
<tr>
<td>Monday, January 21</td>
<td>Martin Luther King Jr. Day, no classes, BSC closed</td>
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<tr>
<td>Monday, February 18</td>
<td>Presidents Day, no classes, BSC closed</td>
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<td>Monday-Friday, March 11-15</td>
<td>Spring Break</td>
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<td>Friday, March 29</td>
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<td>Monday, April 1</td>
<td>Easter Monday, no classes, BSC open</td>
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<tr>
<td>Monday-Friday, May 6-10</td>
<td>Final Exams</td>
</tr>
<tr>
<td>Friday, May 10</td>
<td>Commencement</td>
</tr>
<tr>
<td>TBA</td>
<td>Summer session/Third semester begins</td>
</tr>
<tr>
<td>Monday, May 27</td>
<td>Memorial Day, no classes, BSC closed</td>
</tr>
<tr>
<td>Thursday, July 4</td>
<td>Independence Day observed, no classes, BSC closed</td>
</tr>
<tr>
<td>TBA</td>
<td>Summer session/Third semester ends</td>
</tr>
</tbody>
</table>
ACCESS TO INFORMATION

Bismarck State College makes available or distributes the following information to all students, employees, prospective students, and prospective employees in compliance with federal regulations issued by the U.S. Department of Education.

CAMPUS SECURITY REPORT

The purpose of the report is to inform the campus of campus crime prevention programs, crime reporting procedures and a three-year statistical history of criminal activity on campus. A copy of the campus security report is published and updated annually on the BSC website at bismarckstate.edu/security/securityreport. A printed copy is available upon request from the Security Office, Bismarck State College, P.O. Box 5587, Bismarck, ND 58506-5587.

DRUG FREE WORKPLACE AND SCHOOL

The purpose of this policy is to set forth the college policy regarding alcohol and other drug use, including unlawful drug use or abuse in the workplace in accordance with the Drug Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D), and Drug Free Schools and Communities Act Amendments of 1989 (Public Law 101-226). The drug and alcohol policies can be found at bismarckstate.edu/staff/humanresources/policiesprocedures. The policies are distributed to employees via staff and faculty handbook. Student policies are distributed in the catalog and student handbook and are available on the BSC website at bismarckstate.edu/staff/humanresources/policiesprocedures.

EQUITY IN ATHLETICS DISCLOSURE ACT

The purpose of this policy is to disclose athletic participation rates and financial data related to athletics. The report is available from the Athletic Department or the Office of Institutional Research.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT (FERPA)

The purpose of the Family Education Rights and Privacy Act is to afford certain rights to students concerning their education records. The primary rights afforded are the right to inspect and review education records, the right to seek to have the records corrected, and the right to have some control over the disclosure of information from records. The FERPA policy is included in the BSC catalog and student handbook. Additional information is available from the Academic Records Office.

FINANCIAL AID

The purpose of financial aid is to assist students with college related expenses. Financial aid and scholarship information is available at the Financial Aid office. Information concerning financial aid refund and repayment policies is available from the Financial Aid and/or Student Finance offices.

STUDENTS RIGHT TO KNOW

The purpose of this information is to disclose annual student completion, graduation, or transfer rates, including rates for student athletes. The report is available at Academic Records.

NOTICE OF NONDISCRIMINATION

Bismarck State College is an equal opportunity institution that does not discriminate on the basis of race, color, gender, national origin, age, religion, sexual orientation or disability in its admissions, student aid, employment practices, education programs or other related activities.

Inquiries concerning compliance with Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendment Act of 1972, Section 504 of the Rehabilitation Act of 1973, Americans with Disabilities Act and the Age Discrimination and Employment Act may be referred to: Rita Lindgren, Chief Human Resources Officer, Bismarck State College, BSC Meadowlark Building, 1700 Schafer St., Bismarck, ND 58501. (701)224-5427, Rita.Lindgren@bismarckstate.edu. Inquiries concerning compliance may also be directed to the Office for Civil Rights/Chicago, U.S. Department of Education, Citigroup Center, 500 W Madison Street, Suite 1475, Chicago, IL 60661. Telephone: (312) 730-1560, Fax: (312) 730-1576, TDD: (312) 730-1609 or (877) 521-2172, website: http://www.ed.gov/ocr/.

N.D. STATE BOARD OF HIGHER EDUCATION COMMUNICATION PROFICIENCY POLICY

All Bismarck State College faculty members are required to be proficient in the English language, meaning they must be able to speak and write English clearly. Any student who has difficulty communicating with a faculty member because of that faculty member’s inability to speak or write English clearly has recourse through the North Dakota State Board of Higher Education’s Communication Proficiency Policy. Students may contact the faculty member’s department chairperson or the BSC Human Resources office to discuss the student’s concerns or to file a complaint.
BISMARCK STATE COLLEGE MISSION
Bismarck State College, an innovative community college, offers high quality education, workforce training, and enrichment programs reaching local and global communities.

BISMARCK STATE COLLEGE VISION
A national model for innovative education and workforce training

INNOVATION STATEMENT
BSC’s Culture of Innovation – Transforming Tomorrow Today

BISMARCK STATE COLLEGE GOALS
ENGAGE – People know who we are and what we have to offer.
1. Implement fully the Enrollment Management Plan in an effort to foster future campus growth.
2. Evaluate BSC’s operational processes to identify opportunities to increase efficiencies, trust, and communication.

CONNECT – We stay connected to our students and other stakeholders. We ensure the best quality student experience while students attend BSC.
3. Through a public relations strategy, bring the community to the campus to provide life-long learning opportunities.

DELIVER – We follow through on our pledge to students and other stakeholders that we will deliver the best quality education and training for their success.
4. Enhance services and quality instruction that ensure students reach their goals.
5. Expand student access to BSC’s offerings.
6. Ensure quality “learn by doing” experiences for all students.
7. Develop, fund, and implement a systematic approach to address issues regarding current, new, and emerging technologies.
8. Identify, develop, and use data and performance indicators that will aid decision making, improve effectiveness, and encourage transparency both on campus and to the public.
9. Develop criteria (research, data, surveys, trends, etc.) in support of our resource priority setting process to aid in effective decisions for the FY 2012 budgeting cycle.

INNOVATION AT BSC
In 2007 Bismarck State College developed an Office of Innovation, which is housed in the division of Continuing Education, Training and Innovation (CETI). The Office of Innovation focuses on transforming the BSC culture to be innovative in all aspects of its operations. A process was developed and refined to assist in converting employee-generated ideas into action. The ideas submitted are called Wild Endeavors. To date, more than 60 ideas have been submitted with over 25 percent of those ideas already implemented.

The Office of Innovation has also sent teams to national conferences to present the ideas that BSC has pursued. This is putting BSC on the map as “a national model for innovative education and workforce training.” The Office of Innovation also offers the services of several highly qualified facilitators and “lean office” practitioners. These individuals have facilitated discussion groups, brainstorming sessions, annual retreats, and team builders. As lean practitioners, they have begun to help other departments examine and streamline processes to save time, money and hours of frustration.

The Office of Innovation is continually researching and implementing ways to overcome the obstacles to innovation to assist BSC in reaching its vision and goals.

THE HISTORY OF THE COLLEGE
Bismarck State College was a bold, Depression-era experiment. As North Dakota’s first two-year city college, BSC became an example for others and over the years has grown at a pace most likely unforeseen by its early promoters.

Created in 1939 in response to a community need for a local college, it was originally known as Bismarck Junior College. Enabling legislation providing for the establishment of junior colleges had been passed by the 22nd Legislative Assembly in 1931.

The College’s first students started classes on Sept. 4, 1939, in Bismarck High School. There were 104 full- and part-time students and 12 instructors.

By the late 40s a new location for the college became increasingly urgent as college enrollments soared. In 1951 the 32nd Legislative Assembly responded to an appeal from community leaders to grant the College 15 acres on the Capitol grounds for a campus site. The College moved into its own building at 900 Boulevard Avenue in 1955.

Within a few years the new campus was inadequate to meet the needs of the growing college. The search began for a new location that would allow for future growth and expansion. The problem was solved in 1959 when Harold Schafer, a local entrepreneur and founder of the successful Gold Seal Company, offered the College a tract of land overlooking the Missouri River at the northwest edge of the City. Classes were first held on the new campus in the fall of 1961.
Buildings were constructed on the campus in this order:

<table>
<thead>
<tr>
<th>BUILDING</th>
<th>DATE COMPLETED</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schafer Hall</td>
<td>1961</td>
<td>$ 858,971</td>
</tr>
<tr>
<td>Werner Hall</td>
<td>1965</td>
<td>661,766</td>
</tr>
<tr>
<td>Library</td>
<td>1968</td>
<td>548,493</td>
</tr>
<tr>
<td>Swensen Hall</td>
<td>1972</td>
<td>576,363</td>
</tr>
<tr>
<td>Student Union</td>
<td>1974</td>
<td>899,328</td>
</tr>
<tr>
<td>Technical Center</td>
<td>1974</td>
<td>1,684,000</td>
</tr>
<tr>
<td>Office Annex</td>
<td>1979</td>
<td>394,949</td>
</tr>
<tr>
<td>Technical Center addition</td>
<td>1983</td>
<td>1,291,740</td>
</tr>
<tr>
<td>Jack Science Center</td>
<td>1998</td>
<td>8,465,000</td>
</tr>
<tr>
<td>Leach Music Center</td>
<td>2001</td>
<td>762,000</td>
</tr>
<tr>
<td>BSC-Mandan Campus</td>
<td>2007</td>
<td>1,860,000</td>
</tr>
<tr>
<td>Lidstrom Hall</td>
<td>2008</td>
<td>5,700,000</td>
</tr>
<tr>
<td>National Energy Center of Excellence</td>
<td>2008</td>
<td>18,300,000</td>
</tr>
</tbody>
</table>

Campus improvements from the middle 1980s to the late 1990s focused on the grounds. Parking lot and landscape improvements, sidewalks, handicapped access, and outdoor lighting were included in the projects. Many trees and shrubs were planted and permanent outdoor benches were placed in some areas.

One of the major changes in the college’s history occurred in 1984. Through legislation passed in 1983 by the 48th Legislative Assembly, the College became part of North Dakota’s system of higher education. On July 1, 1984, the governance and control of the College was transferred from the Bismarck School Board to the State Board of Higher Education.

The 50th Legislative Assembly changed the college’s name to Bismarck State College, effective April 27, 1987.

Gov. George A. Sinner transferred ownership of the Burleigh County Memorial National Guard Armory to BSC, officially effective July 1, 1989. The Armory was built adjacent to the campus in 1962, and the National Guard and BSC shared usage of the facility from that time until 1988.

The men’s residence hall was named Werner Hall in the spring of 1989, in honor of the college’s third executive officer.

Construction on the Jack Science Center began in the summer of 1996. It was completed in February 1998. The three-floor, 74,340 square-foot building houses classrooms and labs for the sciences, mathematics, engineering, and computer science classes, and offices for faculty teaching in those disciplines. Funding for the building was approved by the 54th Legislative Assembly in 1995, the third time BSC and the N.D. University System requested funds. The BSC Foundation raised $1,060,000 as a local match for the state’s $7 million appropriation. The building is named for Tom and Peg Jack, who provided the lead donation in the Foundation’s capital campaign.

Bismarck Community Bowl improvements were completed in the summer of 1997. The facility is managed by the Community Bowl Authority. This athletic complex consists of football and soccer fields, ten lane track, locker rooms, press box, restrooms, concessions, and bleacher seating.

In the late 1990s, remodeling work began on Schafer Hall. The entire building was renovated in phases, with the final phase on first floor completed in the summer of 2008.

The Leach Music Center was completed in 2001. This 6,000 square foot addition to Schafer Hall was funded by a grant from the Tom and Frances Leach Foundation, state funds and other private donations.

Private developers completed the Horizon Office Building north of the Technical Center in 2003. Later in that year, BSC rented part of the building for administrative, faculty and staff offices.

In the fall of 2005, BSC’s Allied Health programs moved to a city-owned building downtown at 500 E. Front Ave. The second floor of the building was remodeled to provide state-of-the-art classrooms and labs for four programs.

Construction on BSC’s National Energy Center of Excellence began in the summer of 2006 on the southeast corner of the campus. Completed in the fall of 2008, the 106,200 square foot building houses the National Energy Center of Excellence programs, other technical programs, Great Plains Energy Corridor Office, Division of Continuing Education, Training and Innovation, and administrative offices. Funding was secured through a capital campaign led by the BSC Foundation. Sources of funding include industry partners; local, state and federal government; BSC employee donations; and other individual donations.

BSC was granted permission to offer a baccalaureate degree by the N.D. State Board of Higher Education in November 2006. The degree, a Bachelor of Applied Science (BAS) in Energy Management, educates energy workers to move into supervisory and management positions. The online program was designed for BSC graduates with an Associate in Applied Science (AAS) degree in one of the college’s energy education programs.

In February 2007, BSC opened the Bismarck State College-Mandan Campus at 1831 Twin City Drive S.E. in Mandan. The 12,500 square foot building was constructed to house the Mechanical Maintenance Technology program. The $2 million facility was funded through the sale of bonds, a federal earmark, funds from the City of Mandan and contributions from industry.

The BSC Foundation moved into the Foundation/Alumni House in the fall of 2007, after purchasing a private residence at 1255 Schafer St., on the southeast corner of the campus. The house was remodeled to accommodate the Foundation, Alumni Association, and Resource Development offices.

Lidstrom Hall, the college’s third residence hall, was completed in time for fall semester 2008. The new facility is named in honor of president emeritus Dr. Kermit Lidstrom. The 35,000 square foot residence hall has 76 beds in suite living arrangements, a large lounge, kitchen, and meeting room.

The BSC Aquatic and Wellness Center opened in March 2010. Features of the center include two swimming
pools and a diving well, a strength and cardio area, group fitness area, and community rooms. The Bismarck Parks and Recreation District manages the facility.

BSC began the process of expanding campus housing by leasing the former 3M Building at 1700 Schafer St. This building was remodeled and staff from the Office Annex moved into the renamed Meadowlark Building in February 2010. Remodeling of the Office Annex at 1309 Schafer St. (now Mystic Hall) was completed in time for 30 students to be housed there by fall semester 2010.

The Bismarck Public Schools Career Academy on College Drive was completed by fall semester 2010. The 93,000 square foot structure is a shared facility between BPS and BSC. The college’s technical programs located there are Agriculture, Technology and Natural Resources; Electronics/Telecommunications Technology; Instrumentation & Control Technology, and Graphic Design and Communications.

Since its founding in 1939, Bismarck State College has had six chief executive officers. Dr. Walter J. Swensen was appointed the first dean of the College in 1939 and served in that capacity until 1948 when Sidney J. Lee was appointed dean. Lee died in 1961 and was succeeded by Ralph Werner. Werner retired in 1977. Dr. Kermit Lidstrom served as president from 1977 to 1995. Dr. Donna S. Thigpen served as president from July 1995 through June 2006. Gordon Binek, vice president for college advancement and federal relations, served as interim president for eight months until Dr. Larry C. Skogen became the college’s sixth chief executive officer on March 1, 2007.
ADMISSION TO BSC

Anyone desiring to become a student at Bismarck State College may apply. However, there may be some limitations and restrictions to admission. Please refer to the following headings in this section of the catalog for information on admissions to BSC:

The general admission policy of the college does not ensure admittance to a particular program, because some programs have limited enrollment and/or academic or medical requirements.

Students who are not in good standing at all previous institutions attended, or do not meet all admission requirements will be classified as non-degree seeking students. Until the admission requirements are completed, these students may be denied future enrollment at BSC.

APPLICATION PROCESS

ADMISSION OF NEW STUDENTS

You are a new student if you have not attended a post-secondary institution since completing high school and you are planning to be degree seeking and/or applying for financial aid. (You would be considered a new student if you enrolled in college level coursework while still attending high school).

A complete admissions file includes:

• BSC application for admission
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• An official high school transcript or proof of successful completion of the GED. Ask your high school to mail one final, official transcript showing all your high school grades and graduation date to BSC. Do not have the transcript sent until after graduation. If you completed your GED (high school equivalency) exam, have the results sent to BSC.
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella, or by presenting proof of date of birth prior to 1/1/57. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies only to on-campus students.
• Results of the American College Test (ACT) or the Scholastic Aptitude Test (SAT). This is required of students 24 years of age or under and/or students with less than 24 semester (36 quarter) hours of completed college credit. Students with ACT scores more than five years old must also complete the COMPASS placement exam.
• COMPASS placement exam. BSC requires all students ages 25 or older to submit COMPASS assessment scores in the areas of English, math and reading, unless exemptions apply. All students who plan to take an English or math course must submit appropriate assessment scores prior to enrollment. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.
• If you have attended other colleges, ask them to mail one official and complete transcript, showing courses attempted and grades earned to BSC. Transcripts must be signed by a school official and contain the official school seal.

*Exemptions may apply.

ADMISSION OF TRANSFER STUDENTS

You are a transfer student if you have attended one or more post-secondary institutions (after high school graduation) other than BSC.

A complete admissions file includes:

• BSC application for admission
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• An official high school transcript or proof of successful completion of the GED. Ask your high school to mail one final, official transcript showing all your high school grades to BSC. If you completed your GED (high school equivalency) exam, have the results sent to BSC. This is not required of applicants who have completed 24 or more semester hour (36 quarter hours) of college level coursework.
• Official transcripts of all colleges/universities previously attended. These must be sent directly from the institutions and must show all courses attempted and grades earned. Transcripts must be signed by a school official and contain the official school seal.
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella, or by presenting proof of date of birth prior to 1/1/57. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies only to on-campus students.
• Results of the American College Test (ACT) or the Scholastic Aptitude Test (SAT). This is required of students 24 years of age or under and/or students with less than 24 semester (36 quarter) hours of completed college credit. Students with ACT scores more than five years old must also complete the COMPASS placement exam.
• COMPASS placement exam. BSC requires all students ages 25 or older to submit COMPASS assessment scores in the areas of English, math and reading, unless exemptions apply. All students who plan to take an English or math course must submit appropriate assessment scores prior to enrollment. Transfer students’ transcripts will be evaluated to determine if exemptions apply. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.

*Exemptions may apply.

ADMISSION OF RETURNING STUDENTS
Welcome Back! You are a returning student if you have previously taken classes and/or graduated from BSC after graduation from high school. You may not need to re-submit any official documentation that we have previously received.

A complete admissions file includes:
• BSC application for admission
• If you attended other institutions after leaving BSC, you will need to submit official transcripts of all colleges/universities previously attended. These must be sent directly from the institutions and must show all courses attempted and grades earned. Transcripts must be signed by a school official and contain the official school seal.
• Other official documents, if not previously submitted

ADMISSION OF NON-DEGREE STUDENTS
A non-degree student is any student who has not met the necessary admission requirements or is not pursuing a degree or vocational program. Credits earned cannot be credited toward a degree or program diploma until all admissions requirements have been satisfied and their credit records evaluated by the Registrar.

Non-degree students are not eligible for graduation and are not eligible to receive any Title IV financial aid. Non-degree seeking students who want to change to degree-seeking must do so prior to course registration for that semester.

Note: If a non-degree seeking student is already registered in classes for the semester, the change will be effective for the next semester.

A complete admissions file includes:
• BSC application for admission
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of date of birth prior to 1/1/57. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies only to on-campus students.
• ACT, SAT, COMPASS or college transcripts will be required of students enrolling in English, math or courses that have a pre-requisite. The college transcript will only be used for placement and will not be officially evaluated. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.
• Complete the Non-Degree Seeking form, which will be either emailed or mailed for student’s signature. The form must be returned with signature prior to acceptance.

*Exemptions may apply.

ADMISSION OF EARLY ENTRY STUDENTS
Provides an opportunity for high school Juniors and Seniors to receive college credit. The letter grade received in the course will be posted on only the BSC transcript. The grades earned will not affect the high school G.P.A.

A complete admissions file includes:
• BSC application for admission
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• Permission from parent/guardian and high school administrator
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies to on-campus students only.
• ACT/COMPASS Placement Test Scores. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.

*Exemptions may apply.

ADMISSION OF DUAL CREDIT STUDENTS
Provides an opportunity for high school Juniors and Seniors to receive both high school and college credit. The letter grade received in the course will be the same and posted on both the high school and college transcript.

A complete admissions file includes:
• BSC application for admission.
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• North Dakota University System Dual Credit Enrollment Application.
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies to on-campus students only.
• ACT/COMPASS Placement Test Scores. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.

*Exemptions may apply.

ADMISSION OF COLLABORATIVE STUDENTS

A collaborative student is a student who is earning their degree from BSC, but will be taking a course(s) at another NDUS institution within the same term. BSC will be the “Home Institution” and the other NDUS institution will be considered “Provider Institution.” If BSC is your “Provider Institution,” you must meet all admissions requirements of your “Home Institution.” Also, you must meet all pre-requisites of courses taken at your “Provider Institution.” Students are only eligible for graduation and to receive any Title IV financial aid from the “Home Institution.”

A complete admissions file includes:
• BSC application for admission
• Pay a $35 application fee.* This is non-refundable, but must be paid only once.
• An official high school transcript or proof of successful completion of the GED. Ask your high school to mail one final, official transcript showing courses attempted, grades and graduation date to BSC. Do not have the transcript sent until after graduation. If you completed your GED (high school equivalency) exam, have the results sent to BSC.
• Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella, or by presenting proof of date of birth prior to 1/1/57. Exemptions to this policy may be granted for medical reasons (certified by a licensed physician) or personal beliefs. Applies only to on-campus students.
• Results of the American College Test (ACT) or the Scholastic Aptitude Test (SAT). This is required of students 24 years of age or under and/or students with less than 24 semester (36 quarter) hours of completed college credit. Students with ACT scores more than five years old must also complete the COMPASS placement exam.
• COMPASS placement exam. BSC requires all students ages 25 or older to submit COMPASS assessment scores in the areas of English, math and reading, unless exemptions apply. All students who plan to take an English or math course must submit appropriate assessment scores prior to enrollment. Transfer students’ transcripts will be evaluated to determine if exemptions apply. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.
• If you have attended other colleges, ask them to mail one official and complete transcript, showing courses attempted and grades earned to BSC. Transcripts must be signed by a school official and contain the official school seal.
• Students are also required to complete the Collaborative Registration Form to determine eligibility.

*Exemptions may apply.

ADMISSION OF INTERNATIONAL STUDENTS

All documents submitted must be translated into English and certified as to their authenticity and accuracy. The I-20 will not be issued by BSC until the admissions file is complete.

A complete admissions file includes:
• BSC application for admission
• Pay a $35 application fee. This is non-refundable, but must be paid only once.
• An official high school (secondary school) transcript, showing dates of attendance, courses attempted, grades and date of graduation. This must be sent directly from the high school.
• Submit one FINAL, OFFICIAL college transcript from colleges previously attended. The transcript must show dates of attendance, courses attempted, grades etc. If you are requesting to have courses evaluated for transfer credit, a course-by-course evaluation of non-U.S. postsecondary credentials is required. The evaluation form may be obtained at www.WES.org. The form must be submitted with official transcripts/academic records from all post-secondary schools attended, along with word-for-word English translations. There will be
a cost to the student for the service charged by the World Education Service. There is no guarantee that the credits will transfer.

- Complete COMPASS assessment (taken on the BSC campus, required for all international students.)
- Documented proof of immunity to measles, mumps, and rubella. Immunity can be proven by presenting evidence of having had two immunizations (doses of MMR vaccine) more than one month apart from a licensed physician or authorized representative of a state or local health department or by presenting proof of a positive serologic test for measles, mumps and rubella. Tuberculosis Screening may also be applicable. Read Tuberculosis Screening for International Students at bismarckstate.edu/student/admissions/screening.pdf.
- Results of the American College Test (ACT). This is only required for Canadian students under the age of 25.
- International students (whose first language is not English) must submit certification of satisfactory completion (score of 525 or better for paper-based test; score of 195 or better for computer-based test, or score of 70 for internet-based) of the Test of English as a Foreign Language-TOEFL, before they will be considered for admission to BSC. TOEFL results must be recent and verifiable. Information regarding TOEFL can be obtained by contacting: TOEFL Box 899, Princeton, NJ 08541.
- Completed Declaration of Finance form. Documentation must show a source of full financial support for all years of attendance at BSC. You should be prepared to provide additional certified bank records or other pertinent documentation upon request.
- Medical Insurance: All International students who enroll at BSC are required to purchase a medical health insurance policy which remains in effect for the duration of study. The premium for coverage under this plan will be billed directly to the student. The annual fee must be paid in full at the beginning of the first year and prior to each subsequent year of study. The insurance will be coordinated by the International student admissions office. (Students from Canada and Norway are exempt).
- A copy of your passport, including passport expiration date and the U.S. entry visa stamp in the passport with expiration date (except Canadians) - after a student arrives on campus.

ADMISSION OF BACHELOR OF APPLIED SCIENCE (BAS) IN ENERGY MANAGEMENT STUDENTS

The BAS in Energy Management is designed for individuals interested in supervisory and management positions in the energy industry. The BAS builds on energy related foundations developed in previously completed energy education programs and includes General Education classes, Core Management courses and Energy Management courses. This program is offered entirely online.

A complete admissions file includes:
- BSC application for admission
- Pay a $35 application fee.* This is non-refundable, but must be paid only once.
- Completion of an Associate in Applied Science (AAS), Certificate or Diploma in an accredited and approved program in an energy related field. Previous college coursework along with industry experience/training may also be considered.
- Official transcripts of all colleges/universities previously attended. These must be sent directly from the institutions and must show all courses attempted and grades earned. Transcripts must be signed by a school official and contain the official school seal.
- COMPASS placement exam. BSC requires all students ages 25 or older to submit COMPASS assessment scores in the areas of English and math, unless exemptions apply. All students who plan to take an English or math course must submit appropriate assessment scores prior to enrollment. Previous students’ transcripts will be evaluated to determine if exemptions apply. If the COMPASS placement exam is not available in their area, students may be eligible to take the ACCUPLACER assessment.

* Exemptions may apply.

LIMITED ENROLLMENT PROGRAMS

Acceptance for admission does not automatically guarantee an applicant acceptance in all courses or programs. Some programs require students to obtain specific placement scores before being accepted into the program (see Student Assessment), and some accept a limited number of students each year. Acceptance into these programs is generally on a first-come, first-served basis.

The following programs have limited enrollment.
- Automotive Collision Technology
- Automotive Technology
- Carpentry (Residential)
- Electronics Technology
- Electronics/Telecommunications Technology
- Graphic Design and Communications
- Heating, Ventilation and Air Conditioning
- Instrumentation and Control Technology
• Lineworker (Electrical)
• Mechanical Maintenance Technology
• **Medical Laboratory Technician
• **Nursing
• **Paramedic (EMT-P)
• **Petroleum Engineering Technology
• Power Plant Technology (on campus)
• **Practical Nursing
• Process Plant Technology (on campus)
• Renewable Generation Technology (on campus)
• **Surgical Technology
• Welding

Applicants for these limited enrollment programs must do the following:
1. Complete admissions file according to your admission status
2. Review and meet program specific required placement scores
3. Students applying for the Graphic Design and Communications Program must complete a personal interview with faculty in that program. To set up an appointment, please contact Tom Marple at 701-224-5563 or Sean Thorenson at 224-5564.
4. Students applying for the online Electronics Technology and online Instrumentation and Control programs must complete an interview with faculty in those programs. To schedule an appointment, please contact Bob Arso at 224-5416 or Vance Vesey at 224-2442.
5. Students accepted by the Lineworker, Surgical Technology, and Welding programs must see a licensed physician for a physical examination and submit the completed physical exam form. This is a requirement after admission to one of these programs.
6. Applicants are encouraged to contact the selected program to set up an interview.
7. Pay a $100 tuition deposit when you are accepted into the program. This is non-refundable if you decide not to attend BSC.

** Programs do not require the tuition deposit

COURSE PLACEMENT
Bismarck State College uses placement testing to ensure all students begin their college education by taking the right level of courses. Research shows that when students enter the proper sequence of math and English courses, it is not only helpful within these courses, but it also has a beneficial effect on other classes taken.

The purpose of placement testing at Bismarck State College is to match the academic readiness of the incoming student with the academic requirements of the curriculum. If test results do not meet the standards of college-level courses, students are required to register in courses which help them to improve their learning and increase their opportunity to succeed in college.

Although the tests do not affect admission to the college, students will be required to meet established criteria in certain courses and programs.

Exemptions to the placement testing policy are as follows:
• Students who present ACT official score reports dated within the last five years.
• Students who present COMPASS or ACCUPLACER official score reports dated within the last three years.
• Students who have completed college-level composition and math courses with a grade of “C” or better.
• Students showing proof of having earned a baccalaureate or higher.
• Students who enroll only in courses on an audit basis.

ACT Exam
The ACT exam is designed to assess high school students’ general educational development and their ability to complete college-level work. The North Dakota Board of Higher Education requires all first time students ages 24 or younger and/or students with less than 24 semester hours of completed college credit to submit ACT placement scores.

Registration of high school students for the ACT exam can be done through their high school counselor or by simply registering online at www.actstudent.org

COMPASS Placement Exam
Bismarck State College requires all students who are 25 or older to submit COMPASS assessment scores in the areas of English, math, and reading, unless exemptions apply. Students with ACT scores more than five years old must also complete the COMPASS Placement Exam. All students who plan to take an English or math course must submit appropriate and current assessment scores prior to enrollment.

COMPASS is a computerized adaptive placement testing system that measures skills in math, reading, and English. Because the exam is adaptive, there is no fixed set of testing questions. Each test is made up of a unique collection of items pulled from a database pool. With no time limit, typically students will spend around 1 1/2 – 2 1/2 hours to complete the full test battery. Even though the placement exam is computerized, computer skills are not necessary. COMPASS is user friendly and is designed for individuals with little or no computer experience.

To schedule an appointment to take the COMPASS exam at Bismarck State College go to: http://www.bismarckstate.edu/current/testing/placement-testing/ and click the COMPASS box in black, white and red or call Testing and Assessment Services at 701-224-5658.

The BSC Testing Services office is located in Schafer Hall Room 205. There is a fee to be paid at Student Finance prior to taking the exam and the receipt of payment and photo ID is necessary at the time of testing.
ACCUPLACER Exam

ACCUPLACER is a computer adaptive placement exam that Bismarck State College has available to distance learners. Its purpose is to provide students with useful information about their academic skills. It is not pass/fail; instead, scores will be used to help place students in the level where they will find the most success. Students will have their scores screened for proper placement in English, math, and reading and for admittance into limited enrollment Technical Programs.

ACCUPLACER is for learners 25 years or older who had not taken the ACT or COMPASS exam. This test is valid from three years from the test date.

ACCUPLACER must be administered in an educational, business, or public setting. For no reason is it ever allowed to be given in a student’s home. ACCUPLACER must be administered and supervised by a proctor. Proctors will complete the Proctor Agreement Form found on the Bismarck State College website to receive passwords and testing information.

Placement Score Requirement

Students registering for a math or English course must meet certain placement requirements prior to registering for a college level course. The placement scores have been developed by the departments to reflect the probability of academic success. Each department has designated placement score requirements for ACT, COMPASS and ACCUPLACER exams. When testing indicates the need for developmental work, students must successfully complete the developmental sequence as determined by the exam.

Technical Program Requirements

Students applying for admission to limited enrollment Technical Programs are required to obtain specific placement scores before being accepted in that program. The placement scores are developed to reflect the probability of academic and employment success. Each program has designated placement score requirements for ACT, COMPASS and ACCUPLACER exams. Some programs will have a composite placement score, whereas others will have placement scores in specific areas, such as math or English.

The following programs require minimum admission scores to be met in order to get into the program:

- Automotive Collision Technology
- Automotive Technology
- Carpentry
- Electric Power Technology
- Electronics Technology
- Electronics/Telecommunications Technology
- Graphic Design and Communications
- Heating, Ventilation and Air Conditioning
- Instrumentation and Control Technology
- Lineworker (Electrical)
- Mechanical Maintenance Technology
- Nuclear Power Technology
- Petroleum Engineering Technology
- Petroleum Production Technology

*Minimum score needed for Math 103 College Algebra ONLINE.
ADMISSION/CONTINUED ENROLLMENT
OF INDIVIDUALS WITH DEFAULTED
LOANS AND DELINQUENT ACCOUNTS

A student in default on a Perkins Loan granted under the federal educational lending acts or other student financial assistance programs may not be admitted, nor register, and grade transcripts for that student shall be withheld unless the student is granted a waiver.

A student who is delinquent in payment of tuition and registration fees, student activity fees or other student fees, room and board charges, library fees or fines, parking fees or fines, or any other debt owed the institution may not register and grade transcripts for the student shall be withheld until the debt is paid, unless the student is granted a waiver.

Copies of this policy, which includes how to apply for a waiver, are available in the Student Finance Office or at bismarckstate.edu/staff/humanresources and click on Policies and Procedures.
ESTIMATED COST PER SEMESTER TO ATTEND BSC BASED ON 16 CREDIT HOURS - LIVING OFF CAMPUS

<table>
<thead>
<tr>
<th></th>
<th>ND Resident Tuition Rate</th>
<th>MN/with Reciprocity Tuition Rate</th>
<th>Contiguous Tuition Rate</th>
<th>MSEP/MHEC &amp; WUE Tuition Rate</th>
<th>Non-Resident Tuition Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional Instruction</td>
<td>Traditional Instruction</td>
<td>Traditional Instruction</td>
<td>Traditional Instruction</td>
<td>Traditional Instruction</td>
</tr>
<tr>
<td>TUITION - based on student’s residency for 16 credits of traditional classroom classes</td>
<td>$1,794.24</td>
<td>2,337.12</td>
<td>2,242.88</td>
<td>2,691.36</td>
<td>4,790.56</td>
</tr>
<tr>
<td>MANDATORY FEES</td>
<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
</tr>
<tr>
<td>BOOKS/SUPPLIES</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
</tr>
<tr>
<td>ESTIMATED COST PER SEMESTER</td>
<td>$2,565.66</td>
<td>$3,108.54</td>
<td>$3,014.30</td>
<td>$3,462.78</td>
<td>$5,561.98</td>
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</tbody>
</table>

ESTIMATED COST PER SEMESTER TO ATTEND BSC BASED ON 16 CREDIT HOURS - LIVING ON CAMPUS

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
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<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
<td>$321.42</td>
</tr>
<tr>
<td>RESIDENCE HALL CHARGE (SWENSEN)</td>
<td>$898.50</td>
<td>$898.50</td>
<td>$898.50</td>
<td>$898.50</td>
<td>$898.50</td>
</tr>
<tr>
<td>MEAL PLAN - 7 DAY, 17 MEAL</td>
<td>$1,495.00</td>
<td>$1,495.00</td>
<td>$1,495.00</td>
<td>$1,495.00</td>
<td>$1,495.00</td>
</tr>
<tr>
<td>BOOKS/SUPPLIES</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
<td>$450.00</td>
</tr>
<tr>
<td>ESTIMATED COST PER SEMESTER</td>
<td>$4,959.16</td>
<td>$5,502.04</td>
<td>$5,407.80</td>
<td>$5,856.28</td>
<td>$7,955.48</td>
</tr>
</tbody>
</table>

Due Dates - Student account balances are due in full on the designated due date each semester. Students who add classes after the designated due date for the semester are responsible for paying charges at the time they add class(es). Designated due dates can be found on the Dates and Deadlines page at: bismarckstate.edu/current/records/calendarsdeadlines.

Residency - Students are encouraged to verify residency status in CampusConnection to ensure accurate tuition charges are being charged at the start of each term or session enrolled in.

- MN Residents are initially listed as a MSEP/MHEC until the student is approved for MN Tuition. Submit the MN Application for Reciprocity Status located at: bismarckstate.edu/current/finance.
- Contiguous states/provinces are Montana, South Dakota, Manitoba, Saskatchewan
- MSEP/MHEC-Midwest Student Exchange Program states are Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska and Wisconsin
- WUE-Western Undergraduate Exchange states are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming
- Non-Resident are all other states and countries

For further information on tuition/fees/room/board/residency/course fees/program fees/dates and deadlines (including payment due dates) or how to pay tuition/withdrawing to zero credits/dropping or adding classes please visit the BSC STUDENT FINANCE SERVICES website at: bismarckstate.edu and click on Current Students, Student Finance.
BOOKS/TOOLS

The total for books is an estimate for the year. Please refer to the BSC Student Finance Services website at bis-
marcostate.edu/campusconnection for dates and guidelines on purchasing books. Unless otherwise specified, the total cost of books can be split between the two semesters.

Students purchase tools from an outside vendor, except for students enrolled in electronics/telecommunications technology. Instructors will give students tool lists and possible vendors the first week of class. First semester students may not have financial aid available to cover tools to be purchased from an outside vendor. (All institutional costs must be paid before a student receives any excess financial aid to cover outside vendor or other expenses.)

**Estimated Costs for 2011-2012**

<table>
<thead>
<tr>
<th>Program</th>
<th>Tools</th>
<th>Supplies</th>
<th>Books</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Collision</td>
<td>1300.00</td>
<td>50.00</td>
<td>$275.00</td>
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<tr>
<td>Auto Tech</td>
<td>3000.00</td>
<td>x</td>
<td>800.00</td>
<td></td>
</tr>
<tr>
<td>Carpentry</td>
<td>1000.00</td>
<td>x</td>
<td>200.00</td>
<td></td>
</tr>
<tr>
<td>Electronics/Telecommunications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st yr</td>
<td>500.00</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>100.00</td>
<td>x</td>
<td>450.00</td>
<td></td>
</tr>
<tr>
<td>Lineworker</td>
<td>1800.00</td>
<td>x</td>
<td>500.00</td>
<td></td>
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<tr>
<td>Graphic Design and Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st yr</td>
<td>500.00</td>
<td>$700.00</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>100.00</td>
<td>$600.00</td>
<td>520.00</td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>$750.00</td>
<td>$200.00</td>
<td>$500.00</td>
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<tr>
<td>Instrumentation &amp; Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st yr (First year same as Electronics)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Yr</td>
<td>50.00</td>
<td>x</td>
<td>1100.00</td>
<td></td>
</tr>
<tr>
<td>Mechanical Maintenance</td>
<td>350.00</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>1st yr</td>
<td>300.00</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>300.00</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>Power Plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st yr</td>
<td>x</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>x</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>Process Plant</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1st yr</td>
<td>x</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>x</td>
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<tr>
<td>Renewable Generation</td>
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<tr>
<td>1st yr</td>
<td>x</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>2nd yr</td>
<td>x</td>
<td>x</td>
<td>600.00</td>
<td></td>
</tr>
<tr>
<td>Welding</td>
<td>300.00</td>
<td>x</td>
<td>350.00</td>
<td></td>
</tr>
<tr>
<td>All other programs - $400.00-1000.00</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

NON-RESIDENT TUITION REGULATIONS

If you are not a resident of North Dakota, but you wish to declare residency for tuition purposes, contact the BSC Student Finance Services. You will be asked to complete an Application for Resident Student Status. The completed application will assist the college to determine your legal residence for tuition purposes.

The following guidelines are condensed from the State Board of Higher Education policy on non-resident tuition. A copy of the policy is available in BSC Student Finance Services.

NDCC Section 15-10-19.1 governs determination of residency for tuition purposes. Pursuant to section 15-10-19.1, a resident student for tuition purposes means:

a. A person whose custodial parent, guardian, or parents have been a legal resident of North Dakota for twelve months immediately prior to the beginning of the academic term;

b. A person eighteen years of age or older who has been a legal resident of North Dakota for twelve months immediately prior to the beginning of the academic term;

c. A person who graduated from a North Dakota high school;

d. Active duty military for more than 30 days (includes National Guard and Reserves if active duty for other than training purposes), Member of the North Dakota National Guard, Military Veteran (Veteran is defined as an individual who has served on continuous federalized active military duty for one hundred eighty days or the full period for which the individual was called or ordered to active military duty for reasons other than training, and who was discharged or released under other than dishonorable conditions. A discharge reflecting “expiration of term of service” or “completion of required service” or words to that effect qualifies the shorter term of service as making the individual a veteran);

e. A spouse or a dependent of a full-time active duty member of the armed forces, a member of a North Dakota National Guard unit or a veteran as defined in NDCC section 37-01-40 of all of the above;

f. A spouse or dependent of an employee of any institution of higher education in the state;

g. The spouse of any person who is a resident for tuition purposes;

h. Any other person who was a legal resident of this state for at least three consecutive years within six years prior to the beginning of the academic term; or

i. A child, spouse, widow, or widower of a veteran as defined in NDCC section 37-01-40 who was killed in action or died from wounds or other service-connected causes, was totally disabled as a result of service-connected cause, died from service-connected disabilities, was a prisoner of
war, or was declared missing in action.

Definitions: “Dependent” means only a person claimed as a dependent on the most recent federal tax return. “Member of the armed forces” means only full-time active duty members of the armed forces, and not national guard or reserve members who are not on active duty status. “Spouse” means both parties to a marriage recognized by the state of North Dakota, including those subject to an order of legal separation but not divorced persons.

HOUSING

Residence Halls

BSC has four residence halls. Students applying for on-campus housing should do so as early as possible. Applications for housing are available in the Student and Residence Life Office in the Student Union or on the Web at bismarckstate.edu/life/residencehalls. When applying for housing, a $25 non-refundable application must be included with the application.

All cancellations must be received in writing 30 days prior to the official residence hall move in day. A cancellation fee of $75 will be charged for those cancelling in the 30-day period prior to the official move in day.

Summer housing is available. Information and an application are available from the Student and Residence Life Office, 701-224-5464, or on the Web at bismarckstate.edu/life/residencehalls.

Housing options and costs 2011-2012

<table>
<thead>
<tr>
<th>Housing Option</th>
<th>Cost per Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swensen Hall (All Female)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$1306.00</td>
</tr>
<tr>
<td>Double Room</td>
<td>$898.50</td>
</tr>
<tr>
<td>Swensen Hall (All Female) – Summer Session (8-wk.)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$653.00</td>
</tr>
<tr>
<td>Double Room</td>
<td>$449.25</td>
</tr>
<tr>
<td>Werner Hall (All Male)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$1306.00</td>
</tr>
<tr>
<td>Double Room</td>
<td>$885.00</td>
</tr>
<tr>
<td>Werner Hall (All Male) – Summer Session (8-wk.)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$653.00</td>
</tr>
<tr>
<td>Double Room</td>
<td>$442.50</td>
</tr>
<tr>
<td>Lidstrom Hall (Co-ed)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$1196.50</td>
</tr>
<tr>
<td>Double Room</td>
<td></td>
</tr>
<tr>
<td>Lidstrom Hall (Co-ed) – Summer Session (8-wk.)</td>
<td></td>
</tr>
<tr>
<td>Single Room (on available basis only)</td>
<td>$598.00</td>
</tr>
<tr>
<td>Double Room</td>
<td></td>
</tr>
<tr>
<td>Mystic Hall (Co-ed)</td>
<td></td>
</tr>
<tr>
<td>Double Room</td>
<td>$1330.00</td>
</tr>
<tr>
<td>Mystic Hall (Co-ed) – Summer Session (8-wk.)</td>
<td></td>
</tr>
<tr>
<td>Double Room</td>
<td>$665.00</td>
</tr>
</tbody>
</table>

Room rents must be paid in advance for the semester. There will be no refunds for absences. All college students living in the residence halls must contract for a meal plan through the college Food Services.

BOARD RATES (MEAL PLANS)

On-Campus Students

Students living in the residence halls have the convenience of a board contract (meal plan) to eat on campus in the college Food Services cafeteria. Residence hall students sign up for a board contract when they fill out a housing and board contract with the Student and Residence Life Office.

Options and costs - 2011-2012

<table>
<thead>
<tr>
<th>Meal Plan</th>
<th>Cost per Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Meal Plan</td>
<td>$1412.00</td>
</tr>
<tr>
<td>2 meals each day – M-F, 1 meal each day – Sat and Sun</td>
<td></td>
</tr>
<tr>
<td>17 Meal Plan</td>
<td>$1495.50</td>
</tr>
<tr>
<td>3 meals each day – M-F, 1 meal each day – Sat and Sun</td>
<td></td>
</tr>
</tbody>
</table>

Costs are subject to change without notice. Prices shown are those in effect at time of printing. See current meal plan rates at bismarckstate.edu/life/residencehalls.

During school holidays and vacation periods, Food Services will be closed. Board contracts must be paid in advance for the semester or for the time contracted. There will be no refund for absences.

Off-Campus Students (Commuters)

Students living off campus may sign up for the convenience of a board contract (meal plan) to eat on campus. A variety of meal plans are available for the commuter student, including a 5-meal plan (one meal per day, no weekends).

For complete information regarding board contracts, contact the Student and Residence Life Office in the Student Union.

PAYMENT DUE DATES FOR FALL AND SPRING SEMESTERS

All balances are due in full by the designated due date for the applicable semester. Payment due dates can be found at bismarckstate.edu and click on Current Students, Student Finance, Deadlines Schedule. Failure to pay in full by the designated due date will result in receiving a 1.75% late fee on any balance considered 30 days past due. Payments can be made online directly to the students account through a secure site with check, check card, or credit card. Students can assign an authorized user access to make payments directly on the student account. For further information go
DROPPING A CLASS

If you are receiving financial aid your financial aid file must be complete by the designated tuition due date for the semester. Students who have incomplete financial aid files on the semester due date, are required to pay their balance in full.

Students covered by a third party (employer, Workers Compensation, Job Service, etc) must have their third party authorization/voucher in BSC Student Finance Services on or before the designated semester due date or on the date the student registers for the class if the registration for the class takes place after the designated due date for the semester.

CANCELLATIONS/WITHDRAWALS

If you have registered for any semester and have decided not to attend any classes at BSC for the designated semester, it is your responsibility to WITHDRAW from school prior to the 8.999% point of the semester (or class). Refunds on total withdrawals are based on the current classes students are enrolled in at the time of the withdrawal. Any classes dropped through the drop process prior to a total withdrawal being processed will not be refunded. Failure to follow the proper procedures will result in the student owing tuition for the semester. To totally cancel/withdraw from school, the student must access the Hardship Drop/Withdrawal form online.

Students are unable to withdraw from college if any class they are enrolled in has ended. In this case, students can drop any remaining classes within the designated time frame that drops are allowed for those classes still in session. Students will not obtain a refund on any of these classes if the class is at 8.999% or after this point of time.

For Dates and Deadlines, go to bismarckstate.edu/current/records/withdraw.

DROPPING A CLASS

Students who wish to drop/add a class(es) must do so on the BSC website by going to CampusConnection, and signing in with their userid and password. Students who drop a class after the 8.999% point in time of the class do not receive a refund on the class. (Students who intend to totally withdraw should not use this process, as the system will not allow the last class to be dropped. If any classes are dropped with the drop process instead of the withdrawal process, when it is the students intention to totally withdraw from college, a refund will not be issued on any classes dropped after 8.999% of the class is complete.) See Withdrawal Process for total withdrawal from college. Students are unable to drop any class if the class they intend to drop has ended. For CampusConnection help, go to bismarckstate.edu/connection.

REPAYMENT OF FINANCIAL AID

If a student received Title IV funds, the refund and any unearned financial aid the student has received will be applied to the Title IV financial aid program per federal law. The student will be responsible for repaying the difference between any institutional refund and the amount of unearned aid received at the time of official withdrawal. Allocation of unearned aid shall be consistent with federal law. Any balance after allocation to sources of aid and payment of the student’s account shall be returned to the student. This refund policy shall not apply to deposits which may be subject to forfeiture under housing contracts or program admission policies.

Students who receive Title IV financial aid and receive all “F’s” (failing grades) for the semester will be responsible for repaying all unearned financial aid received. Students who discontinue attending classes must initiate and complete the formal withdraw to zero credits process through the Academic Records Office to avoid failing grades.

Students who fail to repay the student portion of unearned excess financial aid (other than student loans) at the time of withdrawal or at the time of determination of “non-attendance” will be reported to the US Department of Education for collection. Students who fail to repay the unearned financial aid used to pay any of the student charges at BSC at the time of withdrawal or at the time of determination of “non-attendance” will be reported to a collection agency. (i.e., If you quit school and do not officially withdraw, you will owe BSC and the US Department of Education if you received financial aid.)

ADDING A CLASS

Students who add a class after the designated due date for the semester are required to pay for the class at the time the class is added. For CampusConnection help, go to bismarckstate.edu/connection.

TUITION/FEE REFUNDS AND ACCOUNT ADJUSTMENTS

Refunds and adjustments to amount(s) due are determined by the date the student completes the Drop/Add process through CampusConnection. The computer system is set to calculate and process based on the date the student completes any process. It is a student responsibility to follow the proper procedures and be familiar with the last date to drop/add and withdraw to zero credits along with the dates and deadlines schedule.

Refunds are not determined by class attendance. Students who drop one or more courses or who completely withdraw from BSC will be obligated to BSC for that portion of the tuition/fee cost based on the date the student successfully completes the process. Students have access to their class schedule and student account online. It is the students responsibility to check their schedule and account
to verify they have completed any process successfully. Failure to follow the official add, drop, or withdraw process will result in the student owing all or part of the tuition/fees and possibly failed grades.

Students who drop a class prior to the completion of 8.999% of days passed out of the total number of days scheduled for the class will receive a 100% refund of tuition and fees for the credit hour attributable to the class dropped. After the 8.999% of the schedule calendar days of the class which is dropped, no refund shall be made for the class dropped. For CampusConnection help, go to bismarckstate.edu/connection. Students dropping and adding classes equivalent to the same number of credit hours and tuition/fee charges can swap classes prior to the completion of 8.999% of the class. Classes cannot be swapped after 8.999% (last day for 100% refund) of the class is completed. The Dates and Deadlines Schedule will provide the last date to drop at 100% refund. If adding classes results in an increase in credit hours, change in tuition/fees charged, the student will be responsible for any costs due to the class change.

**REFUND POLICY**

The following refund policy will apply as per the Board of Higher Education Policy 830.2. Policy is available in BSC Student Finance Services.

Refunds on board contracts will be prorated. Refunds on room contracts for students who withdraw to zero credits will receive a refund prorated up to sixty percent of the enrollment period. Students living on campus who do not withdraw, but decide to move out of the dorm and break the contract will be responsible for the dorm costs, until the room is filled.

**Refund for students Withdrawing or Expelled from College (dropping all classes)**

This policy can be seen in BSC Student Finance Services.

This policy applies to refunds of institutional charges to students who withdraw, drop out, are expelled, or otherwise fail to complete a program on or after the first calendar day of the class of the enrollment period for which they are charged. “Institutional charges” means tuition, fees, room, board and other educationally-related charges assessed the student by the institution.

Each institution shall adopt a written procedure to comply with requirements of federal law and implementing regulations and this policy concerning refunds to students and the Return of Title IV Funds. The written procedures shall include the allocation of refunds and unearned aid in the order specified by law. The information must be made available to current students and to prospective students (individuals who contact the institution to request information concerning admission) prior to the earlier of a student’s enrollment or the execution of the student’s enrollment agreement. The information shall include the procedures a student needs to follow to withdraw from the institution and the policy with which the institution is required to comply for the return of unearned institutional charges paid to the institution and a summary of the requirements for the return of Title IV grant or loan assistance and provide that refund.

Institutional charges shall be refunded according to a schedule approved by the Chancellor that provides for a percentage refund which approximates the amount the institution must return to the Title IV financial aid programs. Institutional refunds shall be used to reimburse Title IV financial aid only. If the amount of a student’s institutional refund is less than the total amount the institution is responsible for returning to the Title IV financial aid programs, the student is responsible for the difference. In addition, no administrative fee shall be charged.

Students who totally withdraw from a regular term within 8.999% of the calendar days for a class, shall receive a 100% refund of tuition and fees. Students with a room contract who withdraw will receive a refund prorated up to the sixty percent point of the enrollment period according to a schedule approved by the Chancellor. Students with a board contract who withdraw will receive a refund of the board contract amount according to a schedule approved by the Chancellor.

Allocation of unearned aid shall be consistent with federal law. Any balance after allocation to sources of aid and payment of the student’s accounts shall be returned to the student. Any student who finds it necessary to withdraw during the term for reasons beyond the student’s control may submit a “Hardship Drop/Withdraw” if the hardship falls within the hardship reasons. The Student Finance Operations Manager is authorized to determine, consistent with applicable federal law, the amount of the refund in such cases. This refund policy shall not apply to deposits which may be subject to forfeiture under housing contracts or program admission policies.

**FINANCIAL AID**

Student financial aid is designed to assist students who, without such aid, would be unable to attend college. The various types of aid available through federal and state programs are considered a supplement to the student’s own financial resources. Grants, loans, scholarships, tuition waivers and part-time employment are the types of aid available from federal and state programs.

In addition, local scholarship programs are available to students on a basis other than financial need.

Students should apply for all types of financial aid before March 15 to receive full consideration. Applications must be made each academic year because renewal of financial aid is not automatic.

Following are descriptions of federal, state and local programs available to Bismarck State College students. Further information is available from the Financial Aid Office in Schafer Hall. Or visit our website at bismarckstate.edu/current/financialaid
FEDERAL PROGRAMS

Students who wish to be considered for federal financial aid programs need to do the following:
1. Complete all admission requirements.
2. Complete the Free Application for Federal Student Aid. You may also complete the application for the admission online at bismarckstate.edu. The Free Application for Federal Student Aid is available online at www.fafsa.gov.

The Financial Aid Office processes applications using a priority funding deadline date of March 15. The amount of aid awarded to students depends on the funds made available from the federal government. To be considered for federal financial aid programs, students must be enrolled in an eligible program, be a U.S. citizen or eligible non-citizen, demonstrate satisfactory progress in school (maintain at least a 2.00 cumulative grade point average), not be in default on any U.S. Department of Education grant, be registered with the Selective Service (if male) and demonstrate financial need.

For a complete detailed listing of the following federal financial aid programs, please request a copy of the “Student Guide” from the Financial Aid Office. This document is also available at http://studentaid.ed.gov/guide.

Federal Pell Grant. Grants are available to all students who qualify, regardless of their enrollment status.

Federal Supplemental Educational Opportunity grants (SEOG). These grants are provided to limited number of undergraduate students with financial need. They must be awarded to students who are eligible for the Federal Pell Grant and meet the priority deadline of March 15.

Federal Perkins Loan. Perkins Loans are funded by the federal government at a low interest rate and awarded to students who qualify and have met the priority funding deadline of March 15.

Federal Direct Loan. The federal government pays the interest on the loan while the student is in school. Repayment and interest begin six months after the student graduates, leaves school, or drops below half-time enrollment.

Federal Direct PLUS Loan. Repayment of principal and interest begins within 60 days of loan disbursement. Parents may borrow up to the cost of education, less other financial aid the student receives. Requires at least half-time enrollment.

Federal Direct Unsubsidized Loan. The program has the same benefits and interest rates as the federal Direct Loan. Except that the student is responsible for the interest from the time the loan is obtained.

STATE PROGRAMS

Some financial assistance is available through several state agencies. For further information and applications, contact the agency as indicated.

North Dakota State Grant Program. Grants are limited to North Dakota residents who attend North Dakota institutions of postsecondary education. For further information contact the N.D. Student Assistance Program, State Capitol, Bismarck, ND 58505. Phone 328-4114. Requires full-time enrollment.

North Dakota Indian Scholarships are available to qualifying Native American students. Contact ND Indian Affairs Commission, State Capitol, Bismarck, ND 58505. Phone 328-2166.

N.D. Academic Scholarship/N.D. Career and Technical Scholarship are two merit based scholarships. The requirements of the scholarships are closely tied to high school diploma requirements and to ACT and WorkKeys assessment scores. The application is available online through the Department of Public Instruction (http://www.dpi.state.nd.us/scholarship) and may be completed and submitted from March 1 through June 7. Only graduating high school seniors are eligible to apply.

BSC FOUNDATION SCHOLARSHIPS

The Trustees of the Bismarck State College Foundation award scholarships to students of outstanding ability, regardless of sex, race, creed or national origin. Half of the cash award is disbursed at the beginning of each semester. Several types of scholarships are available:

Academic Scholarships. More than 200 $1,000 academic scholarships are awarded each year to students who have demonstrated academic excellence. The recipients, known as “Foundation Scholars,” must carry a minimum of 15 credit hours both semesters and maintain at least a 3.0 GPA to remain eligible for this scholarship. Both entering freshmen and returning sophomores who have maintained a good academic record are encouraged to apply. Twenty-nine additional $2,000 two-year academic scholarships will be awarded.

Performing/Visual Arts Scholarships. More than 40 $1,000 scholarships are awarded each year requiring recipients to carry a minimum of 12 credit hours both semesters and maintain at least a 2.50 GPA to remain eligible. Four $1,000 scholarships are awarded each year requiring 15 credit hours both semesters and a 3.0 GPA to remain eligible. These scholarships are awarded to students who have special talent in the areas of music, drama or visual arts. Recipients of performing/visual arts scholarships also must participate in performing/visual arts activities in their area of talent. The recommendation for this scholarship should be submitted by an instructor in the applicant’s area of talent.

Journalism Scholarships. Bismarck State College has several opportunities for students to get involved with publications and video productions including the student newspaper Mystician with its video component Mysticast, the yearbook Prairie Mystic and the literary arts magazine Figments of Imagination.

Journalism scholarships are available for students with special journalism skills. Each year the senior editor of the Mystician will receive the $1,000 Bismarck Tribune Celebrate 2000 Legacy Scholarship. Five additional scholarships will be awarded for assistant editors. The video editor of the Mysticast will be awarded a $1,000 scholarship.
for the year, and the senior editor of the *Prairie Mystic* will be awarded a $1,000 scholarship for the year.

Two $1,000 scholarships are available for students who are on the *Figments of Imagination* staff.

In addition to satisfactory service in these positions, recipients of the journalism scholarships must carry 12 credit hours both semesters and maintain a 2.5 GPA to remain eligible for these scholarships.

**Engineering Scholarships.** Three $1,000 engineering scholarships will be awarded to students majoring in engineering. The recipients must carry a minimum of 15 credit hours both semesters and maintain at least a 3.00 GPA to remain eligible for this scholarship.

**Other scholarships** are also offered to students enrolled in specific programs. These scholarships state specific criteria involving the program and are awarded separately from the academic, performing/visual arts and journalism scholarships.

Specific program scholarships may include the following programs:

- Agriculture, Technology and Natural Resources
- Automotive Technology
- Carpentry
- Chemistry
- Electronics/Telecommunications
- Graphic Design and Communications
- Heating, Ventilation, Air Conditioning
- Power or Process Plant Technology

For updated information and applications, please visit bismarckstate.edu/foundation/scholarships.

**Transfer Student Scholarships.** Three $4,000 scholarships are available to BSC graduates going on to four-year colleges. The Hites Family Foundation/Walter and Norma Fiedler Scholarship is awarded to help transferring students of high academic standing complete a baccalaureate degree. Scholarships are awarded annually and distributed over two years.

**OTHER AID PROGRAMS**

**Tribal Grant.** Financial programs are available to deserving and qualified Native Americans. Interested students should contact the education specialist at their local tribal agency. Requires full-time enrollment.

**Veterans’ Benefits.** Funds may be available to eligible veterans through the Veterans’ Administration. Further information is available from any Veteran Administration regional office or visit the BSC Veteran’s Services office or website: bismarckstate.edu/current/veterans/

**Other Scholarships.** Many local and state service clubs and professional organizations offer scholarships to students. Awarding of these scholarships may be based on talent and potential in a particular field of study, on recommendation from instructors and employers, on academic excellence, on financial need, or a combination of these. As these scholarships become available, they are posted on our website at bismarckstate.edu/current/financialaid/scholarshipsfinaid

North Dakota Nursing Education/Loan applicants must be North Dakota residents enrolled in a N.D. nursing program. Contact ND Nursing Educational/Loan, ND Board of Nursing, Kirkwood Office Tower, 7th and Arbor Avenue, Suite 504, Bismarck ND 58504. Phone 328-9777. The website is www.ndbon.org.

**Vocational Rehabilitation.** Students with a physical limitation or health problem may be entitled to certain benefits such as tuition, fees, and text book reimbursement. Contact the nearest Division of Vocational Rehabilitation at the district or general office.

**Workforce Investment Act.** This program helps economically disadvantaged persons who have limited job skills or experience. Contact the local Job Service office for information.

**WAIVERS**

**Cultural Diversity Tuition Waiver.** To apply, students must complete a BSC CDTW application form. This waiver is for on-campus courses only. For more details, contact the Financial Aid Office or BSC’s website.

**Survivor of Firefighter or Peace Officer Tuition/Fee Waiver.** Pursuant to N.D.C.C. 15-10-18.5, tuition and fees shall be waived for survivors of firefighters, emergency medical services personnel or peace officers who died as a direct result of injuries received in the performance of official duties, subject to the limitations stated in those statutes.

**Veteran Dependent Tuition/Fee Waiver.** Pursuant to N.D.C.C. 15-10-18.2 and 15-10-18.3, tuition and fees shall be waived for dependents of resident veterans who were killed in action, died of service-related causes, were prisoners of war or declared missing in action, subject to the limitations stated in those statutes.

**ND National Guard Tuition Waiver.** Contact your ND National Guard Unit for application deadlines and qualifications. The National Guard submits the amount of tuition to be waived for qualified National Guard, subject to the limitations stated in N.D.C.C., ch 37-07 and National Guard rules to BSC Student Finance Services at the end of the semester/term based on successfully completed courses.

**Senior Citizen Audit Fee Waiver.** Persons 65 years of age or older may receive a tuition waiver toward audited on-campus courses. This audit tuition waiver shall be limited to a “space available” basis after the last day to add the class. Students utilizing this audit fee waiver will be responsible for all mandatory fees and course related fees.

**FURTHER INFORMATION**

**Financial Aid** - Specific information on Grants, Loans, Scholarships, Waivers, Other Financial Aid, Forms can viewed at bismarckstate.edu/student/finaid/ The student policy on standards of satisfactory progress for financial
aid eligibility can be found under Student Policies. Upon Request, the Financial Aid Office will forward the necessary applications and a brochure explaining in greater detail financial aid opportunities at Bismarck State College.

**Student Finance Services** - Specific information on Tuition and Fees, Billing & Payment Information, Instructions on How to Pay Online, Dropping an Individual Class, Withdrawing to Zero Credits, Third Party Information, Bookstore Charging Against Financial Aid or a Third Party, Financial Aid FAQs, Other Student Finance Questions and 1098T Information can be viewed on the BSC website at bismarckstate.edu and click on Current Students, Student Finance.

**ONLINE SELF-SERVICE**

Students have the ability to apply to BSC and pay the application fee, complete the FAFSA, submit a Withdraw to Zero Credits form, view Dates and Deadlines, and obtain answers to most questions on the BSC website at: bismarckstate.edu/connection.

Through the CampusConnection Portal, students can obtain student account information; 1098T information; make a payment with check, credit card or cash card; drop an individual class; add a class(es); accept financial aid, and view financial aid. Sign into the CampusConnection Portal with your userid and password, then click on Student Center, choose academics or Finances.

This catalog was prepared before the 2011-12 academic year. For the most current information after May 2011, see the catalog on the Web at bismarckstate.edu/academics
FACULTY ADVISOR

An advisor assists a student in selecting courses to ensure a well-balanced education and helps interpret college policies and requirements. However, students are fully responsible for their academic decisions including selecting courses, meeting course requisites and adhering to policies, procedures and deadlines. Students are assigned to a faculty member who will serve as an advisor while enrolled at the College. In most cases the advisor will be an instructor in the course of study that the student has chosen. Students should see their advisor prior to registration. Advisor assignments may be viewed on CampusConnection.

MYSTIC ADVISING AND COUNSELING CENTER (MACC)

The MACC is a one stop student service center located in the lower level of the Student Union that provides advising, career and personal counseling, and employment services. The Multicultural Services office is also located in the MACC.

ADVISING

Advising services are available to assist students with general advising questions, degree planning, course registration, transfer questions and graduation applications.

CAREER COUNSELING

Career Counseling Services personnel offer assistance to help BSC students make informed decisions about career and educational goals, using a variety of resources to explore possible careers. After completing the self-assessment, occupational information, interest inventories, and a Job Shadow experience, the student will move toward selecting a major.

PERSONAL COUNSELING

Counseling is available to help students achieve productive and rewarding experiences while attending BSC. Personal counseling is a resource for assistance with personal problems, maintaining quality mental health, examining life goals, developing coping skills, and establishing positive relationships. Referrals to community agencies may also be arranged if necessary or requested by the student. Students do not have to have a “problem” to utilize a counselor; counselors are available to discuss personal growth issues.

EMPLOYMENT SERVICES

Referral activities assist students, faculty, and employers in developing a relationship for possible student employment. These activities may include on-campus interviews/informational sessions, workshops on resume/ cover letter writing, interviewing techniques, or electronic job search skills. Placement statistics are also available related to past graduates of BSC programs.

To better serve BSC student employment needs, the online career service system Job Seekers Network (https://www.myinterfase.com/bsc/student/) is available for students and alumni seeking employment with local, regional and national companies. Students should also consult with this office for assistance in finding part-time, summer, or permanent employment. Students are strongly encouraged to begin searching for employment at least one semester prior to completing their program.

MULTICULTURAL SERVICES

BSC’s Multicultural Services offer cultural-based student services to promote educational achievement, collegiate success, and cultural enrichment for students.

The office works closely with other BSC programs to offer student advising, career planning, college success skills, disability services, and tutoring support. Students can also receive assistance with referrals to on- or off-campus programs or agencies for counseling, housing, job services, transportation, and contact with local, state or tribal higher education agencies. Information on diversity-related scholarships and cultural diversity waivers is also available.

The office promotes campus diversity and cultural enrichment through Multicultural Club events, presentations, discussion forums, and other campus activities.

Visit the Web page at bismarckstate.edu/current/services/multicultural.

ORIENTATION

bismarckstate.edu/current/orientation/

The college’s student orientation program provides flexible and ongoing opportunities to broaden students’ educational and social opportunities that begin with admission and continue into the first semester. The Mystic G.P.S (Guide for Planning Success) is one piece of the orientation program that provides virtual information to all new students prior to registering for classes. The Mystic G.P.S. includes information on campus familiarization, academic planning, placement testing, student finance, student services, and academic policies. All new students meet individually with an advisor to select courses and answer any questions about the G.P.S. When students are on campus to register, there is time built in to sign up for e-mail, obtain a student ID, buy books and tour campus. The first month of the semester is also filled with activities to acclimate students to the college. Some activities are welcome week, return to learn seminars, residence hall move-in, open houses in student service areas, campus community fair, student dances and other activities.

CAMPUSCONNECTION

https://studentadmin.connectnd.us/

CampusConnection is the student administration system used by Bismarck State College and all North Dakota University System campuses. Students have many options such as add or drop courses, check on Financial Aid,
pay bills, or view grades. The CampusConnection Portal is a place where students have access to their information seven days a week, 24 hours a day.

**STUDENT ACCESSIBILITY (DISABILITY SERVICES)**

In accordance with the Americans with Disabilities Act (ADA), Bismarck State College recognizes its responsibility to provide appropriate accommodations for students with documented disabilities who are otherwise qualified to participate in programs and courses of the college. Staff and faculty will work with students and/or other agencies to arrange for reasonable accommodations.

Students can initiate disability services by contacting the Student Accessibility Services office on a timely basis. An application for services and written documentation of the disability must be submitted to qualify for disability services. Documentation must come from an appropriate professional (such as a physician, psychologist, learning disability specialist, or audiologist), and documentation must include information regarding the type of disability, functional limitations, and modes of treatment. IEP’s are not sufficient for documentation requirements.

Students who think they may have a disability should schedule a time to meet with the Coordinator of Student Accessibility to discuss their concerns. If appropriate, a referral for formal evaluation will be made. Referrals are made to professionals or agencies in the community who do diagnostic work in the specific area of disability.

For more information, visit the website at bismarck-state.edu/student/disability

**ACADEMIC SUPPORT SERVICES**

Academic support services are available in the Sykes Student Success Center located in the hallway between the Leach Music Center and the Jack Science Center. Students receive small group tutoring from both degree and peer learning assistants. Tutoring may be supplemented with audio-visual materials and computer assisted instruction. These services are free and available on a “drop-in” basis for all BSC students. Study skills seminars are held each semester to maintain student success and increase student retention. View more information at bismarck-state.edu/student/academic

**INFORMATION SERVICES**

**HELP DESK**

The Help Desk can assist with computer-related questions and with campus computer login issues. The Help Desk is located in Schafer Hall Room 129, or contact the Help Desk at 701-224-5442 or by email at bsc.helpdesk@bismarckstate.edu.

**STUDENT EMAIL ACCOUNTS**

BSC has established email as an official means of communication with students. Email is the primary contact BSC uses to inform students of important campus information. As a service to students, Information Services Department assigns BSC students an electronic mail or email address. It is the student’s responsibility to activate their email account and read their email messages.

**INTERNET ACCESS**

All campus-owned computers have Internet access. BSC offers wireless Internet connectivity from each of the residence halls, nearly all campus buildings, Allied Health Campus and Mandan Campus.

**COMPUTER LABS**

BSC has approximately 35 computer labs. Two computer labs with 25 computers each are designated as open labs for students on the first floor of the Jack Science Center in Rooms 120 and 122. Commonly used and specialty software applications are installed and Internet access is available on all the computers.

**STUDENT LIFE**

**STUDENT CLUBS**

Students from several programs and departments organize to carry out projects and activities beyond the classroom and work toward common goals. Among the clubs currently on campus are Board of Governors (BOG), Energy Club, Drama Club, Phi Theta Kappa, Phi Beta Lambda, ATNR Club and many others. Each club sends a representative to the Board of Governors, the student government on campus.

Activities of each group depend upon the interest of the members. Examples of activities are meetings, fundraisers, hosting campus events, tours, trips, and conferences/competitions. Organizations that are officially recognized by the College are entitled to certain campus services.

**FINE ARTS**

Students have plenty of opportunities at BSC to perform, enjoy and learn about music and drama. Music groups include the Concert Band, Jazz Ensemble, String Ensemble, Guitar Ensemble, Percussion Ensemble, Concert Choir and Chamber Choir. Performances and special appearances are scheduled throughout the year, and the Concert Choir tours each spring.

Two or more drama productions each year provide a creative outlet for students interested in acting or the technical aspects of a theater.

**STUDENT BOARD OF GOVERNORS (STUDENT GOVERNMENT)**

This organization ensures the student voice is heard on campus through involvement in planning student activities and participating in campus committees and
All-American and Academic All-American status. Mystic athletes have earned All-Conference, All-Region, and done well in national tournaments. In addition, many students have won NJCAA regional and district championships in basketball, volleyball, golf, and baseball. The teams also have competed and done well in national tournaments. In addition, many Mystic athletes have earned All-Conference, All-Region, All-American and Academic All-American status.

ATHLETICS

The varsity sports played by BSC teams are women’s and men’s basketball, golf and soccer, women’s volleyball, women’s softball, and men’s baseball. The Mystic athletic teams have excelled in all areas and have won NICAA regional and district championships in basketball, volleyball, golf, and baseball. The teams also have competed and done well in national tournaments. In addition, many Mystic athletes have earned All-Conference, All-Region, All-American and Academic All-American status.

INTRAMURALS

BSC supports an intramural sports program that provides all students the opportunity to participate in team sports. These non-varsity athletic activities are offered at no cost to full- and part-time students. Activities include men’s basketball, women’s basketball, flag football, coed volleyball, softball, ping pong tournaments, and billiards tournament.

STUDENT PUBLICATIONS

The student newspaper, Mystician, is published twice monthly during the academic year. The staff is composed primarily of students enrolled in the journalism curriculum; however, other students are also welcome to become staff members. One of the strengths of BSC’s journalism program is that students begin writing and reporting as freshmen and assume leadership roles in the newspaper before they are college juniors and seniors. Figments of Imagination, a literary/art magazine, provides a showcase for writing and artworks of BSC students and faculty. It is published by students in the Literary Publication 299 class.

AQUATIC AND WELLNESS CENTER

The BSC Aquatic and Wellness Center is located northwest of the BSC Library. The facility has a 50-meter competition pool, diving and recreation pools, a fitness center, and seating for spectators. Full-time and part-time students have unlimited use of the center.

BSC BOOKSTORE

The BSC Bookstore and Mystic Java are located in the lower level of the Student Union. The bookstore works directly with Bismarck State College faculty members to ensure students have easy access to any books needed for classes at BSC. With the recent addition of a textbook rental program, the BSC Bookstore is able to rent books for select core classes. The bookstore also carries a wide assortment of school/office supplies, computer software, art supplies, greeting cards, gift items, pop, snacks, and BSC-insignia clothing. The Bookstore also offers services such as copying, faxing, laminating and UPS shipping.

Students who prefer to shop online can access textbooks, clothing and gift items at bismarckstate.edu/bookstore. This site also provides useful information on class textbook requirements, prices of textbooks, buyback dates, special promotions and more.

THE LIBRARY

The BSC Library offers a relaxed and friendly atmosphere for research and study, a collection of multi-disciplinary information resources in a variety of print, electronic, and audiovisual formats, and a staff of professional and experienced librarians to help with your information needs.

Public access computers, Internet and e-mail access, an instructional lab (Information Skills classroom), microfilm reader/printers, photocopiers, playback equipment, meeting rooms, and study areas are available for library users. The ODIN library catalog and the library’s online databases are available 24/7 via the library website.

The BSC Library is a member of ODIN (Online Dakota Information Network), a statewide library network of academic, public, school, state agency, and special libraries. The library is also a member of OCLC, a worldwide library cooperative. More than 57,000 libraries in 112 countries and territories use OCLC services to locate, acquire, catalog, lend, and preserve library materials. Research materials not already available in the BSC Library collections can generally be obtained via interlibrary loan for current BSC students, faculty, and staff members.

The BSC Library building is located near the BSC Aquatic and Wellness Center. It houses the BSC Library, BSC Archives, North Dakota Career & Technical Curriculum Library, classrooms, faculty offices, and the Clell and Ruth Gannon Art Gallery.

The Clell and Ruth Gannon Gallery in the BSC Library was dedicated in February 1981. Exhibits throughout the year provide students and other visitors an opportunity to view many types of artwork. Shows range from traveling exhibits of works by nationally known artists to shows by local, regional, faculty, and student artists.

The library sponsors an annual book discussion series, BookTalk at BSC, and also hosts events such as readings by visiting writers and art openings.

Community members are welcome to use the library and apply for a library card.

For more information, visit the Library’s website at bismarckstate.edu/library.
All students must obtain a BSC Photo ID, which is available in the BSC Library during regular library hours. The BSC Photo ID has multiple uses, as outlined below.

For BSC students, faculty, and staff, your BSC photo ID is your library card. The library barcode number is on the back of the photo ID card. A current library access number is required to check out library materials or to access the BSC Library’s databases from off campus. Anyone is welcome to use library materials in the building. Steps to obtain your card:

- **BSC students and employees** must present proof of identification (e.g., driver’s license) and official documentation of the EMPLID (W number).
- **BSC distance education users** (students and faculty) may apply for an online library access number at bismarckstate.edu/library/researchassistance/ and click on Online Services.

**North Dakota residents** have courtesy borrowing privileges at the library (excluding interlibrary loan privileges). North Dakota residents must present a current North Dakota driver’s license in order to get a borrower’s card. The Photo ID is also required for purchasing books at the Bookstore, checking in at the BSC Aquatic and Wellness Center, and for other services. Benefits include free admission or discount tickets to BSC events such as dances, sporting events, concerts and plays. Discounts may also be available at local businesses and health clubs.

**Veterans Services**

**Standards of Progress for Veterans**

Veterans must comply with policies and procedures of the Veterans' Administration in order to maintain eligibility for benefits. It is very important that veterans periodically contact the Veterans’ Services Officer, located in the office of Veterans Services, for latest changes in VA policies and regulations.
COLLEGE CREDIT PROGRAMS AND SUGGESTED TRANSFER CURRICULA
(Degree, Program Diploma and Program Certificate Programs)

Bismarck State College offers programs and courses leading to one of three types of degrees, to a program diploma or to a program certificate. An Associate in Arts (AA) or Associate in Science (AS) degree is awarded to students who complete the requirements for these degrees.

An Associate in Applied Science (AAS) degree, a program diploma or a program certificate is awarded to students who complete the requirements of a technical program. Students in some technical programs may earn an Associate in Arts or an Associate in Science degree.

TRANSFER CURRICULA

You can complete the first two years of a traditional college curriculum in the following areas, enabling you to transfer with success to a senior college or university. This is not an exhaustive list, since it is possible to complete the first one or two years of many bachelor’s degree programs at BSC. Ask your advisor about majors not listed here.

Accounting
Agriculture
Art: Visual
Biology
Business Administration
Business Education
Chemistry
Chiropractic
Computer Science
Criminal Justice
Dentistry
Economics
Education
Engineering
English
Foreign Language
Health Education
History
Journalism
Liberal Arts
Management
Mathematics
Medical Laboratory
Scientist
Medical Laboratory
Technician
Military Leadership
Music
Nursing
Optometry
Pharmacy
Physical Education
Physics
Political Science
Pre-Medical
Psychology
Public Administration
Radiologic Technology
Respiratory Therapy
Social Sciences
Social Work
Sociology
Speech Communication
Theatre Arts

OTHER CAREERS

Can’t find the major you want in the list above? You can begin preparing for many careers, including those below, at BSC. Contact a BSC Admissions representative.

Archaeology
Exercise Science
Natural Resources
Nutritionist
Physical Therapy

BACHELOR’S DEGREE PROGRAM

Energy Management (Bachelor of Applied Science)

See page 88.
ONLINE COURSES AND PROGRAMS

BSC’s online offerings include many general education and elective courses, as well as extensive technical courses that, depending on the curriculum, lead to a Certificate of Completion, Program Certificate, Associate in Applied Science degree, Associate in Arts degree or a Bachelor of Applied Science degree.

All courses in the programs listed here are available online, with the exception of the second year lab courses in Instrumentation & Control Technology. For more information, contact BSC’s Distance Learning Office at 701-224-5715 or visit bismarckstate.edu/online/.

• Administrative Assistant - General
• Criminal Justice
• Electric Power Technology
• Electrical Transmission Systems Technology
• Electronics Technology Certificate
• Eligibility Worker
• Energy Management (BAS)
• Geographic Information Systems
• Human Services
• Information Processing Specialist
• Instrumentation & Control Technology
• Management
• Management (Emergency Responders)
• Nuclear Power Technology
• Petroleum Production Technology
• Power Plant Technology
• Process Plant Technology
• Renewable Generation Technology
• Web Page Development and Design

OTHER DISTANCE LEARNING OPPORTUNITIES

The N.D. Interactive Video Network (IVN) provides two-way audio and video communications to support distance education throughout the state.

Interactive Television (ITV) courses are offered by BSC to 12 area high schools via the Great Western Network. Three sites may be online for a class via two-way audio and video. High school seniors and adults in the communities benefit by being able to complete college classes without traveling to the campus. Visit the website at www.greatwesternnetwork.com.

MILITARY PARTNERSHIPS

Bismarck State College is proud to offer a convenient path to higher education for members of the military, their spouses and dependents. BSC offers flexible, student-centered learning on campus or online.

Bismarck State College is a Navy College Distance Learning Partner, a member of the Service-members Opportunity Colleges (SOC) and a SOC-NAV, SOCCOAST and SOCAD school. For more information, contact BSC’s Military Affairs office at 1-877-272-1939 or bismarckstate.edu/military.

STUDY ABROAD PROGRAM

Bismarck State College, currently working with the University of North Dakota, offers a one-semester study abroad opportunity at the American College of Norway (www.americancollege.no) in Moss, Norway. This program is open to BSC students who have earned 15 or more credits, with a minimum 2.5 GPA. Students are encouraged to enroll for the fall semester. At this time, students must apply as a UND student and will receive UND credits that transfer back to BSC. Courses are taught in English, primarily by UND faculty.

Students can fulfill Communications, Arts & Humanities, Social & Behavioral Sciences, Cultural Diversity, and other general education credits while also learning Norwegian. Classes offered vary from semester to semester, but English 110 and Norwegian 101 are always offered in the fall. Scholarship opportunities through the BSC Foundation are available for qualified applicants who return to BSC. This is a unique opportunity for two-year college students.

BSC is working on new study abroad options and can help students find a study abroad experience once their studies at BSC are completed. For the most current information, contact BSC’s Study Abroad advisor Dr. Amy L. Juhala at 224-5760 or Amy.Juhala@bismarckstate.edu.

COLLABORATIVE PROGRAMS

BSC collaborates with other institutions in the North Dakota University System to bring programs developed by other institutions to the BSC campus. These are the collaborative programs offered at the time this catalog was printed:

Medical Assistant

Students may receive an Associate in Applied Science degree or diploma in Medical Assistant from Dakota College at Bottineau. Students enroll in courses at BSC and via Interactive Video Network and online from Dakota College at Bottineau. For information, contact Melissa Coleman at Dakota College, 701-228-5642 or melissa.coleman@dakotacollege.edu.

COOPERATIVE 4-YEAR PROGRAMS

Dickinson State University offers the following degrees on the BSC campus. To complete the bachelor’s degrees, students may complete the first two years of study at BSC. Upper division courses are provided by DSU at BSC.

• Bachelor of Applied Science in Technology
• Bachelor of Arts in Composite Social Science
• Bachelor of Arts in English
• Bachelor of Arts in History
• Bachelor of Science in Accounting
• Bachelor of Science in Business Administration
Minot State University offers the following degrees on the BSC campus. To complete the bachelor’s degrees, students may complete the first two years of study at BSC. Upper division courses are provided by MSU at BSC.

- Bachelor of Science in Criminal Justice
- Bachelor of Science in Management
- Bachelor of Social Work
- Bachelor of Arts in Psychology
- Bachelor of Science in Addiction Studies
- Bachelor of Science in Marketing

University of North Dakota offers online and distance education programs on the BSC campus at the bachelor’s, graduate certificate, master’s, or doctoral level. Following are the bachelor’s degree programs available in Bismarck through the UND Bismarck Outreach Office.

- Chemical Engineering
- Civil Engineering
- Clinical Lab Science
- Communication
- Electrical Engineering
- General Studies
- Mechanical Engineering
- Nursing – RN to BSN
- Psychology
- Social Science

Medcenter One College of Nursing in Bismarck offers a Bachelor of Science in Nursing degree on its campus in downtown Bismarck. Students may complete the first two years of study at BSC.

CONTINUING EDUCATION, TRAINING AND INNOVATION

BSC’s Continuing Education, Training and Innovation Division provides individuals and companies learning experiences for personal growth and business success. CETI extends BSC’s mission of educating people for work and life through the division’s innovative resources in the following areas of focus:

Conference Planning. CETI provides comprehensive coordination for meetings of all sizes. Services include pre-conference planning, financial management, and coordination of logistics, marketing, registration and evaluation.

Enrichment. Each fall and spring, CETI offers numerous courses for personal and professional advancement. These classes are designed to broaden an individual’s personal, professional, cultural and recreational interests.

N.D. Safety and Health Consultation (NDOSH). This program helps businesses meet OSHA safety and health regulations while developing an ongoing, effective safety and health management system.

Office of Innovation. CETI’s Office of Innovation focuses on transforming the business culture to be innovative in all aspects of its operations. A number of training programs are available for businesses and organizations.

Speakers Bureau. This resource helps organizations and groups find professional presenters with availability of a variety of topics and speakers.

TrainND. CETI implements workforce training for the southwest region of the state as part of the TrainND network. Staff members specialize in providing innovative, results-oriented training and retraining for business and industry, including mentorship, apprenticeships, technical training, computer training, employee development, and
organizational development.

**GENERAL ACADEMIC INFORMATION**

**ACADEMIC YEAR**

Bismarck State College’s regular academic year consists of two semesters, with classes beginning in late August and ending in mid-May. The Summer Session begins in late May and continues for 12 weeks.

**DEFINITION OF SEMESTER AND CREDIT**

A semester is a school term averaging 16 weeks of instruction. A semester hour of credit represents one 50-minute period of theory per week for one semester. Some classes require additional laboratory or shop periods or on-the-job training.

**STUDENT CLASSIFICATION**

Full-time: Students registered for 12 or more semester credit hours.

Part-time: Students registered for fewer than 12 semester credit hours

Students are classified by year according to the number of college-level credits earned.

<table>
<thead>
<tr>
<th>Year</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>0-23</td>
</tr>
<tr>
<td>Sophomore</td>
<td>24-59</td>
</tr>
<tr>
<td><em>Junior</em></td>
<td>60-89</td>
</tr>
<tr>
<td><em>Senior</em></td>
<td>90 or more</td>
</tr>
</tbody>
</table>

*Junior and Senior level only applies to students enrolled in the Bachelor of Applied Science, Energy Management program.

**STUDENT CLASS LOAD**

The average class load for a full-time student is 14 to 18 credit hours per semester. A student must enroll in at least 12 credit hours to be considered a full-time student.

**PETITION FOR ADDITIONAL CLASS LOAD**

Students must petition for permission to enroll in more than 20 credit hours per semester. All students enrolled in a summer session must petition for permission to enroll in more than 12 credit hours.

The Petition for Additional Class Load is available in the Academic Records Office, or online under Current Students, then Academic Records, then Forms. Requests are considered based upon an examination of the student’s need and ability to handle the extra load. A student must file a completed Petition in the Academic Records Office or by the end of the second day of classes during the semester for which the overload is requested. Students will be notified of the status of their petition on or before the published deadline to add classes.

View the Credit Load Policy at bismarckstate.edu/current/records/policies.

**ATTENDANCE POLICY**

Attendance in classes and laboratories is extremely important; therefore, students are expected to attend all class sessions of any course for which they are registered. Students who are registered for a 16-week course but fail to attend at least one class session during the first week of the semester and fail to notify either the faculty member or department chair may be administratively dropped from the class. With courses scheduled for fewer than 16 weeks, the deadline for first class attendance is proportionally shorter and will be defined in the course syllabus. This provides for early identification of class vacancies in closed classes and permits other students to add the class. Students who know they will be absent from class must contact the faculty member or department chair in advance to ensure enrollment.

In limited enrollment programs, faculty have the option to administratively drop students who fail to attend the first day of class and fail to give prior notice to the faculty member or department chair.

Not all faculty follow this policy since it is not mandatory. Students, therefore, are strongly advised not to assume that they have been dropped from a course. Students should review their registration status in a course in question with the Academic Records Office.

Attending classes and laboratories is a student responsibility. Regardless of the reason for the absence, students are responsible for the material that was covered while they were absent.

**GRADING SYSTEM**

**GRADES**

A student’s coursework is graded A, B, C, D, or F. A grade of “A” indicates work of exceptional quality; grade “B” above average; grade “C” average; grade “D” unsatisfactory work but credit granted; and grade “F” failing, no credit granted.

Departments may use “S” (successful) and “U” (unsuccessful) grades in selected programs or courses. Use of S, U grades must be approved in advance by the Dean of Academic Affairs. If a student withdraws from a class before the final withdrawal deadline, a “W” (withdraw) will be recorded on that student’s transcript.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Honor Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

Only BSC courses are used to compute a student’s BSC grade point average. All college level courses, including those which have been accepted in transfer, are used to calculate a student’s cumulative grade point average.
INCOMPLETE (‘I’) GRADES

When a student who is otherwise doing satisfactory work in a course is unable, for reasons beyond control (death in the family, hospitalization of the student), to complete all course requirements during the term, that student may be given an “I” for incomplete. It is the responsibility of the student to ascertain the instructor’s requirements for making up the incomplete. Fall semester incompletes must be removed by mid-term of the spring semester; spring semester and summer session incompletes must be removed by the mid-term of the fall semester. If it is not removed within the time limit, the “I” (incomplete) automatically becomes an “F.”

GRADE APPEAL

Students who receive a grade that they believe does not correctly reflect their performance should discuss the grade with the instructor. If the matter is not resolved, it should be discussed with the appropriate department chair. If the matter is still not resolved, it should be discussed with the Dean of Academic Affairs. If the matter is still not resolved, it should be discussed with the Associate Vice President for Academic Affairs. If the matter remains unresolved, the student may appeal the issue to the Standing Committee on Grade Appeals. Information relating to the appeal process is available in the Associate Vice President for Academic Affairs Office.

View the Grievance and Appeal Policy at bismarckstate.edu/current/records/policies.

GRADE CHANGES

Submitted grades, except for grades of incomplete, are final and may only be changed to correct human error (instructor, clerical or frauds, such as plagiarism, or cheating). The instructors may change final grades, on their own authority, within the limits stated above, through the end of the next regular semester after the course is taken by filing a Grade Change form with the Academic Records Office. For grade changes two or more regular semesters after the course is taken, instructors must also seek approval of the Department Chairperson. Grades of a “W” or an “Audit” cannot be changed. They are administrative procedures initiated by the student.

GRADE FORGIVENESS

A former Bismarck State College student, who has not completed an associate degree, diploma, or a certificate, and has not been in attendance at Bismarck State College for four or more years, may request to exclude from G.P.A. calculations all grades earned in selected full semesters completed at Bismarck State College prior to the four year interval. Students wishing to request grade forgiveness should submit the Grade Forgiveness Form to the Office of Academic Records. Find the form at bismarckstate.edu/current/records/forms/

A student may only exercise the option of “grade forgiveness” once. Although the grades will be excluded from calculating the students G.P.A., the courses and forgiven grades will remain on the student’s transcript. Courses where grades have been excluded cannot be used to satisfy any academic requirements. Extenuating circumstances will be dealt with on an individual basis by the Faculty Senate Committee on Academic Standards.

View the Grade Forgiveness Policy at bismarckstate.edu/current/records/policies.

GRADE POINT AVERAGE

Grade Point Averages (GPAs) are the single most important piece of information that transfer colleges and employers want to know. To calculate your GPA, set up four columns and record grade points for letter grades as follows: A = 4 points, B = 3 points, C = 2 points, D = 1 point, F = 0 points.

Example:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
<th>Course per credit</th>
<th>Total credits</th>
<th>Total grade points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra</td>
<td>D</td>
<td>1</td>
<td>x</td>
<td>3 = 3</td>
</tr>
<tr>
<td>Western Civ.</td>
<td>F</td>
<td>0</td>
<td>x</td>
<td>3 = 0</td>
</tr>
<tr>
<td>Psychology</td>
<td>A</td>
<td>4</td>
<td>x</td>
<td>3 = 12</td>
</tr>
<tr>
<td>English</td>
<td>B</td>
<td>3</td>
<td>x</td>
<td>3 = 9</td>
</tr>
<tr>
<td>Biology</td>
<td>B</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
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<td></td>
<td></td>
<td>16</td>
<td>36</td>
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</tbody>
</table>

Multiply the grade points per credit by the course credits. Total grade points earned = 36. Then divide the total grade points earned by the total number of course credits to find your GPA. 36 points divided by 16 course credits = 2.25 GPA.

REPEATING A COURSE

Students may repeat a course at BSC; however, the first grade earned in the repeated course is never removed from the transcript. In computing the grade point average, the last grade a student receives in the repeated course will be used (even if the last grade is lower than the first grade). Refer to the next entry, Auditing a Course, for more information. View the Student Policy on Grades, Incompletes, Honor Points, GPA, and Repeating a Course at bismarckstate.edu/current/records/policies.

AUDITING A COURSE

Students are permitted to audit classes at BSC. An audit student is one who attends class but is not obligated to complete assignments or take tests and will not receive a grade or college credit. Students pay tuition, some required mandatory fees and class fees.

Students who wish to enroll in a class on an audit basis will NOT be able to do so on CampusConnection, therefore, they should contact the Academic Records Office for registration assistance. Enrolled students who wish to change their status from audit to credit or credit to audit may do so only by contacting the Academic Records Office before the deadline to add a course for credit.

View the Auditing Policy at bismarckstate.edu/current/records/policies.
REGISTRATION

CHANGES IN REGISTRATION

ADDDING COURSES OR CHANGING SECTIONS:

Students may make routine registration adjustments to their course schedule via CampusConnection. It is the student’s responsibility to complete these changes by specified deadlines. A student wishing to change classes must follow the procedure outlined below:

Currently enrolled students attempting to ADD an additional open section of a class up to the established Course Add Deadline must complete the process on CampusConnection. Students attempting to ADD a closed section of a class up to the established Course Add Deadline must obtain a “Course Override” or “CampusConnection Permission” from the instructor of the closed course. The completed Course Override Form must be submitted to the Academic Records Office for processing before the ADD deadline.

Students may not add courses after the deadline unless very unusual circumstances exist. In such cases, they must obtain the approval of the instructor and Student Finance.

DROPPING COURSES:

Students attempting to DROP one or more classes, but not all classes during a given semester, must complete the drop process on CampusConnection, before the drop deadline as identified on the BSC Dates and Deadlines Schedule. There are two deadlines for dropping classes that affect a student’s transcript. The first deadline is for dropping a class with no record on the transcript, and the second deadline is for dropping with a “W” recorded on the transcript. Separate deadlines are also established by Student Finance to determine 100% tuition refunds. All these dates are available on the BSC Dates and Deadlines Schedule.

Students who do not complete the DROP procedure before the final deadline will have “F” (Failure) recorded as a final grade. Dropping a class is a student responsibility. However, students who are registered for a class but fail to abide by the attendance policy or fail to notify their instructor or the Dean of Academic Affairs of their absence may be dropped from the class by the instructor. (See Attendance Policy on previous page.)

View the Student Policy on Course Drop, Withdrawal to Zero Credits, Hardship Drop/Withdrawal at bismarckstate.edu/current/records/withdraw/ (This is an electronic form that is located on the Academic Records webpage, it is not within CampusConnection.)

The form will be forwarded to the proper offices to ensure all student obligations have been met. Once all offices have cleared the student for withdrawal, the withdrawal is completed in CampusConnection, and a confirmation will be sent to the student. The withdrawal date posted on the student transcript and the percent of refund will be based on the date the initial form was submitted to the Academic Records Office.

ACADEMIC REQUIREMENTS

PRESIDENT’S HONOR ROLL

A President’s Honor Roll is compiled at the end of each semester to give recognition to students who have maintained at least a 3.50 grade point average while enrolled in at least 12 semester credit hours during the semester. Students on the list receive notification from the President in recognition of their achievement. View the Student Policy on President’s Honor Roll at bismarckstate.edu/current/records/policies.

ACADEMIC ALERT

Students whose academic performance is below average will receive, at the instructor’s discretion, an “Academic Alert” warning. The warning notifies students of their academic deficiency and suggests possible solutions to correct the deficiency. Instructors can issue these warnings at any time before the last day to withdraw from a course. Students will receive the alerts by mail. It is the responsibility of all students to remain in contact with their instructors regarding progress in enrolled courses.

ACADEMIC WARNING

Students who have a grade point average below 2.00 within any semester will be placed on academic warning status. Academic warning status notifies students that the quality of their work is unacceptable and that unsatisfactory work during the subsequent semester of enrollment may result in the student being placed on academic probation. Students who receive an academic warning should contact their advisor and/or academic support services for academic
ACADEMIC PROBATION

Students who are on academic warning status and fail to earn a cumulative grade point average minimum of 2.00 after finishing their subsequent semester of enrollment will be placed on academic probation. Students placed on academic probation should understand the following:

- Students will remain on academic probation as long as their BSC cumulative grade point average (G.P.A.) remains below a 2.00.
- Students who improve their BSC cumulative G.P.A. to a 2.00 or higher will be taken off academic probation.
- Students who do not improve their BSC cumulative G.P.A. to a 2.00 within two consecutive probationary semesters will continue on academic probation only if the present semester G.P.A. remains at or above a 2.00. Refer to the Academic Suspension section below.
- Students should contact their academic advisor for academic assistance.

View the Student Policy on Academic Alert, Warnings, Probation, Suspension and Readmission at bismarck-state.edu/current/records/policies.

ACADEMIC SUSPENSION

Students who fail to comply with the standards for academic probation will be placed on academic suspension. Students placed on academic suspension should understand the following:

- Students on academic suspension will not be readmitted before a lapse of at least one regular semester (The academic summer session will constitute a regular semester.)
- The notice of academic suspension does appear on a student’s permanent record.

Readmission Procedures:

During or after the lapse of at least one semester on academic suspension a student:

- Completes and submits a BSC Admission Application form to the BSC Admissions Office.
- Completes an Academic Suspension Readmission Request form. The form is available online at https://info.bismarckstate.edu/secure/studentrecords/readmission.asp
- Contacts the Academic Support Services Office at 701-224-5671 or Lonna.Meier@bismarckstate.edu to review readmission request.

Students should complete the above process at least two weeks prior to the beginning of an academic semester to be considered for readmission.

Academic Suspension Reinstatement

Students seeking reinstatement from academic suspension must follow the readmission procedures outlined above. Reinstated students continue on academic probation and are subject to the same limits and regulations as students placed on academic probation prior to academic suspension. Refer to the previous Academic Probation section.

Students readmitted from their second or more academic suspension must understand the following:

- Students readmitted from their second or more academic suspension will again be placed on academic probation.
- Students on academic probation for their second or more academic suspension will remain on academic probation only if the present semester G.P.A. remains at or above a 2.00. (Two probationary semesters are not allowed.)
- Students who improve their cumulative G.P.A. to a 2.00 or higher will be taken off academic probation.
- Students who do not improve their cumulative G.P.A. to a 2.00 and the present semester G.P.A. is below a 2.00 will be placed on academic suspension.

View the Student Policy on Academic Alert, Warnings, Probation, Suspension and Readmission at bismarck-state.edu/current/records/policies.

TRANSFER INFORMATION

TRANSFER APPEAL PROCESS

Students may appeal transfer decisions of BSC credit made by a receiving NDUS institution or another institution. This process is initiated by completing an online “Academic Grade Appeal” form located on the BSC website.

If the appeal is a NDUS institution, it must refer to one of the statewide transfer policies.

1. The General Education Requirements Transfer Agreements (GERTA)
2. Common Course Numbering (CCN)
3. Statewide articulation agreements
4. National credit-by-exam programs, including the College Level Examination Program (CLEP), Advanced Placement (AP), International Baccalaureate (IB) or the DANTES or DSST program.

Please refer to the NDUS Transfer Appeals Procedures 403.7.0.

TRANSFER CREDIT

Students who wish to transfer to BSC from another college or university must complete all of the admissions requirements and must provide the Admissions Office with official and complete transcripts, showing all courses at-
tented and grades earned, from all colleges attended.

BSC only accepts transfer credit for college-level course work earned from regionally recognized accredited institutions of postsecondary education. All credit hours earned from the institutions that meet this criterion will be accepted, except graduate level course work. The Academic Records Office will evaluate only official transcripts after the student has been accepted, to determine the total number of hours accepted and the suitability and applicability of accepted hours and courses toward BSC graduation requirements.

BSC has a transfer equivalency database that will help students by providing general information regarding transfer course equivalencies from various schools across the U.S. For more information, refer to bismarckstate.edu/current/records/transferinformation/.

A student who was suspended from another institution, with a lapse of at least one semester prior to the term in which he/she is seeking BSC admission, may be admitted by completing the Academic Suspension – Readmission Procedures outlined on page 40. Students should complete the above process at least two weeks prior to the beginning of an academic semester to be considered for admission.

Students academically dismissed from a North Dakota University System (NDUS) baccalaureate institution should refer to the NDUS policy regarding re-admission to a NDUS community college.

View the Student Policy on Transfer Credit at bismarckstate.edu/current/records/policies.

PRIOR LEARNING

BSC offers Prior Learning Assessment (PLA), a process identifying and documenting previous learning that has the potential to receive academic credit as part of a degree program. BSC recognizes that students will pursue an associate degree with a variety of academic and professional experiences related to the degree program. BSC supports these adult learners who wish to participate in a Prior Learning Assessment process. Below are some questions to consider:

Is a Prior Learning Assessment for me? Adults learn constantly – many have developed their college level learning away from the traditional classroom; on the job; in relationships; and through reading, travel, hobbies, and life events. Adults who want a college to grant them a degree still have to find a way to document what they know in order to get the necessary college credit. BSC is committed to the idea that people deserve credit for their learning experiences that were not acquired as part of a formally structured course offered by a college. A Prior Learning Assessment is not a short cut to a degree, and online courses are not necessarily easier or more convenient. They are self-motivated learning experiences that require dedication and desire. Prior Learning Assessment accepts only that which is considered to be college-level learning, not experiences. Be sure you have the documentation to verify your learning. In some cases, taking the actual course, either on-campus or online, may be the better option.

What types of information can be used for a Prior Learning Assessment?

Credit is awarded for the knowledge gained, not for the experience itself; therefore, credit is granted for verifiable college-level learning acquired through life or work experience. Some of the possible sources for prior college-level learning include work experience, non-credit courses, seminars, in-service training programs, volunteer work in the community, hobbies, recreational activities, independent reading and research, and military service.

The Prior Learning Assessment Process

• Transfer Credit
• Military Credits
• College Level Examination
• Challenge Exam Program (CLEP)
• Credit for Industry Training
• Portfolio Assessment

CREDIT BY NON-TRADITIONAL METHODS

Students at Bismarck State College may earn college credit through the non-traditional methods listed in this section. However, you must be a currently enrolled BSC student to receive credit in this way.

A maximum of 45 semester hours of non-traditional college credit (e.g., AP, CLEP, military training, BSC challenge test credit, portfolio development, prior learning, and courses covered under high school articulation agreements) may be applied to an associate’s degree, diploma, or certificate at BSC. A maximum of 60 semester hours of non-traditional college credit may be applied to a bachelor of applied science degree at BSC.

Students should be aware that each college has policies governing credit by non-traditional methods, and that credits awarded by BSC might not be accepted or awarded by other colleges.

Further details on all these programs are available from the Alternative Learning Coordinator. The Alternative Learning Coordinator will determine the suitability and applicability of these credits and courses toward meeting graduation requirements at BSC.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

BSC awards college credit for successful completion of CLEP examinations. Since CLEP policies vary from institution to institution, students are advised to review the CLEP policies of the institution they plan to transfer before they write any CLEP exams. The complete BSC CLEP policy can be found in the Student Policies section.

DANTES SUBJECT STANDARDIZED TESTS (DSST)
BSC awards college credit for successful completion of certain DSST examinations. DSST examinations measure knowledge of the material usually covered in various classes during the first two years of college. Some examinations may be used to meet general educational or liberal arts requirements, while others may be used for credit for specific college courses. Since DSST policies and acceptance vary from institution to institution, students are advised to review the DSST policy of the institution they plan to transfer to. BSC DSST policy can be found in the Student Policies section of this catalog.

ADVANCED PLACEMENT (AP)

High school students are advised to plan their college careers carefully to determine if Advanced Placement courses are a wise use of the student’s time and money. Each college has policies which govern the awarding of AP credit. What is acceptable at one institution may not be acceptable at another college. While BSC has a policy which allows the awarding of college credit for AP courses completed in high school, there are no guarantees that other colleges have similar policies. It is the student’s responsibility to ascertain the policies, procedures, and limitations regarding AP at each college or university a student may wish to attend. The complete BSC AP policy can be found in the Student Policies section of this catalog.

INSTITUTIONAL CHALLENGE EXAM

Bismarck State College will permit students to demonstrate college level competency and establish college credits by successfully passing an Institutional Challenge Examination in selected courses. Students taking a Challenge Exam must adhere to the limits, regulations, and procedures laid out in the BSC Challenge Exam Policy located in the Student Policies section of this catalog.

MILITARY TRAINING PROGRAMS

BSC awards college credit for selected and successfully completed military training programs as outlined in the “Guide to the Evaluation of Educational Experiences in the Armed Forces,” prepared by the American Council on Education. The number of credits awarded will be based on evaluation and recommendation of the BSC Registrar and the appropriate department chairperson. Eligible students must submit official documentation (dates, locations, course titles, identification numbers, and other supporting information) for evaluation.

HIGH SCHOOL ARTICULATION AGREEMENTS

Students enrolled in secondary schools which have a signed articulation agreement with BSC may use the process for testing as outlined in the agreement. Articulation agreements provide students the opportunity to earn college credit based on competencies acquired in high school.

RECOGNITION FOR ACHIEVEMENT

PHI THETA KAPPA HONOR SOCIETY

Phi Theta Kappa is the international honor society of the two-year college with the mission to recognize and encourage scholarship, service and leadership among two-year college students. Eligibility for membership in BSC’s chapter of Phi Theta Kappa requires completion of at least 15 semester hours of associate degree course work in residence, minimum cumulative grade point average (GPA) of 3.5, and current enrollment as either a full-time or part-time student. Members of Phi Theta Kappa are honored during the spring recognition ceremony and they are acknowledged at the commencement ceremony by being allowed to wear the Phi Theta Kappa distinguished gold stole and tassel. Transcripts are noted with this special honor.

WHO’S WHO AMONG STUDENTS IN AMERICAN JUNIOR COLLEGES

Ten students are selected each year by the All-Campus Senate on the basis of academic achievement, service to the community, leadership in extracurricular activities and future potential. Students selected are listed in a national “Who’s Who” volume. They also are honored at the annual student recognition ceremony with a certificate and $75 cash award from the Bismarck State College Foundation.

OUTSTANDING STUDENT AWARDS

An outstanding student is selected every spring from each of the technical programs and various disciplines. These students are honored at the annual student recognition ceremony with a certificate and $75 cash award from the Bismarck State College Foundation.

GENERAL INFORMATION

CHANGE PROGRAM/ADVISOR

A student wishing to change program of study or advisor should complete the Request for Program/Advisor Change Form located in the Academic Records section of the BSC website. Find the form at bismarckstate.edu/current/records/forms/

ACADEMIC RECORDS (FERPA)

Directory Information

The college may, in compliance with the law, or to protect the integrity of the institution, release the following directory information in printed, electronic, and other forms without student consent:
1. Name
2. Address (All on record)
3. Email address
4. Phone Number
EDUCATIONAL RECORDS

Bismarck State College maintains the following educational records which contain information directly related to students:

- Admissions Office – Application material submitted by the student or sent to BSC at student request.
- Financial Aid Office – Financial Aid matter submitted by the student and sent to BSC at student request.
- Student Finance Office – Account charges and receipts.
- Academic Records Office – Records pertaining to academic or training achievement including transcripts and grade reports.
- Instructors’ Offices – Instructor’s recommendation for technical students.
- Student Union Office – Records pertaining to on-campus housing.

These records are on file in appropriate BSC offices and are accessible only to persons having legitimate interest as defined in Public Law 93-380. Information contained in academic records will not be otherwise released without written consent from the student. For academic records purposes, the college assumes that all students are independent. Parents of dependent students must establish a student’s dependency (Internal Revenue Code of 1954, Section 152), as a first step in gaining access to a student’s educational records.

In accordance with FERPA regulations Title 34 CFR Part 99.31(a)(2) and 34 CFR 99.34(a)(1)(ii) educational records, including but not limited to a student’s academic transcript, may be released by Bismarck State College to another institution without prior written consent provided the student seeks or intends to enroll at that institution.

The Family Educational Rights and Privacy Act of 1974 (FERPA) guarantees students certain rights with regard to educational records, which include the following:

- The right to inspect and review information contained in the educational records in their file.
- The right to challenge the content of information contained in their educational records file.
- The right to a hearing as part of an initially unsatisfactory challenge.
- The right to submit a written explanatory statement for inclusion in their educational records file.
- The right to receive a copy of the College’s policy regarding educational records maintained by the institution.
- The right to file complaints with the Department of Education concerning alleged failure of Bismarck State College to comply with provisions of the Privacy Act of 1974.

The text of the Family Educational Rights and Privacy Act of 1974 and copies of BSC’s Academic Records/Privacy Act Policy may be reviewed by contacting the BSC Registrar.

FERPA RELEASE FORM

Form available at bismarckstate.edu/current/records/forms/

Educational records contained in student records will not be otherwise released without written consent from the student. For student records purposes, the college assumes that all students are independent. Students who would like to release educational records to a third party must complete the NDUS FERPA Release Form located on the BSC website. The completed form must be submitted to the Academic Records Office for processing. The release will remain in effect while enrolled, unless the student revokes the consent in writing to the Academic Records Office.

TRANSCRIPT SERVICES

bismarckstate.edu/current/records/transcriptrequest/

According to federal law, telephone and email requests cannot be honored nor can requests from others on behalf of the student. Transcripts may be requested online through CampusConnection (current students) or through www.getmytranscript.com (former students). Online ordering will allow you to order official transcripts securely via the web anytime. In addition to the automated ordering service, you will also be able to track your order status, receive
timely email notices regarding your transcript request, as well as review your order status history.

You must have a major credit/debit card and a valid email address to request an official transcript online.

GENERAL ORDERING INFORMATION
• A transcript will not be issued if a Student Finance Office hold has been placed on a student’s account (outstanding balance).
  • The hold must be satisfied within 60 days of the receipt of the request. After 60 days, your order will be cancelled and you will need to place a new transcript request.
  • Bismarck State College honors all transcript requests for 30 days, after 30 days students will need to place a new transcript request.
  • Cost per transcript is $5.00, unless special order options are chosen.
  • Current and former students with online CampusConnection access may view and print an unofficial transcript free of charge through CampusConnection
  Note: Unofficial transcripts are only available online for students who were enrolled at BSC Fall 2004 or later.
  • Transcript requests of academic coursework completed at other institutions must be directed to the respective institutions.
  • Faxed transcripts are not considered official. Verify the type of transcript needed before requesting a copy to be faxed.

STUDENT CONDUCT
Students are expected to conduct themselves in a responsible and mature manner. It is an implied contract that all students at Bismarck State College will comply with college regulations while they are students under the jurisdiction of the College.

The College’s policy on student conduct addresses various kinds of actions for which a student would be subject to disciplinary action, such as plagiarism, arrest and conviction for violating a law, failing to pay college financial obligations (including library and parking fines), furnishing false information, damaging property, bringing firearms on campus, possession of alcoholic beverages and illegal drugs, and other forms of misconduct.

The policy also outlines the types of disciplinary actions and the regulations and procedures for carrying out the discipline.

The College’s written policies on student conduct and on crime awareness and campus security are published in the back of this catalog and on BSC’s website at bismarckstate.edu/hr/stupol/.

EXTRACURRICULAR ELIGIBILITY REQUIREMENTS
In order to be eligible to participate in a competitive intercollegiate activity, a student must meet the eligibility requirements as set forth by the governing intercollegiate association established for the activity.

Participation in non-competitive, non-intercollegiate activities is limited to enrolled students and is governed by the standards of that particular activity.

This catalog was prepared before the 2011-12 academic year. For the most current information after May 2011, see the catalog on the Web at bismarckstate.edu/academics

DUE PROCESS/STUDENT RIGHTS
Bismarck State College has established procedures which ensure due process for students regarding improper, unfair, arbitrary, or discriminatory treatment. Specific procedures for students who have a grievance are contained in the Policy on Grievance Procedure for Students found in the back of this catalog and on BSC’s website at bismarckstate.edu/hr/stupol/.
**DEGREE REQUIREMENTS**

Graduates of Bismarck State College are awarded degrees, program diplomas, program certificates, or certificates of completions, depending on the number of credits and other requirements completed.

Degree requirements are listed on the following pages:

Bachelor of Applied Science........Page 53
Associate in Arts .....................Page 53
Associate in Science..................Page 53
Associate in Applied Science........Page 54
Diploma Program........................Page 54
Certificate Program....................Page 54
Certificate of Completion.............Page 55

**BSC MATRIX OF GENERAL EDUCATION COURSES**

**GENERAL EDUCATION AT BISMARCK STATE COLLEGE.** The following courses meet the general education requirements at BSC. Please note that some courses may fulfill the requirements for only certain degrees or certain programs. See an explanation of GERTA on page 56. Check with your academic advisor if you have questions!

<table>
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<tr>
<th>General Education Category</th>
<th>Credits</th>
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**ARTS & HUMANITIES - FINE ARTS ACTIVITIES**

(Note: a maximum of 3 credits of A&H activity courses may be used to meet the general education requirements at BSC.) If a course(s) is used to fulfill a general education requirement, it cannot be used to fulfill the enrichment requirement.

| ART 122 Two Dimensional Design     | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 124 Three Dimensional Design   | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 130 Drawing I                  | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 220 Painting I                 | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 221 Painting II                | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 230 Drawing II                 | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 250 Ceramics I                 | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 251 Ceramics II                | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ART 265 Sculpture I                | 2       | *   | *  | *  | *   | *    | *    | YES   |
| ART 266 Sculpture II               | 2       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 117 Concert Choir             | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 118 Chamber Choir             | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 121 String Ensemble           | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 132 Wind Ensemble             | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 133 Woodwind Ensemble I       | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 134 Woodwind Ensemble II      | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 135 Brass Ensemble I          | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 136 Brass Ensemble II         | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 137 Jazz Ensemble             | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 138 Percussion Ensemble       | 1       | *   | *  | *  | *   | *    | *    | NO    |
| MUSC 145 Applied Music             | 1       | *   | *  | *  | *   | *    | *    | YES   |
| MUSC 146 Applied Music-Major       | 1       | *   | *  | *  | *   | *    | *    | YES   |
| THEA 161 Acting I                  | 3       | *   | *  | *  | *   | *    | *    | YES   |
| THEA 261 Acting II                 | 3       | *   | *  | *  | *   | *    | *    | YES   |

**SOCIAL AND BEHAVIORAL SCIENCES**

| CJ 201 Introduction to Criminal Justice | 3       | *   | *  | *  | *   | *    | *    | YES   |
| COMM 212 Interpersonal Communications  | 3       | *   | *  | *  | *   | *    | *    | NO    |
| ECON 105 Elements of Economics         | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ECON 201 Principles of Microeconomics  | 3       | *   | *  | *  | *   | *    | *    | YES   |
| ECON 202 Principles of Macroeconomics  | 3       | *   | *  | *  | *   | *    | *    | YES   |
| POLS 115 American Government           | 3       | *   | *  | *  | *   | *    | *    | YES   |
| POLS 116 State and Local Government    | 3       | *   | *  | *  | *   | *    | *    | YES   |
| POLS 220 International Politics        | 3       | *   | *  | *  | *   | *    | *    | YES   |
| PSYC 111 Introduction to Psychology    | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 110 Introduction to Sociology      | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 115 Social Problems                | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 220 Family                         | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 221 Minority Relations             | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 235 Cultural Diversity             | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 251 Gerontology                    | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 252 Criminology                    | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SOC 275 Native American Studies        | 3       | *   | *  | *  | *   | *    | *    | YES   |
| SWK 256 Social Work                    | 3       | *   | *  | *  | *   | *    | *    | YES   |
## BSC MATRIX OF GENERAL EDUCATION COURSES (CONTINUED)

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BSC ENRICHMENT REQUIREMENT COURSES

Enrichment is designed to broaden the student’s academic exposure while providing the maximum flexibility in designing a personalized curriculum of study. Enrichment is not required for the AAS, Diploma or Certificate. The following courses meet the enrichment requirements for the AA and AS degrees at Bismarck State College. Please Note: Some courses in the following list are also general education courses. The student is reminded that a course used to meet one requirement cannot be used to meet the other! Please speak with your academic advisor if you have questions.

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<td>ART 231 Figure Drawing I</td>
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<td>ART 250/251 Ceramics I &amp; II</td>
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<tr>
<td>ART 252 Advanced Ceramics</td>
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<tr>
<td>ART 265/266 Sculpture I &amp; II</td>
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<td>ART 270/271 Printmaking I &amp; II</td>
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<td>ART 299 Special Topics in Art</td>
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<td><strong>AUTOMOTIVE TECHNOLOGY</strong></td>
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<td>AUTO 101 Introduction to Automotive Technology</td>
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<td><strong>BIOLOGY</strong></td>
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<td>BIOL 102 Introduction to Aquarium Keeping</td>
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<td>BIOL 108 Beginning Birding</td>
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<td><strong>CARPENTRY</strong></td>
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<td>COMM 201 Interpretive &amp; Opinion Writing</td>
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<td>COMM 240 Introduction to News Photography</td>
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<td>COMM 242 Advanced News Photography</td>
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<td>COMM 244 Reporting and Feature Writing</td>
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<td>COMM 270 Basic TV &amp; Video Production</td>
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<td>COMM 281 Reporting &amp; Editing</td>
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<td>COMM 299 Special Topics in Journalism</td>
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<td>MUSC 118 Chamber Choir</td>
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<td>MUSC 130/131 Class Voice (Men)</td>
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<td>MUSC 230/231 Class Voice (Women)</td>
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<td>MUSC 132 Wind Ensemble</td>
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<td>MUSC 137 Jazz Ensemble</td>
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<td>MUSC 138 Percussion Ensemble</td>
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<td>MUSC 145 Applied Music</td>
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<td>MUSC 146 Applied Music - Major</td>
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<td>MUSC 151/152 Class Piano I-IV</td>
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<td>MUSC 153 Class Guitar—Beginner</td>
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<td>MUSC 154 Class Guitar II</td>
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<td>MUSC 155 Guitar Ensemble</td>
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<td>MUSC 160* Mini-Music</td>
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<td>MUSC 299* Special Topics in Music</td>
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<td>NURS 100 Nurse Assistant Training</td>
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<tr>
<td>HPER 100 Concepts of Fitness and Wellness</td>
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<td>HPER 101 Physical Education</td>
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<td>HPER 150/151 Varsity Athletics</td>
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<td>HPER 202 Physical Education</td>
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<td>HPER 204 Dance Skills/Techniques</td>
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<td>HPER 210 First Aid, CPR and AED</td>
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<td>HPER 212 Introduction to Self-Defense</td>
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<td>HPER 250/251 Varsity Athletics</td>
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<td>HPER 299* Special Topics in Phy. Ed.</td>
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<td>PSYC 105 Relationships &amp; Self Esteem</td>
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<td>PSYC 107 Mental Skills Train for Perf Exc</td>
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<td>SOC 120 Transition to College Life/Seminar</td>
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<td>COMM 222 Voice and Diction</td>
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<td>COMM 299 Special Topics in Speech Comm.</td>
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THEATRE ARTS
THEA 161  Acting I  3 * *
THEA 167/267  Dance-Theatre Movement I & II  3 * *
THEA 201  Theatre Practicum  1 * *
THEA 247  Stage Makeup  3 * *
THEA 270  Stagecraft  3 * *
THEA 255  One-Act Play Production  1-3 * *

NOTE: *COURSES MARKED WITH AN ASTERISK MAY SATISFY REQUIREMENTS WITH PERMISSION OF DEPARTMENT CHAIRPERSON AND DEAN OF ACADEMIC AFFAIRS.

BSC DIVERSITY REQUIREMENT COURSES
The diversity requirement is designed to enhance the AA and AS student’s overall educational experience by focusing in a central and substantial way on issues, theories, and methods relevant to analyzing and understanding inter-group dynamics and diversity in its broadest sense. Diversity is not required for the AAS, Diploma or Certificate. The following courses meet the diversity requirement for AA and AS degrees at Bismarck State College. Please Note: This requirement is part of – but not in addition to – the existing general education requirements for the Associate in Arts Degree (AA) and the Associate in Science Degree (AS), so one course may meet the requirement in both diversity and general education. Please speak with your academic advisor if you have questions.

<table>
<thead>
<tr>
<th>Diversity Course</th>
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<th>Gen. Ed. Course</th>
<th>Degree</th>
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<tr>
<td>ART 110  Introduction to Visual Arts</td>
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<tr>
<td>ART 210  Art History I</td>
<td>3</td>
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<td>ART 211  Art History II</td>
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<td><strong>CRIMINAL JUSTICE</strong></td>
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<td>CJ 201  Introduction to Criminal Justice</td>
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<td><strong>ECONOMICS</strong></td>
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<td>ECON 201  Principles of Microeconomics</td>
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<tr>
<td>ENGL 221  Introduction to Drama</td>
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<tr>
<td>ENGL 222  Introduction to Poetry</td>
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<td>ENGL 233  Fantasy &amp; Science Fiction</td>
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<td>ENGL 236  Women and Literature</td>
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<td>ENGL 252  British Literature II</td>
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<td>ENGL 261  American Literature I</td>
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<td>ENGL 262  American Literature II</td>
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<td>ENGL 279  World Autobiography</td>
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<td>HUMS 210  Integrated Cultural Studies (Hispanic Civilization &amp; Culture)</td>
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<td><strong>PHILOSOPHY</strong></td>
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<tr>
<td>PHIL 101  Introduction to Philosophy</td>
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<td>PHIL 250  Philosophy in Cinema</td>
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### BSC DIVERSITY REQUIREMENT COURSES (CONTINUED)

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<td><strong>RELIGION</strong></td>
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<td>RELS 120 Religion in America</td>
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<td>RELS 203 World Religions</td>
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<td>SOC 110 Introduction to Sociology</td>
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<td>SOC 115 Social Problems</td>
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<td>SOC 252 Criminology</td>
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<td>SPAN 202 Second-Year Spanish II</td>
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REQUIREMENTS FOR BACHELOR OF APPLIED SCIENCE IN ENERGY MANAGEMENT

1. Satisfy all admissions requirements.
2. Completion of an AAS degree, Certificate, or Diploma in an accredited and approved program in an energy related field. Previous college coursework along with industry experience/training may also be considered.
3. Earn a minimum of 120 semester hours of credit to include the following general education (GE) requirements. See pages 46-49 for more information about required program general education courses.

Communications – 9 semester hours
Arts and Humanities – 6 semester hours with no more than 3 hours of Fine Arts Activities
Social and Behavioral Sciences – 6 semester hours
Business, Math, Science, and Technology – 21 semester hours with at least one Science course three hours (lab not required)
5. Completion of Energy Management courses (30 semester hours).
6. Earn at least 30 semester hours of institutional credit from Bismarck State College.
7. Earn a minimum of 30 semester hours of upper division (300/400) level courses.
8. Meet all of the following:
   • Minimum of 120 credits
   • Minimum 2.00 institutional GPA (BSC only)
   • Minimum 2.25 cumulative GPA (BSC + Transfer)
9. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.

ASSOCIATE IN ARTS (AA) REQUIREMENTS

1. Satisfy all admissions requirements.
2. Complete the following general education (GE) requirements. See matrix of general education courses on pages 46-49.

Communications – 9 semester hours
• ENGL 110 - 3 credits
• ENGL 120, 121 or 125 - 3 credits
• COMM 110 - 3 credits

Arts and Humanities – 6 semester hours
Note: No more than 3 hours of Fine Arts Activities may be used.

Social and Behavioral Sciences – 6 semester hours

Math, Science, and Technology – 15 semester hours with at least 8 hours of a laboratory science pair and at least 3 hours of math are required, excluding Math 102 and Math 137.

3. Enrichment requirement: 2 semester hours to enrich the overall educational experience. If a course(s) is used to fulfill a general education requirement, it cannot be used to fulfill the enrichment requirement.
4. Diversity requirement: 3 semester hours to enhance the overall educational experience. If a course(s) is used to fulfill a general education requirement, it can be used to fulfill the diversity requirement.
5. Academic Skills Courses (ASC) will not fulfill general education requirements and cannot be included in the semester hours required for an Associate in Arts degree.
6. Earn at least 15 semester hours of institutional credit from Bismarck State College.
7. Meet all of the following:
   • Minimum of 60 credits
   • Minimum 2.00 institutional GPA (BSC only)
   • Minimum 2.00 cumulative GPA (BSC + Transfer)
8. Clear all college obligations.
9. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.
7. Meet all of the following:
   • Minimum of 60 credits
   • Minimum 2.00 institutional GPA (BSC only)
   • Minimum 2.00 cumulative GPA (BSC + Transfer)
8. Clear all college obligations.
9. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.

ASSOCIATE IN APPLIED SCIENCE (AAS) REQUIREMENTS
1. Satisfy all admissions requirements.
2. Complete a prescribed technical program
3. Complete the following general education requirements. See matrix of general education courses on pages 46-49.
4. Meet all of the following minimums:
   • 60 credits
   • 2.00 GPA in a prescribed technical program
   • 2.00 overall institutional GPA (BSC only)
   • 2.00 cumulative GPA (BSC + Transfer)
5. Earn at least 15 semester hours of institutional credit from Bismarck State College
6. Academic Skills Courses (ASC) will not fulfill general education requirements and cannot be included in the semester hours required for an Associate in Applied Science Degree.
7. Clear all college obligations.
8. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.

Communications - 6 semester hours
   • ENGL 110 - 3 credits
   • ENGL 120, 121, 125 or COMM 110 - 3 credits

Arts & Humanities/Social and Behavioral Sciences - 3 semester hours

Business/Math/Science/Technology - 6 semester hours
Note: Must be from any two areas of study listed under business/math/science/technology in the AAS column of the General Education Matrix. (For example, enroll in a biology course and a math course, but not two biology courses or two math courses.)

4. Meet all of the following minimums:
   • 60 credits
   • 2.00 GPA in a prescribed technical program
   • 2.00 overall institutional GPA (BSC only)
   • 2.00 cumulative GPA (BSC + Transfer)
5. Earn at least 15 semester hours of institutional credit from Bismarck State College
6. Academic Skills Courses (ASC) will not fulfill general education requirements and cannot be included in the semester hours required for a Program Diploma.
7. Clear all college obligations.
8. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.

CERTIFICATE PROGRAM REQUIREMENTS
1. Satisfy all admissions requirements.
2. Complete a prescribed technical program.
   If the program contains 45 or more credits, also complete a minimum of four semester hours of general education credits from any two areas of study. (For example, enroll in an English course and a computer science course, but not two English courses or two computer science courses.)

Note: Courses that will fulfill the general education requirement are listed in the Certificate column of the General Education Matrix.

3. Meet all of the following minimums:
   • 2.00 GPA in a prescribed technical program
   • 2.00 overall institutional GPA
   • 2.00 Cumulative GPA (BSC + Transfer)
For a program of fewer than 45 credits that requires no general education credits, the GPA is calculated based on the courses of the prescribed technical program only.
4. Earn at least 15 semester hours of institutional credit from Bismarck State College
5. Academic Skills Courses (ASC) will not fulfill general education requirements and cannot be included in the semester hours required for a Program Certificate.
6. Clear all college obligations.
7. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.
CERTIFICATE OF COMPLETION REQUIREMENTS
1. Satisfy all admissions requirements.
2. Complete a prescribed technical program.
3. Meet all of the following minimums:
   • 2.00 GPA in a prescribed technical program
   • 2.00 overall institutional GPA (BSC Only)
   • 2.00 Cumulative GPA (BSC + Transfer)
4. Earn at least half of the semester hours of institutional credit from Bismarck State College
5. Academic Skills Courses (ASC) will not fulfill general education requirements and cannot be included in the semester hours required for a Program Certificate.
6. Clear all college obligations.
7. File an Application for Degree in the Academic Records Office the semester prior to anticipated graduation.

EFFECTIVE DEGREE REQUIREMENTS
If the College’s degree requirements change during a student’s period of enrollment at BSC, the following will apply:
1. Students who are enrolled continuously, except for summer session, may choose the degree requirements in effect at the time of their initial enrollment at BSC, or the degree requirements in effect during the academic year in which they plan to meet degree requirements. Students must declare the college catalog and year of their choice on their degree application.
2. Students who are not enrolled continuously must meet the degree requirements in effect during the academic year in which they reapply for admission.

ELECTRONIC DEGREE AUDIT
Electronic degree audit is an advising tool available to students and advisors. It can be found in CampusConnection via the Student Center. This feature enables students to easily view an advisement report matching their completed and in-progress coursework to the requirements of their degree plan. The most recent information, including Quick Guide Help Sheets, is available at bismarckstate.edu/current/records/degreeaudit/.

APPLICATION FOR DEGREE
All students need to complete an application for degree in order to receive their degree, diploma or certificate. Degree information is not posted to transcripts and a diploma is not ordered if you fail to apply. An application for degree should be submitted to the Academic Records Office the semester prior to anticipated graduation. Please refer to the graduation page on the BSC website for the degree application, application deadline and procedures. bismarckstate.edu/current/records/graduation/

FAILURE TO MEET DEGREE REQUIREMENTS
The student is solely responsible for making sure all graduation requirements are met.
Failure to apply by the published degree application deadline of the planned semester of graduation or not completing all requirements for the degree within 30 days of the end of the semester of graduation will delay the awarding of the degree until the following semester. The student must reapply for the degree in a following term.

DEGREE POSTING
Earned degrees are posted to academic records approximately four to five weeks following the close of the semester in which degree requirements were successfully completed.

DIPLOMAS
Diplomas are mailed approximately six weeks following the close of the academic term in which graduation requirements have been completed. Neither diplomas nor official transcripts will be released for students who have outstanding debts owed to the college. Students are responsible for submitting any name and address corrections for diploma processing. A diploma replacement can be provided by the Academic Records Office for those who have lost or damaged their diploma. A fee will apply.

COMMENCEMENT
Candidates for graduation are encouraged to attend their commencement ceremony. Commencement exercises are held at the close of spring semester. Students who expect to complete graduation requirements during the summer are eligible to participate in May commencement exercises. The date of degree conferral will be printed on the diploma according to the academic calendar of the college. Graduates who plan to attend the commencement ceremony can indicate their intent on their degree application or by notifying the Academic Records Office, with the intent to participate in the ceremony if a degree application has already been submitted. Orders for caps and gowns are made through the BSC Bookstore. Detailed Commencement information is available at bismarckstate.edu/current/records/graduation/graduationceremony/.

GENERAL EDUCATION REQUIREMENT
In addition to course work in the students’ declared major and elective credits, the core of the curriculum is found in the general education requirements.

Philosophy of General Education
Bismarck State College is dedicated to providing innovative educational programs that develop individual abilities, strengthen human relationships, enhance community life, and heighten global consciousness.
The General Education requirements at Bismarck State College promote the development of an informed and educated person who recognizes and respects the diversity of communities; understands the value of active, critical thinking; and is competent and proficient at fundamental skills which encourage a positive attitude toward lifelong learning and equip students to participate in a complex, interdependent world.

The ability to successfully function in a diverse society requires knowledge and awareness. This includes:
- recognition of the diversity of people;
- examination of one’s attitudes, values and assumptions;
- recognition of the impact of past events on contemporary society; and
- knowledge of the rights and responsibilities of citizens in society.

The ability to communicate one’s thoughts to others is essential in interpersonal relationships, working environments, and civic duties. This includes:
- clarity of thought, organization, and presentation in oral and written communication;
- organization, presentation, and transfer of ideas by electronic means; and
- communication of ideas and emotions through creative expression.

The ability to think in a manner that is imaginative, methodic, and even provocative can be the cornerstone of success for a student. This includes:
- recognition of the impacts of technology on society and of the responsible and ethical use of technology;
- identification of a problem and an approach to the solution that is realistic and/or creative;
- recognition and analysis of arguments that support divergent theories and perspectives; and
- interpretation of results and the reasonable drawing of conclusions.

ENRICHMENT REQUIREMENT

The enrichment requirement is designed to enrich the overall educational experience.

Statement of Philosophy

The role of Enrichment is to explore areas of interest that lie beyond traditional textbook-bound course work. Many of the Enrichment courses provide opportunities for hands-on learning. Others provide experiences which may translate into life-long interests or pursuits. Enrichment courses give students opportunities to grow in ways that enhance their personal and community lives.

Intended Student Outcomes

- To broaden one’s life experiences.
- To develop new skills including less hesitancy when engaging in new/novel experiences.
- To experience personal growth or change.

For courses that will satisfy the enrichment requirement for the AA and AS degrees, see the matrix on pages 49-51.

DIVERSITY REQUIREMENT

The diversity requirement is designed to enhance the overall educational experience. As part of – but not in addition to – the existing Requirements for Associate in Arts Degree (AA) and Requirements for Associate in Science Degree (AS), students must earn three credits from a designated list of courses that focus in a central and substantial way on issues, theories, and methods relevant to analyzing and understanding inter-group dynamics and diversity in its broadest sense.

Statement of Philosophy

Liberal education today must include preparation for effective citizenship in a diverse multicultural society and in a pluralistic global setting. The diversity requirement helps to ground students in the realities of a multicultural, transnational, and/or global society, and provides tools for studying the complexity of diverse communities defined by characteristics such as race, ethnicity, gender, socioeconomic background, religion, sexual orientation, age, and/or others.

Intended Student Outcomes

Bismarck State College has established a Cultural Diversity Course Requirement to enable students to:
1. gain knowledge of cultural diversity including races, religions, subcultures or ethnicities;
2. gain exposure to the concept that all individuals and cultures are not alike;
3. address multi-cultural issues; and/or
4. recognize and think critically about the ideas and perspectives of others.

For courses that will satisfy the diversity requirement, see pages 51-52.

THE NORTH DAKOTA UNIVERSITY SYSTEM TRANSFER AGREEMENT (GERTA)

Students who attend colleges and universities in the North Dakota University System are guaranteed that approved general education requirements successfully completed at one of the NDUS institutions will transfer to other NDUS institutions. This practice was made possible when the State Board of Higher Education adopted the General Education Requirements Transfer Agreement (GERTA).

BSC students who complete the general education course requirements for either the Associate in Arts or the Associate in Science degree and who accumulate 36 semester hours of course work in the areas of communications; arts and humanities; social sciences; and mathematics, science and technology will be exempt from taking any additional lower division general education courses at any NDUS institution to which they transfer.
The following stipulations apply:
1. Requirements must be met through completion of BSC courses. Credits obtained through CLEP exams, military training, challenge exam credits or other similar programs do not apply.
2. Courses must be completed at colleges or universities in the North Dakota University System.
3. Students must have obtained a grade of C or above for the course to meet GERTA requirements.

Students who plan to transfer to other NDUS institutions and who have met the requirements (referred to as GERTA Paragraph One requirements) should contact the BSC Academic Records Office. An NDUS General Education Requirements (GER) verification form will be completed by the BSC Registrar and provided to, or on behalf of, the student making the request. GER verification forms document the fact that a student has completed NDUS GERTA Paragraph One requirements and is exempt from additional general education requirements.

The complete text of the State Board of Higher Education’s General Education Transfer Agreement and the NDUS “Student Guide to Transfer Within the North Dakota University System” are available for reference purposes in administrative offices on campus, in the BSC Library and online at ndus.edu/employees/articulation-transfer.
CURRICULA

This section contains curricula for students who plan to transfer and for students in technical programs. All curricula are organized alphabetically. Directly under each discipline title are key words to guide students as to whether the curriculum (list of coursework) is designed for transfer, or is a technical program. Some have both options within the discipline. Other key words will indicate if the program is also online or has limited enrollment.

Transfer Curricula

• For students planning to pursue a bachelor’s degree

• Curricula listed is suggested for first two years toward the bachelor’s degree

• Students need to consult the four-year institution they will transfer to and revise BSC’s suggested curriculum as needed.

Technical Programs

• For students seeking skills and knowledge for entry-level employment

• Most programs are not designed for transfer

• Some exceptions exist for students seeking management positions. Ask your advisor about bachelor of applied science degrees.

• Some programs have limited enrollment, with admission on first-come, first-served basis.

Availability of courses is subject to change whenever such changes are deemed necessary, or based upon availability of resources, or student enrollment.

The list on the next page includes all transfer curricula and programs, the type of degree students can earn, and the page numbers. The type of degree is indicated by these abbreviations:
BAS – Bachelor of Applied Science
AA – Associate in Arts
AS – Associate in Science
AAS – Associate in Applied Science
D – Program Diploma
C – Program Certificate
CC – Certificate of Completion
<table>
<thead>
<tr>
<th>Field</th>
<th>Degree(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>AA</td>
<td>62</td>
</tr>
<tr>
<td>Agriculture, Technology and Natural</td>
<td>AAS</td>
<td>63</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Industry and Technology</td>
<td>AAS</td>
<td>63</td>
</tr>
<tr>
<td>Farm and Ranch Management</td>
<td>AAS</td>
<td>64</td>
</tr>
<tr>
<td>Agriculture Transfer</td>
<td>AS</td>
<td>65</td>
</tr>
<tr>
<td>Farm Management Education Program</td>
<td>AA</td>
<td>66</td>
</tr>
<tr>
<td>Art: Visual</td>
<td>AA</td>
<td>67</td>
</tr>
<tr>
<td>Automotive Collision Technology</td>
<td>AAS, D, C</td>
<td>68</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>AAS, D, C</td>
<td>69</td>
</tr>
<tr>
<td>Biology</td>
<td>AS</td>
<td>70</td>
</tr>
<tr>
<td>Business</td>
<td>AA</td>
<td>71</td>
</tr>
<tr>
<td>Business Administration</td>
<td>AA</td>
<td>72</td>
</tr>
<tr>
<td>Management</td>
<td>AAS</td>
<td>73</td>
</tr>
<tr>
<td>Management - Entrepreneurship Option</td>
<td>AAS</td>
<td>74</td>
</tr>
<tr>
<td>Management - American Institute of Banking</td>
<td>AAS</td>
<td>75</td>
</tr>
<tr>
<td>Management - Emergency Responders</td>
<td>CC</td>
<td>76</td>
</tr>
<tr>
<td>Business and Office Technology</td>
<td>AAS</td>
<td>77</td>
</tr>
<tr>
<td>Administrative Assistant/Legal</td>
<td>AAS</td>
<td>78</td>
</tr>
<tr>
<td>Administrative Assistant/Medical</td>
<td>AAS</td>
<td>79</td>
</tr>
<tr>
<td>Administrative Assistant/General</td>
<td>AAS, C</td>
<td>80</td>
</tr>
<tr>
<td>Business Education</td>
<td>AAS</td>
<td>81</td>
</tr>
<tr>
<td>Carpentery (Residential)</td>
<td>AAS, D, C</td>
<td>82</td>
</tr>
<tr>
<td>Chemistry</td>
<td>AS</td>
<td>83</td>
</tr>
<tr>
<td>Chiropractic</td>
<td>AS</td>
<td>84</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>AAS, C</td>
<td>85</td>
</tr>
<tr>
<td>Computer Support Specialist</td>
<td>AAS, C</td>
<td>86</td>
</tr>
<tr>
<td>Information Processing Specialist</td>
<td>AAS, C</td>
<td>87</td>
</tr>
<tr>
<td>Computer Science</td>
<td>AS</td>
<td>88</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>AAS</td>
<td>89</td>
</tr>
<tr>
<td>Criminal Justice - Entrepreneurship Option</td>
<td>AAS</td>
<td>90</td>
</tr>
<tr>
<td>Dentistry</td>
<td>AAS</td>
<td>91</td>
</tr>
<tr>
<td>Economics</td>
<td>AA</td>
<td>92</td>
</tr>
<tr>
<td>Education</td>
<td>AA</td>
<td>93</td>
</tr>
<tr>
<td>Electric Power Technology</td>
<td>AAS, C</td>
<td>94</td>
</tr>
<tr>
<td>Electrical Transmission</td>
<td>AAS, C</td>
<td>95</td>
</tr>
<tr>
<td>Systems Technology</td>
<td>AAS, C</td>
<td>96</td>
</tr>
<tr>
<td>Electronics/Telecommunications Technology</td>
<td>AAS, D</td>
<td>97</td>
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<tr>
<td>Energy Management</td>
<td>BAS</td>
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<tr>
<td>Engineering</td>
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<tr>
<td>Engineering Technology</td>
<td>AAS</td>
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<tr>
<td>English</td>
<td>AA</td>
<td>101</td>
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<tr>
<td>Foreign Language</td>
<td>AA</td>
<td>102</td>
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<tr>
<td>Geographic Information Systems</td>
<td>AAS, C, CC</td>
<td>103</td>
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<tr>
<td>Technician</td>
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<td>Graphic Design and Communications</td>
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<td>105</td>
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<tr>
<td>Health Education</td>
<td>AA</td>
<td>106</td>
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<tr>
<td>Heating, Ventilation and</td>
<td>AAS, D, C</td>
<td>107</td>
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<tr>
<td>Air Conditioning</td>
<td>AAS, D, C</td>
<td>108</td>
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<tr>
<td>History</td>
<td>AA</td>
<td>109</td>
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<tr>
<td>Human Services</td>
<td>AAS</td>
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<tr>
<td>Eligibility Worker</td>
<td>C</td>
<td>111</td>
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<tr>
<td>Instrumentation &amp; Control Technology</td>
<td>AAS, D</td>
<td>112</td>
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<tr>
<td>Journalism</td>
<td>AA</td>
<td>113</td>
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<tr>
<td>Liberal Arts</td>
<td>AA</td>
<td>114</td>
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<tr>
<td>Lineworker (Electrical)</td>
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<td>115</td>
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<tr>
<td>Medical Laboratory Scientist</td>
<td>AAS</td>
<td>116</td>
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<tr>
<td>Music</td>
<td>AA</td>
<td>117</td>
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<tr>
<td>Medical Laboratory Technician</td>
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<td>118</td>
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<tr>
<td>Music Technology</td>
<td>AAS</td>
<td>119</td>
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<tr>
<td>Nursing</td>
<td>AA</td>
<td>120</td>
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<tr>
<td>Medical Laboratory Scientist</td>
<td>AS</td>
<td>121</td>
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<tr>
<td>Nuclear Power Technology</td>
<td>AAS, C</td>
<td>122</td>
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<tr>
<td>Practical Nursing</td>
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<td>123</td>
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<tr>
<td>Registered Nursing</td>
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<td>124</td>
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<tr>
<td>Medical Laboratory Scientist</td>
<td>AS</td>
<td>125</td>
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<tr>
<td>Medicine</td>
<td>AAS</td>
<td>126</td>
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<td>Petcent One College of Nursing</td>
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<td>127</td>
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<tr>
<td>Nursing Transfer</td>
<td>AS</td>
<td>128</td>
</tr>
<tr>
<td>Optometry</td>
<td>AS</td>
<td>129</td>
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<tr>
<td>Paramedic (EMT-P) Technology</td>
<td>AAS, C</td>
<td>130</td>
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<tr>
<td>Pharmacology</td>
<td>AS</td>
<td>131</td>
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<tr>
<td>Petroleum Engineering Technology</td>
<td>AAS, C</td>
<td>132</td>
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<tr>
<td>Process Plant Technology</td>
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<td>133</td>
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<tr>
<td>Psychology</td>
<td>AS, AA</td>
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<tr>
<td>Public Administration</td>
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<td>135</td>
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<tr>
<td>Radiologic Technology</td>
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<tr>
<td>Renewable Generation Technology</td>
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<td>137</td>
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<tr>
<td>Respiratory Therapy</td>
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<td>138</td>
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<tr>
<td>Social Sciences</td>
<td>AS</td>
<td>139</td>
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<tr>
<td>Social Work</td>
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<tr>
<td>Sociology</td>
<td>AA</td>
<td>141</td>
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<tr>
<td>Speech Communication</td>
<td>AA</td>
<td>142</td>
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<tr>
<td>Sustainable Construction Technology</td>
<td>AAS, C</td>
<td>143</td>
</tr>
<tr>
<td>Technical Studies</td>
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<td>144</td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>AA</td>
<td>145</td>
</tr>
<tr>
<td>Web Page Development and Design</td>
<td>AAS, C</td>
<td>146</td>
</tr>
<tr>
<td>Welding</td>
<td>AAS, D, C</td>
<td>147</td>
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</tbody>
</table>
Accounting majors who study accounting and other business administration courses will obtain a basic understanding of the world of business and industry.

Students taking accounting should enjoy processing information and thinking analytically. In addition, good interpersonal and writing skills are also valuable. High school students should have mathematics courses in algebra and geometry.

The future looks good for accounting majors. With increasing competition on a global level, the need to utilize timely information for operational and strategic decision making is more important than ever and remains an essential priority for all businesses.

Technology has changed nearly every aspect of the profession and is an integral component of the accounting program at BSC. The latest software programs used by business and industry across the nation are available for student use in the computer labs.

Students who complete the requirements earn an Associate in Arts degree. Since programs at four-year colleges vary somewhat, students should consult the catalog of the college to which they plan to transfer and modify the following suggested curriculum.

BSC has cooperative agreements with Dickinson State University and Minot State University that allow students to complete the Associate in Arts or Associate in Science degree at BSC and continue with a bachelor’s degree on the BSC campus. Programs offered by DSU related to this program are Accounting, Business Administration, Finance, Human Resource Management, and International Business. Bachelor’s degree programs offered by MSU on the BSC campus include Management and Marketing. Contact your BSC advisor for assistance with transfer planning.

**Career Possibilities:** Accountant, Financial Analyst, Financial Planner, Stock Analyst, Stock Broker, Auditor, Entrepreneur, Business Owner, Manager, Banking and Investment Banking.

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### SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

#### FRESHMAN

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<tr>
<th>Course</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Elements of Accounting (ACCT 200, 201)</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Macroeconomics (ECON 202)</td>
<td>3</td>
</tr>
<tr>
<td>Algebra (MATH 103) or Finite Mathematics (MATH 104)**</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Statistics (MATH 210)</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
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<tr>
<td>Enrichment</td>
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<td><strong>Total credits</strong></td>
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#### SOPHOMORE

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<tbody>
<tr>
<td>Laboratory Science Elective</td>
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</tr>
<tr>
<td>Speech (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Applications in Business (ACCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>Business in the Legal Environment (ACCT 215)</td>
<td>3</td>
</tr>
<tr>
<td>Business Law I (ACCT 225)</td>
<td>3</td>
</tr>
<tr>
<td>Management Information Systems (BADM 224)</td>
<td>3</td>
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<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
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<tr>
<td><em>Income Tax Procedures (ACCT 231)</em></td>
<td>3</td>
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<tr>
<td>Electives</td>
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<tr>
<td><strong>Total credits</strong></td>
<td><strong>32</strong></td>
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</table>

* Recommended for Accounting and other business majors as an elective

**Economics and Accounting majors should take Math 146 or Math 104.
Bismarck State College takes a comprehensive approach in preparing graduates for careers in agriculture, technology and natural resources. Programs in ATNR offer specialized courses, projects to apply classroom learning, freshman and sophomore seminars on career opportunities, and a cooperative education internship for on-the-job training.

Bismarck State College offers the following:

Agriculture Industry and Technology - Associate in Applied Science degree (AAS) – For students interested in the agronomy industry
Farm and Ranch Management (AAS) – For students interested in management of a farm/ranch or agribusiness
Agriculture, Technology, Food and Natural Resources Transfer - Associate in Science degree (AS) – For students interested in transferring to a four-year university
Farm Management Education - non degree – For farm financial analysis

**CURRICULUM FOR AAS:**

**SEMESTER I FALL**
- World Food Crops/Lab (PLSC 110/L) .........................................3
- Leadership and Presentation Techniques (H&CE 241) ....................2
- First Year Seminar (AGRI 191) ..................................................2
- Agriculture Industry Skills (ASM 175) .......................................3
- Special Topics (AGRI 299) .......................................................1
- General Education Course(s) - Communications ........................3-6

**SEMESTER II SPRING**
- Introduction to Weed Science/Lab (PLSC 223/L) .......................3
- Soil Fertility and Fertilizers/Lab (SOIL 222/L) ..............................3
- Field Scouting Techniques (PLSC 235/L) ....................................2
- Agriculture Industry Machinery Operations (ASM 130) ..............2
- Introduction to Agribusiness Management (AGEC 141) .............2
- Introduction to Agricultural Finance (AGEC 246) .........................3
- *Microeconomics (ECON 201) ..................................................3
- *General Education Course – Social and Behavioral Sciences

**SUMMER SESSION**
- Cooperative Education/Internship (AGRI 197) .........................2
- Field Scouting Techniques Lab (PLSC 235L) ...............................1

**SEMESTER III FALL**
- Principles of Crop Production (PLSC 225) .................................3
- Introduction to Soil Science (SOIL 210/L) ..................................3
- Introduction to Precision Farming (AGRI 275) .............................3
- Introduction to Agriculture Management (AGEC 242) ...............4
- Second Year Seminar (AGRI 291) .............................................2

**SEMESTER IV SPRING**
- Introduction to Agricultural Marketing (AGEC 244) ..................3
- AgriSales (AGEC 250) ..........................................................3
- Precision Agriculture Systems – Software (AGRI 285) ..............2
- Advanced Crop Production (PLSC 245) ....................................2
- Advanced Weed Science (PLSC 243) .......................................2
- General Education Course - Communications ..........................0-3

**FARM AND RANCH MANAGEMENT ASSOCIATE IN APPLIED SCIENCE (AAS)**

**SEMESTER III FALL**
- Principles of Crop Production (PLSC 225) ...................3
- Introduction to Soil Science (SOIL 210/L) .............................3
- Introduction to Precision Farming (AGRI 275) .........................3
- Introduction to Agriculture Management (AGEC 242) ..............4
- Second Year Seminar (AGRI 291) ...........................................2

**SEMESTER IV SPRING**
- Introduction to Agricultural Marketing (AGEC 244) ..................3
- AgriSales (AGEC 250) ..........................................................3
- Precision Agriculture Systems – Software (AGRI 285) ..............2
- Advanced Crop Production (PLSC 245) ..................................2
- Advanced Weed Science (PLSC 243) ....................................2
- General Education Course - Communications ..........................0-3

This two-year program prepares students to manage a farm/ranch or agribusiness. Agriculture is a business savvy industry with many opportunities for candidates skilled at streamlining processes and creating value added solutions for promoting agriculture goods. In today’s market, farmers, ranchers and agribusiness managers must stay abreast of the latest developments in technology and agriculture production to make sound
scientific and business decisions. Price fluctuations, increased demand for food and biofuel are just a few of the challenges that the future generation of agriculture managers will face.

The curriculum is designed to prepare students to be successful managers and includes prescribed coursework in accounting, agriculture finance, marketing, precision farming, crop/soil science and livestock production. The program requires participation in a cooperative education internship. Advisors will work with students to determine an appropriate internship project for the farm/ranch management option and to gain employment at an agribusiness for the agribusiness management option.

General education requirements for the AAS degree are included below.

**CURRICULUM FOR AAS**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture Accounting (AGEC 142)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Agriculture Management (AGEC 242)</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Agriculture Marketing (AGEC 244)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Agriculture Finance (AGEC 246)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Leadership and Presentation Techniques (H&amp;CE 241)</td>
<td>2</td>
</tr>
<tr>
<td>World Food Crops (PLSC 110/L)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Soil Sciences/Lab (SOIL 210/L)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Animal Science/Lab (ANSC 114/L)</td>
<td>3</td>
</tr>
<tr>
<td>Feeds and Feeding/Lab (ANSC 123/L)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Precision Farming (AGRI 275)</td>
<td>3</td>
</tr>
<tr>
<td>Special Topics (AGRI 299)</td>
<td>1</td>
</tr>
<tr>
<td>Cooperative Education/Internship (AGRI 297)</td>
<td>2</td>
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<tr>
<td>Elements of Accounting (ACCT 200)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Courses - Communication</td>
<td>6</td>
</tr>
</tbody>
</table>

**FARM/RANCH MANAGEMENT OPTION**

- Introduction to Range Management (RNG 236) ................................ 3
- Agriculture Industry Skills (ASM 175) ...................................... 3
- Agriculture Welding (ASM 155)                                       3
- Agriculture Electives ................................................................ 12

**AGRIBUSINESS MANAGEMENT OPTION**

- First Year Seminar (AGRI 191)                                       2
- Second Year Seminar (AGRI 291)                                      2
- AgriSales (AGEC 250)                                                 3
- Human Resource Management (BADM 282)                                3
- Agriculture Electives ................................................................ 11

**AGRICULTURE ELECTIVES**

- Suggested Courses
  - Principles of Crop Production (PLSC 225) ................................ 3
  - Advanced Crop Production (PLSC 245) ...................................... 2
  - Introduction to Weed Science/Lab (PLSC 223/L)                     3
  - Soil Fertility and Fertilizers/Lab (SOIL 222/L)                   3
  - Advanced Weed Science (PLSC 243)                                 2
  - Large Ruminant Production (ANSC 252)                             2
  - Livestock Production/Lab (ANSC 220/L)                             3
  - Introduction to Veterinary Science (VETS101)                     2
  - Animal Health (VETS 239)                                          3
  - Agriculture Industry Machinery Operation (ASM 130)                3
  - Precision Agriculture Systems – software (AGRI 285)              2

**AGRICULTURE TECHNOLOGY, FOOD AND NATURAL RESOURCES ASSOCIATE IN SCIENCE (AS)**

**TRANSFER**

**CONTACT PERSON:** Carmel Miller • BPS Career Academy 109

**224-5557 • Carmel.Miller@bismarckstate.edu**

The Agriculture, Technology, Food and Natural Resources transfer program offers core classes for students who will ultimately transfer to a four-year agriculture college. Faculty members advise students to meet the Associate in Science requirements at Bismarck State College (BSC) and the proper prerequisites for the transfer degree at a four-year college. Students are able to be dual enrolled at BSC and North Dakota State University (NDSU) or Dickinson State University (DSU).

Completion of the program provides a strong foundation in agriculture, allowing a student to enroll in a transfer school at the junior level to pursue a bachelor's degree in such areas as agribusiness, agricultural economics, animal science, crop and weed science, agriculture systems management, agriculture education, range management, natural resources management, general agriculture, veterinary technology, pre-veterinary medicine, and more.

A cooperative education internship with on-the-job training in an agriculture area of interest is suggested. Graduates of this program receive an Associate in Science degree.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:**

- College Composition I (English 110) ....................................... 3
- College Composition II (English 120) ...................................... 3
- Public Speaking (COMM 110)                                       3
- Arts and Humanities Electives ................................................ 6
- Microeconomics (Econ 201)                                        3
- Macroeconomics (Econ 202)                                        3
- General Biology (Biol 150/L or Biol 151/L)                       4
- General Chemistry I (Chem 121/L)                                 5
- College Algebra (Math 103)                                       4
- Math/Science/Technology Electives                                 6-12
- Enrichment ............................................................................ 2
- Agriculture Electives required for transfer major ............. 12-18

**AGRICULTURE ELECTIVES**

- Introduction to Agricultural Finance (AGEC 246) ...................... 3
- Introduction to Agricultural Management (AGEC 242) ................ 4
- Introduction to Agricultural Marketing (AGEC 244) .................. 3
- Introduction to Animal Science/Lab (ANSC 114/L)                  3
- Feeds and Feeding/Lab (ANSC 123/L)                              3
- Livestock Production/Lab (ANSC 220/L)                            3
- World Food Crops/Lab (PLSC 110/L)                              3
- Principles of Crop Production (PLSC 225)                         3
- Introduction to Range Management (RNG 236)                      3
- Introduction to Soil Science (SOIL 210/L)                       3

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64  Bismarck State College
ART: VISUAL

TRANSFER

CONTACT PERSON: Michelle Lindblom • Werner Hall 201 224-5520 • Michelle.Lindblom@bismarckstate.edu

The visual arts stimulate growth and appreciation of aesthetics among the Bismarck State College students, faculty, and staff, and in the community.

The visual arts engage the student emotionally, intellectually and spiritually through a variety of activities that promote an understanding and respect through the process of observation and synthesis. The task of the visual arts is to weld together imagination and experience.

The visual arts program has a threefold mission: (1) to provide the core curriculum for students planning to transfer to a four year institution and for students who will involve art as a profession and/or livelihood; (2) to allow the students to enjoy art and develop their skills by participation in local, state, and national art activities and exhibitions; (3) and to make artistic contribution to the community.

Students may complete their initial two years of study toward a bachelor of arts degree in these categories: two dimensional design (painting, drawing); three dimensional design (ceramics, sculpture, jewelry); and design (computer, graphic, commercial, fashion, industrial and interior).

Non-major students may also benefit from visual art courses through our humanities-based introductory and appreciation courses. Non-traditional students are also an important part of the Visual Art Program. Inclusion of students who have returned to school for a variety of reasons and who are there for the love of learning add considerable depth and range to the classroom experience. Students often take visual art courses for self enrichment and several of the courses are structured so students can have continued enrollment as their skills develop.

Part of our goal as a Visual Arts program in a community college is to bring art to the community, but also as important, it is our goal to bring the community into our art program to make it a richer, deeper, more diverse and rewarding environment in which to express the creative spirit.

Career Possibilities: include but are not limited to: ART INSTRUCTOR: private, elementary, high school, college, university, GALLERY: director, curator, critic, agent, STUDIO: private, commercial, medical and scientific illustrator, illustrator, cartoonist, DESIGN: jewelry, fashion, industrial, interior, computer, graphic, commercial, animation and cartooning, ART THERAPY: research, industrial, rehabilitation, instructional and private.

The Art Department reserves the right to retain, exhibit, and reproduce any art work submitted for credit in any of the courses or programs.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math (MATH 103 or 210)</td>
<td>3-4</td>
</tr>
<tr>
<td>Social and Behavioral Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Drawing I &amp; II (ART 130-230)</td>
<td>6</td>
</tr>
<tr>
<td>Two Dimensional Design (ART 122)</td>
<td>3</td>
</tr>
<tr>
<td>Three Dimensional Design (ART 124)</td>
<td>3</td>
</tr>
<tr>
<td>Ceramics I &amp; II (ART 250, 251)</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment</td>
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<td>Total credits</td>
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SOPHOMORE

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Chemistry in Art (CHEM 114/114L)</td>
<td>3/1</td>
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<tr>
<td>Social and Behavioral Science Elective</td>
<td>6</td>
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<tr>
<td>Art History I &amp; II (ART 210-211)</td>
<td>6</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Painting (ART 220-221)</td>
<td>6</td>
</tr>
<tr>
<td>Sculpture I &amp; II (ART 265-266)</td>
<td>4</td>
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<tr>
<td>Enrichment</td>
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<tr>
<td>Total credits</td>
<td>30</td>
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</tbody>
</table>

*Jewelry I & II (ART 204-205) | 4 |
*Printmaking I & II (ART 270-271) | 6 |
*Advanced Ceramics (ART 252) | 1-3 |
*Art courses that can be taken according to the needs or interests of the student as well as the requirements of a bachelor degree art major.
There are countless opportunities in the automotive collision technology industry. A capable repair person need not worry about finding a job or about job security. Employment is available throughout the country with good wages and high demand for well-trained technicians.

This program prepares students to enter the automobile service field. The program provides training in metal finishing, frame straightening, welding, painting, and glass replacement.

Students have the opportunity to use a great variety of modern, specialized equipment in applying their classroom theory to actual shop work. The shop area is equipped with a spacious, well-lighted room which has filtered air movement in order to provide an ideal facility for spray painting automobiles. While the greater portion of the program is spent in actual shop work, a part of each class day is spent in the classroom studying basic theories, shop management, and other related subjects.

Enrollment: A class of 18 students is enrolled once a year in late August.

Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

Required placement scores:
ACT Composite - 14 or higher
COMPASS Reading - 64 or higher

Students who do not meet the above requirements should arrange an interview with an automotive collision technology instructor.

Background in these areas helpful:
• Basic computer literacy

Industry technical standards:
Awareness of the following technical standards in this industry may help students determine if they are suited to this career:
• Must have the ability to perform close accurate work, communicate effectively with others, present information in a clear, concise manner and follow verbal and written instructions.
• Requires good finger dexterity, good color vision and hearing, and ability to speak.
• Requires continuous walking, frequent standing, bending, stooping, climbing stairs and ladders, kneeling, lifting and carrying up to 50 pounds.
• Reaching above and below shoulder level, and occasional sitting, crawling, lifting 50 pounds from knee to shoulder high, pushing and pulling up to 25 pounds.

• Requires continuous use of tools and occasional use of foot controls.
• Continuous use of respirators or fresh air systems is required.
• Continuously exposed to noise, frequently exposed to dirt, dust, fumes, chemicals, and extreme heat and cold, and occasionally exposed to vibration, poor ventilation, and confined areas.

FALL

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Automotive Collision Technology (ABOD 100)</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Metal Finishing (ABOD 105)</td>
<td>5</td>
</tr>
<tr>
<td>Introduction to Sanding, Priming, and Painting (ABOD 107)</td>
<td>6</td>
</tr>
<tr>
<td>Auto Body Welding (ABOD 110)</td>
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<tr>
<td>Total credits</td>
<td>17</td>
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</table>

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Intermediate Metal Finishing (ABOD 108)</td>
<td>4</td>
</tr>
<tr>
<td>Plastics and Adhesives (ABOD 109)</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Painting (ABOD 112)</td>
<td>4</td>
</tr>
<tr>
<td>Component Parts—Replacement and Adjustment (ABOD 114)</td>
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</tr>
<tr>
<td>Total credits</td>
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Summer

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical and Electrical Components (ABOD 200)</td>
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</tr>
<tr>
<td>Advanced Painting (ABOD 210)</td>
<td>1</td>
</tr>
<tr>
<td>Frame Straightening &amp; Wheel Alignment (ABOD 216)</td>
<td>3</td>
</tr>
<tr>
<td>Estimating and Industrial Management (ABOD 220)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>10</td>
</tr>
</tbody>
</table>

Certificate Program Students:
*Students are encouraged to enroll in two classes of general education studies. Suggested classes are:
CSCI 101 Intro. to Computers.
See page 54 for general education requirements

Program Diploma and Associate in Applied Science Students:
*See page 54 for general education requirements

Students receive a program certificate upon successful completion of the program. Additional course work may lead to a program diploma or an Associate in Applied Science degree.
Automobile technicians face a challenging future in a changing field. Automobiles are growing increasingly complex with each model year as manufacturers respond to the public’s interest in better mileage and more stringent emissions control systems in this electronic age.

While the job outlook is good, the demands of this line of work are also increasing. Auto technicians are required to master the art of repairing and maintaining the more complicated systems of today’s vehicles. They will face countless automotive advances and changes during their working careers, requiring them to keep up with the industry. BSC’s auto technology program is vital for those who plan to work as automotive technicians, but also can be of value to many whose career interests lie in other automotive related areas. The training is also valuable for farmers and ranchers, permitting them to save money over the coming years by caring for and servicing their sophisticated farm implements.

All faculty in this department are Automotive Service Excellence (ASE) certified. In addition, the BSC Automotive Technology program holds the ASE NATEF Certification, adding an element of quality recognized by the automotive industry throughout the U.S.

Most BSC automotive graduates begin in entry-level jobs in the area. Starting salaries depend upon the level of responsibility, skill and initiative of the individual, and also to some extent on location. The faculty maintains active contacts throughout the industry in the area and helps graduates locate employment.

Enrollment: Students are enrolled two times a year on space available basis during the months of August and January. Refer to the admissions section in this catalog for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

Background in these areas helpful:
Students need good reading and comprehension skills. Success will be difficult without adequate reading skills. Prior automotive training is also helpful. High school or college courses: physics, algebra, chemistry. Other courses that are helpful: business management, introduction to electricity, computer keyboarding.

Industry technical standards:
Awareness of the following technical standards in this industry may help students determine if they are suited to this career:

- Must have the ability to perform accurate work, communicate effectively with others, present information in a clear, concise manner and follow verbal and written instructions.
- Requires good manual dexterity, good color vision and hearing, and ability to speak.
- Requires continuous walking, frequent standing, bending, stooping, climbing stairs and ladders, kneeling, lifting and carrying up to 50 pounds, reaching above and below shoulder level, and occasional sitting, crawling, lifting 50 pounds from knee to shoulder high, pushing and pulling up to 25 pounds.
- Requires continuous use of tools and occasional use of foot controls.
- Continuously exposed to noise; frequently exposed to dirt, dust, fumes, chemicals, and extreme heat and cold, and occasionally exposed to vibration, poor ventilation, and confined areas.

### FRESHMAN

#### FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake Fundamentals (AUTO 151)</td>
<td>2</td>
</tr>
<tr>
<td>Brake Repair (AUTO 152)</td>
<td>3</td>
</tr>
<tr>
<td>Electronics (AUTO 161)</td>
<td>2</td>
</tr>
<tr>
<td>Starting and Charging Systems (AUTO 163)</td>
<td>3</td>
</tr>
<tr>
<td>Instruments and Accessory Systems (AUTO 164)</td>
<td>4</td>
</tr>
<tr>
<td>Mechanical and Shop Orientation (AUTO 108)</td>
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#### SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Transmissions and Transaxles (AUTO 128)</td>
<td>5</td>
</tr>
<tr>
<td>Clutches, Drive Trains and Axles (AUTO 131)</td>
<td>3</td>
</tr>
<tr>
<td>Manual Transmissions and Transaxles (AUTO 132)</td>
<td>3</td>
</tr>
<tr>
<td>Suspension &amp; Steering (AUTO 148)</td>
<td>4</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>

### SOPHOMORE

#### FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Fundamentals (AUTO 211)</td>
<td>4</td>
</tr>
<tr>
<td>Engine Repair (AUTO 212)</td>
<td>4</td>
</tr>
<tr>
<td>Air Conditioning-Heating Theory and Operation (AUTO 271)</td>
<td>3</td>
</tr>
<tr>
<td>Air Conditioning-Heating Diagnosis and Service (AUTO 272)</td>
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<td>Total credits</td>
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#### SPRING SEMESTER

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Ignition Systems (AUTO 282)</td>
<td>3</td>
</tr>
<tr>
<td>Fuel Delivery Systems (AUTO 283)</td>
<td>6</td>
</tr>
<tr>
<td>Emission Control Systems (AUTO 284)</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>

General Education Classes*
Biology is the study of life, of plants and animals and their relationships in and to their environments. The biology program at BSC provides the fundamentals for students pursuing a career in any of the biological sciences. Students who complete the suggested two-year curriculum receive an Associate in Science degree and can transfer to bachelor degree programs at four-year colleges and universities.

Biology is also an important part of the foundation of many career fields including biological and environmental engineers. Agriculture, wildlife management and medicine are other areas that require strong backgrounds in biology.

Students interested in any biological profession are strongly encouraged to become trained in Geographic Information System (GIS) technology.

The courses listed below are required at most colleges granting a degree in biology. Students should consult the catalog of the college to which they plan to transfer in selecting specific courses.

Career Possibilities: Biologist, Botanist, Microbiologist, Medicine, Cytotechnologist, Plant or Animal Ecologist, Wildlife Manager, Zoologist.

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>General Biology I-II (BIOL 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology Lab I-II Lab (BIOL 150L-151L)</td>
<td>2</td>
</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics 104 and 146</td>
<td>6</td>
</tr>
<tr>
<td>Biology Elective</td>
<td></td>
</tr>
<tr>
<td><strong>Fundamentals of Geographic Information Systems (GIS 105)</strong></td>
<td>3-4</td>
</tr>
<tr>
<td>Total credits</td>
<td>39-40</td>
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</tbody>
</table>


**Students who would like a Certificate of Completion in Geographic Information Systems need to take GIS 105 in their first or second semester. They will also need to include GEOG 121 and 121L in their course work.

SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Chemistry (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I-II (PHYS 211-212)</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I-II Lab (PHYS 211L-212L)</td>
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</tr>
<tr>
<td>Enrichment</td>
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</tr>
<tr>
<td>Total credits</td>
<td>32</td>
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</tbody>
</table>

*MATH 107 or MATH 103 and 105 may be substituted for MATH 104 and 146.
BUSINESS ADMINISTRATION

TRANSFER

CONTACT PERSON: James Wright • Schafer Hall 312B
224-5462 • James.Wright@bismarckstate.edu

Business administration has been among the most popular college courses of study for several years. Employment opportunities have been excellent and possibilities for career advancement are generally good. Students have successfully transferred to a number of bachelor degree programs after taking the two-year BSC program in business administration. Business courses have also proven useful for students in other curricula.

Business administration students will obtain a basic understanding of the world of business and commerce, and how it relates to individual businesses. Accounting, economics, statistics and law are among the areas studied. Students who complete the requirements earn an Associate in Arts degree.

Since business administration programs at four-year colleges vary somewhat, catalogs of transfer colleges should be consulted in planning schedules.

BSC has cooperative agreements with Dickinson State University and Minot State University that allow students to complete the Associate in Arts or Associate in Science degree at BSC and continue with a bachelor’s degree on the BSC campus. Programs offered by DSU related to this program are Accounting, Business Administration, Finance, Human Resource Management, and International Business. Bachelor’s degree programs offered by MSU on the BSC campus include Management and Marketing. Contact your BSC advisor for assistance with transfer planning.


SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Elements of Accounting (ACCT 200, 201)</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Macroeconomics (ECON 202)</td>
<td>3</td>
</tr>
<tr>
<td>Algebra (MATH 103) or Finite Mathematics (MATH 104)**</td>
<td>4</td>
</tr>
<tr>
<td>OR Elementary Statistics (MATH 210)</td>
<td>3</td>
</tr>
<tr>
<td>Management Information Systems (BADM 224)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
<td>2</td>
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<td>32-33</td>
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SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>Laboratory Science Elective</td>
<td>4</td>
</tr>
<tr>
<td>Computer Applications in Business (ACCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>American Government (POLS 115)</td>
<td>3</td>
</tr>
<tr>
<td>Speech (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Business in the Legal Environment (ACCT 215)</td>
<td>3</td>
</tr>
<tr>
<td>Business Law I (ACCT 225)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>3</td>
</tr>
<tr>
<td>Income Tax Procedures* (ACCT 231)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
</tr>
<tr>
<td>Total credits</td>
<td>32-33</td>
</tr>
</tbody>
</table>

*Accounting majors should take this course. Other business majors may select it as an elective.

**Economics and accounting majors should take MATH 104 or 146.

MANAGEMENT

TECHNICAL AND/OR TRANSFER ONLINE OPTION

The management curriculum affords students the opportunity to obtain rewarding employment upon the completion of a two-year Associate in Applied Science degree in management. The curriculum is available online as well as in the classroom. This option provides a combination of business and general education courses, many of which may be transferable to a four-year curriculum if the student decides to pursue a higher degree at a later time. Students who complete the curriculum for the degree in management are typically employed in areas such as: Advertising Account Managers, Sales Representatives, Real Estate Sales, Insurance, Management, Banking, Management Trainee, Purchasing Agent and Private Business Owner.

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Accounting (ACCT 102 or 200)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Marketing (BADM 201)</td>
<td>3</td>
</tr>
<tr>
<td>Sales (BADM 240)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Retailing (BADM 260)</td>
<td>3</td>
</tr>
<tr>
<td>*General Electives</td>
<td>3</td>
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<tr>
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<td>30</td>
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</table>

SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource Management (BADM 282)</td>
<td>3</td>
</tr>
<tr>
<td>Entrepreneurship (BUSN 170)</td>
<td>3</td>
</tr>
<tr>
<td>Project Management (BADM 274)</td>
<td>3</td>
</tr>
<tr>
<td>Sales Management (BADM 241)</td>
<td>3</td>
</tr>
<tr>
<td>Advertising (BADM 210)</td>
<td>3</td>
</tr>
<tr>
<td>Economics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Business Math or Algebra (BOTE 108 or MATH 103)</td>
<td>3-4</td>
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<tr>
<td>Principles of Management (BADM 202)</td>
<td>3</td>
</tr>
<tr>
<td>*General Electives</td>
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<tr>
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<td>30-31</td>
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</tbody>
</table>

*See page 53 for general education requirements for Associate in Applied Science degree.
MANAGEMENT

ENTREPRENEURSHIP OPTION

TECHNICAL

Completion of the Entrepreneurship option leads to an Associate in Applied Science degree in Management. Students will obtain the skills, tools and experiences necessary to successfully assist in creation and management of new business ventures.

FRESHMAN CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<tr>
<td>Intro to Professional Writing (English 125)</td>
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<td>Speech (Communications 110)</td>
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<tr>
<td>Micro Economics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Computers (CSCI 101)</td>
<td>3</td>
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<tr>
<td>Principles of Marketing (BADM 201)</td>
<td>3</td>
</tr>
<tr>
<td>Sales (BADM 240)</td>
<td>3</td>
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<tr>
<td>Accounting (ACCT 200)</td>
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<tr>
<td>Electives</td>
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</tr>
<tr>
<td>Total credits</td>
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</tr>
</tbody>
</table>

SOPHOMORE CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Commerce (BUSN 224)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Accounting II (ACCT 201)</td>
<td>3</td>
</tr>
<tr>
<td>Business and Legal Environment (ACCT 215)</td>
<td>3</td>
</tr>
<tr>
<td>Human Resource Management (BADM 282)</td>
<td>3</td>
</tr>
<tr>
<td>Entrepreneurship (BUSN 170)</td>
<td>3</td>
</tr>
<tr>
<td>Web Foundations (CIS 151)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Applications in Business (ACCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>Advertising (BADM 210)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>30</td>
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</tbody>
</table>

SUGGESTED ELECTIVES

Organizational Behavior (BADM 281)
Management Information Systems (BADM 224)
Sociology (SOC 110)
Retailing (BADM 260)
Project Management (BADM 274)

MANAGEMENT

AMERICAN INSTITUTE OF BANKING

TECHNICAL

Students may transfer accredited American Institute of Banking courses into the Bismarck State College Management Program. With the addition of specific BSC course work listed below, the student will receive an Associate in Applied Science degree in management. This curriculum will provide an excellent background for those wishing to pursue careers in the banking and finance industry.

REQUIRED CURRICULUM CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>3</td>
</tr>
<tr>
<td>Accounting (ACCT 200-201)</td>
<td>6</td>
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<tr>
<td>Economics (ECON 201-202)</td>
<td>6</td>
</tr>
<tr>
<td>Math (Above MATH 102)</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior (BADM 281)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Management (BADM 202)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Marketing (BADM 201)</td>
<td>3</td>
</tr>
<tr>
<td>Human Resource Management (BADM 282)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education (BADM 197-297)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
<td>3</td>
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<td>Total credits</td>
<td>38</td>
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AMERICAN INSTITUTE OF BANKING ELECTIVES CREDITS

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Law and Banking (Principle)</td>
<td>3</td>
</tr>
<tr>
<td>Law and Banking (Application)</td>
<td>3</td>
</tr>
<tr>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Commercial Lending</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Banking</td>
<td>3</td>
</tr>
<tr>
<td>Analyzing Financial Statements</td>
<td>3</td>
</tr>
<tr>
<td>Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Lending</td>
<td>3</td>
</tr>
</tbody>
</table>

MANAGEMENT

EMERGENCY RESPONDERS

TECHNICAL ONLINE ONLY

Completion of this management curriculum leads to a Certificate of Completion in Management. The online curriculum is designed for workers employed in emergency response careers, such as firefighters, EMT-paramedics, and criminal justice personnel.

The sequence of five eight-week management courses begins each year in fall semester, and continues through spring semester and summer session. The curriculum was developed through a partnership with the N.D. Firefighters Association. By enrolling, firefighters will be preparing for fire officer training.

FALL SEMESTER CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Management (BADM 202)</td>
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</tr>
<tr>
<td>Organizational Behavior (BADM 281)</td>
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<tr>
<td>Total credits</td>
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</table>

SPRING SEMESTER CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Information Systems (BADM 224)</td>
<td>3</td>
</tr>
<tr>
<td>Human Resource Management (BADM 282)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>3</td>
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SUMMER SESSION CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Project Management (BADM 274)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>
Bismarck State College offers students seeking training in administrative support staff positions a wide variety of one- and two-year programs.

Students who successfully complete a two-year program earn an Associate in Applied Science degree. Those who successfully complete a one-year program earn a program certificate.

The Administrative Assistant/General program is available 100% online as well as on campus.

Administrative support staff represents one of the largest occupational groups in the United States. Each year thousands of new job opportunities are available for those seeking initial employment as well as for those experienced in office work. Support staff positions can often serve as stepping-stones to management for those interested in office work. Support staff positions can often serve as stepping-stones to management for those interested in office work. Support staff positions can often serve as stepping-stones to management for those interested in office work. Support staff positions can often serve as stepping-stones to management for those interested in office work.

Employment opportunities and placements of administrative support staff students have been exceptionally good. Conservative predictions indicate that the need for qualified administrative support staff will not diminish, but the demand will far exceed the supply for many years. The diverse positions available in the U.S. and worldwide are among the advantages of this field of study.

**ADMINISTRATIVE ASSISTANT/LEGAL ASSOCIATE IN APPLIED SCIENCE DEGREE**

**CONTACT PERSON:** Vickie Volk • Technical Center 132B
224-5505 • Vickie.Volk@bismarckstate.edu

This curriculum is designed for students interested in obtaining legal administrative support staff positions in offices related to the practice of law, such as private attorneys’ offices, corporate legal departments, government, banks, insurance companies and real estate offices.

The following is a tentative class schedule for the incoming freshman. Please consult your advisor or class instructor for assistance in setting up your personalized class schedule.

**FRESHMAN YEAR**

**SEMESTER I FALL**

- Keyboarding II (BOTE 152) ..................................................3
- Business English (BOTE 121) ...............................................3
- Business Math (BOTE 108) ..................................................3
  *Computer Software Applications-Word (CIS 102) ...............3
- General education requirements (Recommended: CSCI 101) ..3
- Total credits .................................................................15

**SEMESTER II SPRING**

- Fundamentals of Accounting (ACCT 102) .........................3
  *Microcomputer Spreadsheets (CIS 105) .........................3
- Business Communications (BOTE 210) ..........................3
- Business English (BOTE 122) ........................................3
- General education requirements (Recommended: ENGL 110) 3
- Total credits .................................................................15

**SEMESTER III FALL**

- Microcomputer Database (CIS 104) ...............................3
- Legal Office Procedures (BOTE 253) ..............................3
- Criminal Law (CJ 220) ..................................................3
- Office Management (BOTE 209) ..................................3
- Student Leadership Practicum (PBL) (BOTE 116) .............1
- General education requirements (Recommended: ENGL 125) 3
- Total credits .................................................................16

**SEMESTER IV SPRING**

- Advanced Software Applications (CIS 202) ....................3
- Legal Transcription (BOTE 251) ................................7
- Business Law I (ACCT 225) .......................................3
- Student Leadership Practicum (PBL) (BOTE 116) ..........1
- Cooperative Education/Internship (BOTE 197-297) .........1-3
- Presentations (CIS 130) ..............................................3
- General Education Requirements (Recommended: CJ 201 and BADM 282) .................................6
- Total credits .................................................................19-21
- Total credits for degree ................................................65-67

See page 54 for general education requirements (15 semester hours) for Associate in Applied Science degree.
**ADMINISTRATIVE ASSISTANT/GENERAL ASSOCIATE IN APPLIED SCIENCE DEGREE ONLINE OPTION**

**SEMMESTER I FALL**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Accounting (ACCT 102)</td>
<td>3</td>
</tr>
<tr>
<td>Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Office Management (BOTE 209)</td>
<td>3</td>
</tr>
<tr>
<td>Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Student Leadership Practicum (PBL) (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td>General education requirements</td>
<td></td>
</tr>
<tr>
<td>*(Recommended: COMM 110 or ENGL 125)</td>
<td>3</td>
</tr>
<tr>
<td>Elective (Recommended: BOTE 138)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**SEMMESTER II SPRING**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microcomputer Database (CIS 104)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Software Applications (CIS 202)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education Internship (BOTE 197-297)</td>
<td>1-3</td>
</tr>
<tr>
<td>Student Leadership Practicum (PBL) (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td>General education requirements</td>
<td></td>
</tr>
<tr>
<td>*(Recommended: PSYC 111 and BADM 282)</td>
<td>6</td>
</tr>
<tr>
<td>Elective (Recommended: BOTE 139 or BOTE 210)</td>
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</tr>
<tr>
<td><strong>Total credits</strong></td>
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</table>

**SEMMESTER III FALL**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Office Management (BOTE 209)</td>
<td>3</td>
</tr>
<tr>
<td>Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Student Leadership Practicum (PBL) (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td><strong>General education requirement</strong></td>
<td></td>
</tr>
<tr>
<td>*(Recommended ENGL 125 or COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td><strong>General education requirement</strong></td>
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</table>

**SEMMESTER IV SPRING**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Database (CIS 104)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Software Applications (CIS 202)</td>
<td>3</td>
</tr>
<tr>
<td>Business Communications (BOTE 210)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education Internship (BOTE 197-297)</td>
<td>1-3</td>
</tr>
<tr>
<td>Student Leadership Practicum (PBL) (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td>Electives: <em>(See suggestions)</em></td>
<td>6</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
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</table>

**SUGGESTED ELECTIVES**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Elements of Accounting I (ACCT 200)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Accounting II (ACCT 201)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Application in Business (ACCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>Electronic Publishing (Dreamweaver) (CIS 230)</td>
<td>3</td>
</tr>
<tr>
<td>Sales (BADM 240)</td>
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</tr>
</tbody>
</table>

**Total credits for degree** .......................... 63-65

*Students may challenge

**General education requirements-students must have 15 credit hours for an AAS degree

***A prerequisite for Keyboarding II (BOTE 152) is to be able to key with proper technique approximately 30-35 words a minute. Keyboarding I (BOTE 102) is a beginning course teaching the alphabetical keys with proper technique and can be used as an elective.

See page 54 for general education requirements (15 semester hours) for Associate in Applied Science degree.

**ADMINISTRATIVE ASSISTANT/GENERAL CERTIFICATE PROGRAM ONLINE OPTION**

This curriculum, available on campus and online, is designed for students interested in becoming a general administrative assistant. Students must complete 30 credit hours from the following courses to obtain a program certificate. These courses may be applied toward an Associate in Applied Science degree.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business English (BOTE 121)</td>
<td>3</td>
</tr>
<tr>
<td>Keyboarding II (BOTE 152)</td>
<td>3</td>
</tr>
<tr>
<td>Business Math (BOTE 108)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Accounting (ACCT 102)</td>
<td>3</td>
</tr>
<tr>
<td>*Computer Software Applications-Word (CIS 102)</td>
<td>3</td>
</tr>
<tr>
<td><strong>General education requirements</strong></td>
<td></td>
</tr>
<tr>
<td><em>(Recommended CSCI 101)</em></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>15</strong></td>
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</table>

**SEMMESTER I FALL**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business English (BOTE 122)</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior (BADM 281)</td>
<td>3</td>
</tr>
<tr>
<td>*Computer Software Applications-Word (CIS 102)</td>
<td>3</td>
</tr>
<tr>
<td><strong>General education requirements</strong></td>
<td></td>
</tr>
<tr>
<td><em>(Recommended: ENGL 110)</em></td>
<td>3</td>
</tr>
<tr>
<td><strong>Arts/Humanities Requirement</strong></td>
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<tr>
<td><strong>Total credits</strong></td>
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**SEMMESTER II SPRING**

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Business English (BOTE 212)</td>
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<tr>
<td>Principles of Management (BADM 202)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Applications in Business (ACCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>*Microcomputer Database (CIS 104)</td>
<td>3</td>
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<tr>
<td>**Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Human Resources Management (BADM 282)</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior (BADM 281)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education/Internship (BOTE 197-297)</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**SEMMESTER III FALL**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Office Management (BOTE 209)</td>
<td>3</td>
</tr>
<tr>
<td>Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Student Leadership Practicum (PBL) (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td><strong>General education requirement</strong></td>
<td></td>
</tr>
<tr>
<td>*(Recommended ENGL 125 or COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
BUSINESS EDUCATION TRANSFER OPTION
ASSOCIATE IN SCIENCE DEGREE

Students may complete the first two years of study toward a bachelor’s degree in business education at BSC. An Associate in Science degree is earned if all requirements are completed.

High school students planning to major in business education should study business education courses.

Those who major in business education generally become business education teachers in high schools. Teachers in this field sometimes move into the private sector, working for large firms or corporations as supervisors or trainers.

Students planning a teaching career should register for Introduction to Education (EDUC 250 - 2 credits) and Pre-Professional Experience (EDUC 298 - 1 credit) during their sophomore year. These classes should be taken during the same semester from the same instructor. Students should also check the curriculum of the four-year college/university where they plan to complete their bachelor’s degree and modify this curriculum where necessary. Because of the increased nature of licensure requirements for professional educators, students should also check on the state licensure where they plan to pursue a career during their sophomore year. Students planning to teach in North Dakota will be prepared for initial licensure testing requirements in conjunction with EDUC 250.

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:
FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education communications</td>
<td>6</td>
</tr>
<tr>
<td>Keyboarding II (BOTE 152)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Accounting I &amp; II (ACCT 200 &amp; 201)</td>
<td>6</td>
</tr>
<tr>
<td>*Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
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<td>Social Science Elective</td>
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<tr>
<td>Math/Science/Technology Electives</td>
<td>7</td>
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<tr>
<td>Total credits</td>
<td>34</td>
</tr>
</tbody>
</table>

*Suggested curriculum for Associate in Science:

SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Communications (BOTE 210)</td>
<td>3</td>
</tr>
<tr>
<td>*Computer Software Applications-Word (CIS 102)</td>
<td>3</td>
</tr>
<tr>
<td>*Microcomputer Database (CIS 104)</td>
<td>3</td>
</tr>
<tr>
<td>*Microcomputer Spreadsheet (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Math/Science/Technology Electives</td>
<td>8</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Total credits</td>
<td>28</td>
</tr>
</tbody>
</table>

*Students may challenge
Growth in the construction industry has been increasing, thus demand is high for skilled carpenters in the state.

Carpentry students who complete this program may either apply for membership in apprentice training programs to complete journeymen carpentry requirements or go to work directly for building contractors. The future prospects for self-employment are considered good for those who wish to become building contractors upon attainment of necessary skills.

The carpentry trade is well suited to those who enjoy working outdoors and working with their hands, applying creative ingenuity to building. Pride in good workmanship and safe, dependable work habits are also important factors for success in this field.

Students learn the safe and proper use and care of hand tools, power hand tools and power equipment used in the carpentry trade. They receive instruction in the methods and principles of building construction, carpentry math, blueprint reading, drawing house plans, energy efficient and sustainable/green building, building materials, cabinetry, concrete forming, and other related areas such as drywall, roofing, etc.

**Enrollment:** A class of 24 students is enrolled once each year in late August. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

**Required placement scores:**
- ACT Math - 15 or higher
- Reading - 14 or higher
- COMPASS Math - (pre-algebra) 31 or higher
- Reading - 64 or higher

Students who do not meet the above requirements should arrange an interview with a carpentry instructor.

**Background in these areas helpful:**
- Building trades courses
- Basic math
- Basic blue print drawing
- Basic residential drafting

**Industry Standards:**
Awareness of the following carpentry industry standards may help students determine if they are suited to this career:
- Must have the ability to perform close accurate work, communicate effectively with others, present information in a clear concise manner, and follow verbal and written instructions.
- Requires good hand and finger dexterity.
- Requires continuous walking, frequent standing, bending, stooping, climbing ladders and stairs, kneeling, lifting and carrying up to 50 pounds, and carrying long or oversized loads.
- Frequently requires working over your head.
- Requires continuous use of hand and power tools.
- Frequently exposed to noise, dirt, dust, fumes, extreme heat and cold and vibration.

**SEMESTER I CREDITS**
- Blueprint Reading (CARP 110) ...................................................2
- Core Curriculum (CARP 102) .....................................................2
- Site Layout and Foundation Construction (CARP 115) ...............3
- Principles of Framing (CARP 120) ..............................................3
- Framing I (CARP 125) .................................................................6
- Exterior Finish (CARP 130) ........................................................2
- Total credits ................................................................................18

**SEMESTER II CREDITS**
- Framing II (CARP 135) ...............................................................4
- Principles of Interior Finish (CARP 140) .................................3
- Interior Finish (CARP 145) .........................................................6
- Cabinetmaking (CARP 150) .......................................................3
- House Design and Code Requirements (CARP 155) ...............2
- Total credits ................................................................................18

Students receive a program certificate upon successful completion of the program. Additional course work may lead to a program diploma or an Associate in Applied Science degree.

**CERTIFICATE PROGRAM STUDENTS:**
Students are encouraged to enroll in two classes of general education studies. Suggested classes for general education:
- CSCI 101 Intro to computers
- See page 54 for general education requirements.

**DIPLOMA PROGRAM AND ASSOCIATE IN APPLIED SCIENCE STUDENTS:**

**Recommended Elective Course:**
- Introduction to the Green Environment (CARP 112) .................3
- Sustainable Building Science I (BCT 216) ...............................3
- See page 54 for general education requirements.
CHEMISTRY

TRANSFER

CONTACT PERSON: Brent Reems • Jack Science Center 319
224-5469 • Brent.R.Reems@bismarckstate.edu

The chemistry program provides the basics for students planning a career in chemistry or a related field. An Associate in Science degree is awarded to those who complete the requirements for the two-year degree.

Chemists often specialize in a subfield of chemistry, such as analytical, organic, inorganic, physical, polymer or biochemistry. More than half of all chemists work in research and development for manufacturing firms and chemical companies. Others work in production and inspection, as marketing or sales representatives, as teachers, or as consultants to private industry and government agencies.

Other areas for which chemistry serves as the basic foundation are pre-medicine, pre-veterinary science, pharmacy, and chemical engineering. Students planning careers as chemists should enjoy science and mathematics, have an inquisitive mind and imagination, and enjoy working with their hands. They also must be able to concentrate on detail and work independently.

High school students planning to major in chemistry should study as much science and math as possible. Students should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify the following suggested curriculum if necessary.

CHIROPRACTIC

TRANSFER

CONTACT PERSON: Shawn Iverson • Jack Science Center 201F
224-5733 • Shawn.T.Iverson@bismarckstate.edu

Students may complete the first two years in chiropractic at Bismarck State College. The Associate in Science degree will be granted to students who complete the degree requirements and will prepare students for transfer toward a degree in chiropractic. Colleges of chiropractic often require 90 semester hours prior to application for admission. Many of these hours must be from upper-level courses (300- or preferably 400-level courses). Upper-level coursework must be completed at an institution other than BSC.

A doctor of chiropractic is a physician whose purpose is to help meet the health needs of the public, giving particular attention to the structural and neurological aspects of the body. Chiropractic focuses on the inherent ability of the body to heal without the use of drugs or surgery.

High school students interested in chiropractic should pursue a course of study heavy in the sciences.

Many schools of chiropractic are accredited by the Council on Chiropractic Education (CCE). These schools do not have identical admission requirements. The following curriculum is suggested as a guide. Students should check the catalog of the school of chiropractic of their choice, bring this information to their advisor, and modify this curriculum accordingly. Students may wish to contact the Council on Chiropractic Education at www.cce-usa.org for additional information about schools and requirements.


SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>General Chemistry I &amp; II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I &amp; II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>Calculus I &amp; II (MATH 165-166)</td>
<td>8</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
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<tr>
<td><strong>Total credits</strong></td>
<td><strong>35</strong></td>
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SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>Organic Chemistry I &amp; II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I &amp; II Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>University Physics (PHYS 251-252)</td>
<td>8</td>
</tr>
<tr>
<td>University Physics Lab (PHYS 251L-252L)</td>
<td>2</td>
</tr>
<tr>
<td>Calculus III (MATH 265)</td>
<td>4</td>
</tr>
<tr>
<td>Intro. to Differential Equations (MATH 266)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I &amp; II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>General Chemistry I &amp; II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I &amp; II Labs (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>General Biology I &amp; II (BIOL 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I &amp; II Labs (BIOL 150L-151L)</td>
<td>2</td>
</tr>
<tr>
<td>College Algebra (MATH 103)</td>
<td>4</td>
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<tr>
<td>Trigonometry (MATH 105)</td>
<td>2</td>
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SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Organic Chemistry I &amp; II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I &amp; II Labs (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>College Physics I &amp; II (PHYS 211-212)</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I &amp; II Labs (PHYS 211L-212L)</td>
<td>2</td>
</tr>
<tr>
<td>Elementary Statistics (MATH 210)</td>
<td>3</td>
</tr>
<tr>
<td>Arts &amp; Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>
**COMPUTER INFORMATION SYSTEMS**

**COMPUTER SUPPORT SPECIALIST**

**TECHNICAL**

**CONTACT PERSON:** Matt Frohlich • Technical Center 110
224-5581 • Matthew.Frohlich@bismarckstate.edu

The Bismarck State College Computer Support Specialist program provides two years of highly technical computer education, leading to an Associate in Applied Science degree. Students will prepare to work in various business and institutional settings. Their experiences at BSC will provide extensive training in computer operating systems, networking environments, and security.

BSC developed this program to fill a growing need in the marketplace. Technology is driving today’s businesses, especially health care, financial services, public utilities and sales. These businesses need computer and network specialists to upgrade equipment, maintain data networks, manage servers, and secure company IT resources. In addition to these technical skills, employers are seeking computer personnel who can communicate well with people, since these computer specialists work with end-users to solve problems and provide assistance.

Employment opportunities are expected to grow, as research shows computer-oriented careers are among the fastest growing in the country. In North Dakota, the computer and network administrator occupation is expected to increase significantly in upcoming years, making it one of the fastest-growing occupations in the state.

**Career possibilities:** Computer support specialist, computer technician, computer operator, help desk support, computer systems analyst, data communications analyst, systems administrator, security administrator, network administrator, network systems analyst, information systems manager

Most Computer Support Specialist courses are offered on campus one semester and online the next semester. Required classes are listed below with the highly recommended class order. General education courses are incorporated into the following four semesters.

<table>
<thead>
<tr>
<th>ASSOCIATE IN APPLIED SCIENCE DEGREE:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEMESTER I</strong></td>
</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
</tr>
<tr>
<td>Microsoft Windows Operating System Client (CIS 212)</td>
</tr>
<tr>
<td>Linux Fundamentals (CIS 107)</td>
</tr>
<tr>
<td>Networking Fundamentals I (CIS 164)</td>
</tr>
<tr>
<td>Electronic Publishing (CIS 230)</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
</tr>
</tbody>
</table>

| **SEMESTER II** | **CREDITS** |
| Beginning Visual Basic (CSCI 122) | 3 |
| Implementing a Microsoft Windows Network Infrastructure (CIS 216) | 3 |
| Linux System Administration (CIS 223) | 3 |
| Networking Fundamentals II (CIS 165) | 4 |
| Microcomputer Hardware (CIS 128) | 3 |
| **Total credits** | 16 |

| **SEMESTER III** | **CREDITS** |
| Arts & Humanities/Social & Behavioral Science Elective | 3 |
| Implementing a Microsoft Windows Active Directory Infrastructure (CIS 214) | 3 |
| Linux Network and Security Administration (CIS 226) | 3 |
| Intermediate Networking I (CIS 267) | 4 |
| Database Design and SQL (CIS 204) | 3 |
| Elementary Statistics (MATH 210) | 3 |
| **Total credits** | 19 |

| **SEMESTER IV** | **CREDITS** |
| Fundamentals of Public Speaking (COMM 110) | 3 |
| Implementing Microsoft Windows Server Applications (CIS 213) | 3 |
| Intermediate Networking II (CIS 268) | 4 |
| Computer and Network Security (CIS 255) | 3 |
| Network Architecture and Design (CIS 269) OR Cooperative Education/Internship (CIS 197/297) | 3 |
| **Total credits** | 16 |
The two-year program of study in Information Processing Specialist leads to an Associate in Applied Science degree. Students acquire the necessary knowledge and skills needed to meet the ever changing technology of small businesses or corporate offices.

Computer technology has profoundly influenced the kinds of jobs available and the way work is organized and performed. Information Processing Specialist students must possess a variety of communication, business, keyboarding, and technological skills. Students receive concentrated training on various applications of the personal computer including keyboarding, word processing, database, spreadsheets, desktop publishing, electronic presentations, world wide web research, electronic publishing (creation of web pages), and operating systems.

Placement includes working as an information-processing specialist in government agencies, educational institutions, law offices, sales offices, service agencies, insurance companies, or bank and investment firms.

ASSOCIATE IN APPLIED SCIENCE DEGREE:

**SEMESTER I**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>* Keyboarding II (BOTE 152)</td>
<td>3</td>
</tr>
<tr>
<td>Business Math (BOTE 108)</td>
<td>3</td>
</tr>
<tr>
<td>OR Intermediate Algebra (MATH 102)</td>
<td>3</td>
</tr>
<tr>
<td>OR College Algebra (MATH 103)</td>
<td>3</td>
</tr>
<tr>
<td>* Computer Software Applications-Word (CIS 102)</td>
<td>3</td>
</tr>
<tr>
<td>Business English (BOTE 121)</td>
<td>3</td>
</tr>
<tr>
<td>OR College Composition II (ENGL 120)</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Requirement**

- Introduction to Computers (CSCI 101) | 3 |
- Total credits | 15 |

**SEMESTER II**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>* Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Business Communications (BOTE 210)</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Requirements**

- Business/Math/Science/Technology | 3 |
- College Composition I (ENGL 110) | 3 |
- Total credits | 15 |

**SEMESTER III**

<table>
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<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Design Theory (CIS 154)</td>
<td>3</td>
</tr>
<tr>
<td>Desktop Publishing (CIS 210)</td>
<td>3</td>
</tr>
<tr>
<td>Student Leadership Practicum (BOTE 116)</td>
<td>1</td>
</tr>
<tr>
<td>* Electronic Publishing (CIS 230)</td>
<td>3</td>
</tr>
<tr>
<td>Office Management (BOTE 209)</td>
<td>3</td>
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</tbody>
</table>

**General Education Requirement**

- Arts & Humanities/Behavioral & Social Science | 3 |
- Total credits | 16 |

**SEMESTER IV**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Microcomputer Database (CIS 104)</td>
<td>3</td>
</tr>
<tr>
<td>XML (CIS 252)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Software Applications (CIS 202)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education/Internship (CIS 197)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**General Education Requirement**

- Intro to Professional Writing (ENGL 125) | 3 |
- Total credits | 14-16 |

* Courses may be challenged

**SUGGESTED ELECTIVES:**

- Web Foundations (CIS 151) | 3 |
- Cascading Style Sheets (CIS 152) | 3 |
- Vector Graphics and Web Animation (CIS 233) | 3 |
- Site Design (CIS 251) | 3 |

**INFORMATION PROCESSING SPECIALIST CERTIFICATE**

**TECHNICAL ONLINE OPTION**

**CONTACT PERSON:** Lynette Borjeson Painter

Technical Center 132C • 224-5755
Lynette.Painter@bismarckstate.edu

The curriculum is designed for students who want to upgrade their microcomputer application background. Students must complete 30 credits from the courses listed. Completion of the one-year program leads to a Program Certificate in Information Processing Specialist.

**CERTIFICATE:**

**SEMESTER I - FALL**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Software Applications-Word (CIS 102)</td>
<td>3</td>
</tr>
<tr>
<td>Electronic Publishing (CIS 230)</td>
<td>3</td>
</tr>
<tr>
<td>Web Design Theory (CIS 154)</td>
<td>3</td>
</tr>
<tr>
<td>Microcomputer Spreadsheets (CIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Desktop Publishing (CIS 210)</td>
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</table>

**SEMESTER II - SPRING**

<table>
<thead>
<tr>
<th>Course Description</th>
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<tbody>
<tr>
<td>Microcomputer Database (CIS 104)</td>
<td>3</td>
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<tr>
<td>Presentations (CIS 130)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Software Applications (CIS 202)</td>
<td>3</td>
</tr>
<tr>
<td>Cooperative Education/Internship (CIS 197)</td>
<td>1 – 3</td>
</tr>
</tbody>
</table>

Additional classes available with permission of instructor or advisor. Most of the courses may be applied toward an Associate in Applied Science Degree.
Information Technology jobs are among the fastest growing in North Dakota. Technology is driving business today, especially health care, financial services, public utilities, and sales. The Computer Science program at BSC provides students with highly marketable skills and knowledge to meet the ever-changing technology of business and industry.

BSC’s Computer Science graduates receive an Associate in Science degree. Students also receive an extensive education in computer program design practices, a variety of high-level programming languages, such as Java, Visual Basic, and C++, communication skills, technology troubleshooting, and critical thinking skills.

Completion of the program provides a strong foundation in computer program design, allowing a student to enroll in a transfer school at the junior level to pursue a bachelor’s degree in computer science topics such as software engineering, computer graphics, game development, multimedia, bioinformatics, artificial intelligence, operating systems, database management systems. The options are continually growing due to advances in technology. Since each school requires a slightly different set of courses to complete the degree, it is important that the student be in contact with the transfer school as early as possible.

Successful computer science students possess these qualities: logical and critical thinking, good organizational skills, ability to work independently and/or as part of a team, strong mathematics background, problem-solving and troubleshooting skills, inquisitive, able to adapt to change, and excellent communication skills.

Career Possibilities: Computer scientists choose jobs in agriculture, energy, business, research, and teaching, just to name a few. Possible career opportunities include Systems Analyst, Management Information Processing, Software Engineer, Computer Scientist, Game Developer, and Database Administrator.

### SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

#### FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Computer Science I (CSCI 160)</td>
<td>4</td>
</tr>
<tr>
<td>*Computer Science II (CSCI 161)</td>
<td>4</td>
</tr>
<tr>
<td>*Calculus I (MATH 165)</td>
<td>4</td>
</tr>
<tr>
<td>*Calculus II (MATH 166)</td>
<td>4</td>
</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition II or Intro. to Professional Writing (ENGL 120 or 125)</td>
<td>3</td>
</tr>
<tr>
<td>Math/Science/Technology Electives</td>
<td>8</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>36</td>
</tr>
</tbody>
</table>

*Students with weak backgrounds in math or computers may have to take some preliminary classes before taking Computer Programming or Calculus.

#### SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly Language (CSCI 250)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Organization (CSCI 270)</td>
<td>3</td>
</tr>
<tr>
<td>Beginning C++ (CSCI 124)</td>
<td>3</td>
</tr>
<tr>
<td>Probability and Statistics (MATH 220)</td>
<td>3</td>
</tr>
<tr>
<td>Discrete Mathematics (MATH 208)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Total credits</td>
<td>26</td>
</tr>
</tbody>
</table>
**CRIMINAL JUSTICE-AA**

**TRANSFER**

**ASSOCIATE IN ARTS DEGREE**

**ONLINE OPTION**

**CONTACT PERSON:** Joe Ellefson • Schafer Hall 202
224-5436 • Joe.Ellefson@bismarckstate.edu

Students who complete the suggested two-year curriculum in criminal justice will be prepared for transfer into four-year bachelor’s degree programs. Since each school has slightly different requirements to complete the degree, it is important that students be in contact with the transfer school when planning a program of study.

Major concentration options include law enforcement, corrections and security. Those who complete the two year program may also find employment in certain sectors of the criminal justice field, but careful consultation with program personnel is recommended before such a decision is made.

The criminal justice options provide a broad professional background for students entering these career fields. A working knowledge of the various systems is provided by the criminal justice courses, with sociology and psychology courses aiding in the understanding of human behavior. Students should seek familiarity with bureaucratic structures and systems.

An Associate in Arts degree is awarded to those who complete requirements for the two-year degree.

**Career Possibilities:** Police Officer, Corrections Officer, Detective, Security Officer, Youth Bureau Officer, Narcotics Investigator, Parole/Probation Officer, County Sheriff, Highway Patrolman, Industrial Security Chief.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government (POL 115)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>History (HIST 101, 102, 103, or 104)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Law (CJ 230)</td>
<td>3</td>
</tr>
<tr>
<td>Criminology (SOC 252) or Developmental Psychology (PSYC 250)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Criminal Justice (CJ 201)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

**PLUS ONE OF THE FOLLOWING OPTIONS:**

**LAW ENFORCEMENT OPTION:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Policing (CJ 210)</td>
<td>3</td>
</tr>
<tr>
<td>Police Administration (CJ 223)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Investigation (CJ 226)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Evidence (CJ 231)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Homeland Security (CJ 243)</td>
<td>3</td>
</tr>
</tbody>
</table>

**CORRECTIONS OPTION:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juvenile Delinquency (SOC 253)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Corrections (CJ 270)</td>
<td>3</td>
</tr>
<tr>
<td>Community Based Corrections (CJ 271)</td>
<td>3</td>
</tr>
<tr>
<td>Juvenile Justice Systems (CJ 254)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Homeland Security (CJ 243)</td>
<td>3</td>
</tr>
</tbody>
</table>
The Criminal Justice program leading to an Associate in Applied Science degree is comprised of professional and general education courses and is designed to provide the student with a broad exposure to criminal justice theory and process. Students will also be exposed to contemporary issues and problems, along with sound philosophical insights for understanding society and the ideals of the United States system of justice.

The curriculum provides a balanced approach to both law enforcement and corrections, with supporting courses that enhance both perspectives. Students follow a more focused curriculum that allows learning the fundamentals of the field without completing the more general college requirements of the Associate in Arts degree.

The program was developed in conjunction with active criminal justice professionals who serve as members of an advisory committee.

Prospective criminal justice students should be aware that criminal justice and security employment candidates are subject to extensive background checks that may include drug screening, polygraph testing, physical and psychological examinations, and oral and/or written proficiency examinations.

Successful completion of the program does not necessarily guarantee that students will obtain employment in the field of criminal justice. The goal of the program is to provide students with an educational opportunity that prepares them for the rigors of employment competition within the scope of criminal justice career planning.

The candidate for the Associate in Applied Science must complete 60 semester hours with a cumulative grade point of 2.0.

While not designed as a transfer program, with careful course selection, graduates could complete the appropriate prerequisites to continue on with a four-year degree program.

Career Possibilities: Police Officer, Corrections Officer, Investigator, Security Officer, Deputy, Industrial Security Officer, Halfway House/Residential Facility Staff.

Curriculum for Associate in Applied Science

Program Requirements:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Criminal Justice (CJ 201)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Law (CJ 220)</td>
<td>3</td>
</tr>
<tr>
<td>Criminology (SOC 252)</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience and Internship (CJ 235)</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Social Problems (SOC 115)</td>
<td>3</td>
</tr>
<tr>
<td>Ethics (PHIL 210)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>18</td>
</tr>
</tbody>
</table>

Electives:

Selected Electives: 15 credits

General Education Requirements:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 110</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 120, ENGL 125 or COMM 110</td>
<td>3</td>
</tr>
<tr>
<td>Art &amp; Humanities/Social &amp; Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Business/Math/Science/Technology</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>

Plus One of the Following Options:

Law Enforcement Option:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Policing (CJ 210)</td>
<td>3</td>
</tr>
<tr>
<td>Police Administration (CJ 223)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Investigation (CJ 226)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Evidence and Procedure (CJ 231)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Homeland Security (CJ 243)</td>
<td>3</td>
</tr>
</tbody>
</table>

Community Support Option:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juvenile Delinquency (SOC 253)</td>
<td>3</td>
</tr>
<tr>
<td>Juvenile Justice System (CJ 254)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Corrections (CJ 270)</td>
<td>3</td>
</tr>
<tr>
<td>Community Based Corrections (CJ 271)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Homeland Security (CJ 243)</td>
<td>3</td>
</tr>
</tbody>
</table>
**ECONOMICS**

**TRANSFER**

**CONTACT PERSON:** Ivan A. Tschider • Schafer Hall 319I
224-5571 • Ivan.Tschider@bismarckstate.edu

Governments, businesses and individuals are continually making decisions regarding the allocation of their scarce resources. Economists study how they choose to use the scarce resources and the ramifications of their decisions.

Economics is commonly divided into two areas of study known as Microeconomics and Macroeconomics. Microeconomics is the analysis of the parts of an economic system including factors which influence supply and demand, price determination through supply and demand, profit maximization under different economic structures, efficiency and capital markets. Macroeconomics examines the economy as a whole and analyzes economic growth and development, aggregate levels of income and employment, inflation, fiscal and monetary policy and international trade.

Economics is a challenging field of study and students will learn to express information in a variety of ways and develop critical thinking skills while processing the information. The study of economics helps students to develop an analytical approach to thinking that will serve them in other courses of study and in their future endeavors.

Students who complete the requirements earn an Associate in Arts degree. Since programs at four-year colleges vary somewhat, students should consult the catalog of the college to which they plan to transfer and modify the following suggested curriculum.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

**FRESHMAN**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120)</td>
<td>6</td>
</tr>
<tr>
<td>Principles of Macroeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 202)</td>
<td>3</td>
</tr>
<tr>
<td>College Physics I-II, General Physics I-II</td>
<td>6</td>
</tr>
<tr>
<td>College Algebra (MATH 103) or Finite Mathematics (MATH 104)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>32</td>
</tr>
</tbody>
</table>

**SOPHOMORE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Microeconomics (ECON 202)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Macroeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Probability and Statistics (MATH 106)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>32</td>
</tr>
</tbody>
</table>

*Recommended for Economics majors as an elective

**Career Possibilities:** Economist, Bank Officer, Financial Planner, Entrepreneur, Securities Broker, Investment Banker, Auditor, Insurance Analyst, Business Manager, Appraiser, Statistician, Research Assistant, Market Analyst, Real Estate Broker.

Bismarck State College 81
EDUCATION

TRANSFER

CONTACT PERSON: Nita Wirtz • Schafer Hall 319B • 224-5440
Nita.Wirtz@bismarckstate.edu

The associate’s degree in education incorporates training for both elementary and secondary levels. Training in education and experience in teaching can provide individuals with excellent skills in working with people, and may also open doors to careers other than teaching. For example, after experience in teaching, and with additional education, teachers may be able to move into positions such as school librarian, reading specialist, curriculum specialist, or other school staff positions.

Early childhood education involves teaching or administering preschool programs. These programs assist young children in their preparation for K-12 academics and their initial social development. Students planning to obtain a bachelor's degree in early childhood are advised to register for the courses listed in the suggested curriculum while attending BSC. An Associate in Arts (and possibly an Associate in Science) degree is earned if all requirements are completed. BSC and Mayville State University have an articulation agreement that allows students to complete the Associate in Arts degree at BSC and continue with a bachelor’s degree in early education from Mayville State University. BSC suggested curriculum prepares students for the option. Students intending to pursue their four-year degree at other four-year colleges/universities should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify this curriculum where necessary.

Middle or secondary education teachers should be interested in a specific subject, be effective in working with young people, and be able to relate knowledge to and motivate students. Since middle and secondary school teachers instruct students in a specific subject, college students should decide on their specialization by the sophomore year in order to begin preparation. College students considering elementary education as a career should be creative, dependable, and patient, and should possess good communication skills. They should enjoy being directly involved in the educational and emotional development of children.

Music for Teachers (MUSC 207) ...........................................3

Early Childhood Education


SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS/ASSOCIATE IN SCIENCE:

FRESHMAN CREDITS

College Composition I-II (ENGL 110 and 120) ..................6
College Algebra (MATH 103) ............................................4
Fundamentals of Public Speaking (COMM 110) ................3
Intro. to Computers (CSCI 101) .......................................3
Intro. to Psychology (PSYC 111) ..................................3
Intro. to Sociology (SOC 110) .......................................3
American Indian Studies (SOC 275) ..............................3
Physical Science II (SCNC 102) and Physical Science III
(SCNC 103) .................................................................8
OR
(for early childhood and secondary education majors only)
Lab Sciences (i.e., Biology, Chemistry, Physics, Physical
Science, or Astronomy) ..................................................8
Enrichment .................................................................2
Total credits ...............................................................35

SOPHOMORE CREDITS

(Choose one of three options: Early Childhood, Elementary, or Secondary Education)

Early Childhood Education Curriculum

*Intro. to Education (EDUC 250) ....................................2
*Pre-Professional Experience (EDUC 298) ....................1
Developmental Psychology (PSYC 250) .........................3
Children's Literature (ENGL 238) ...............................3
Math for Elementary Teachers I (MATH 277) ..................4
Western Civilization I-II (HIST 101 or 102) ....................3
Music Appreciation (MUSC 100) OR
Introduction to Visual Arts (ART 110) .........................3
Music for Teachers (MUSC 207) .................................3

are completed. BSC and Dickinson State University have an articulation agreement that allows students to complete the Associate in Arts degree at BSC and continue with a bachelor’s degree in education from Dickinson State University on the BSC campus. BSC suggested curriculum prepares students for this option. Students intending to pursue their four-year degree at other four-year colleges/universities should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify this curriculum where necessary.

Due to the increased nature of licensure requirements as a professional educator, students should also plan to check the state licensure where they plan to pursue a career in their sophomore year in order to begin preparation. Students planning to pursue a career as a professional educator in the state of North Dakota will be prepared for initial licensure testing requirements in conjunction with EDUC 250.

Students planning to obtain a bachelor’s degree in early childhood are advised to register for the courses listed in the suggested curriculum while attending BSC. An Associate in Arts (and possibly an Associate in Science) degree is earned if all requirements
Concepts of Fitness & Wellness (HPER 100) ..............................2
(Note: can be taken freshman year to fulfill enrichment credit)
First Aid, CPR, & AED (HPER 210) ...........................................1
Dance Skills/Techniques (HPER 204) .........................................1
Electives (other) ...........................................................................7
Total credits ................................................................................33

Elementary Education Curriculum
*Intro. to Education (EDUC 250).................................................2
*Pre-Professional Experience (EDUC 298)...............................1
Developmental Psychology (PSYC 250) ...................................3
Two Dimensional Design (ART 122) .........................................3
Western Civilization I OR II (HIST 101 OR 102) ......................3
Physical Geography (GEOG 121) ..............................................3
Concepts of Biology (BIOL 111) OR Physical Science I (SCNC 101) ... 4
Math for Elem. Teachers I (MATH 277) .................................4
Music for Teachers (MUSC 207) ............................................3
Children’s Literature (ENGL 238) .......................................3
Elective (other) ...........................................................................3
Total credits ................................................................................33

Secondary Education Curriculum
*Intro. to Education (EDUC 250) .................................................2
*Pre-Professional Experience (EDUC 298)...............................1
Developmental Psychology (PSYC 250) ...................................3
Art or Music (Elective) ...............................................................3
US History (HIST 103 or 104) ...................................................3
Western Civilization I-II (HIST 101 or 102) ...............................3
Physical Geography (GEOG 121) OR Elements of Economics (ECON 105) OR American Government (POLS 115).........3-4
Electives (suggested in area of specialization – see advisor for details) .................................................................14
Total credits .........................................................................32-33

*NOTE: Students who enroll in Introduction to Education (EDUC 250) should also enroll in Pre-Professional Experience (EDUC 298) during the same semester from the same instructor.
ELECTRIC POWER TECHNOLOGY

TECHNICAL
OFFERED ONLINE ONLY

CONTACT PERSON: Kevin Holmstrom • NECE 227G
701-224-5776 Kevin.Holmstrom@bismarckstate.edu

This academic program, offered entirely online, prepares students for careers in the field of electric power technology. The curriculum was co-developed by the Energy Providers Coalition for Education (EPCE), which includes power utilities, associations, and certain IBEW locals.

Geared to working adults, the program offers up to 14 credit hours each semester. Courses vary from 3-6 weeks in length, depending on credit hours, and are offered sequentially each term. It may take up to two years to complete this degree if a student does not have prior learning or transfer credits.

Students who complete this program may earn a certificate and/or an Associate in Applied Science degree. The program presents a core of technical courses needed by electric workers across the energy industry. Coursework provides current workers and new hires with general industry knowledge and skills that allow them to make an immediate contribution on the job and move into various technical positions within the industry.

Career options are good for those interested in jobs in the electrical power industry. Many power companies will lose substantial numbers of workers through retirement, industry changes and attrition. A graduate from this program may find entry-level employment in many different areas of the industry, including maintenance, operations, linework and/or the business operation.

Students who complete the first 11 technical core courses (29 semester credits) are eligible to receive the Essentials of Electric Power Technology Certificate. Students who complete 57 semester credits can earn a program certificate. The 57 hours include 41 semester credits of technical core courses, 12 semester credits in a specialization area and four general education credits. Earning the Associate in Applied Science degree requires the completion of 68 semester credits. The 68 credits include the program certificate requirements along with 11 general education credits.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include passing a physical exam, which may include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

In addition to the list above, 15 general education credits are required in the following areas for the Associate in Applied Science degree:
- Communications ................................................. 6
- Arts & Humanities/Social & Behavioral Sciences ............ 3
- Business/Math/Science/Technology .......................... 6

Check BSC’s website, bismarckstate.edu/energy for the most up-to-date list of course offerings and schedule.

Required placement scores:
- ACT Math - 16 or higher
- COMPASS Math - 41 or higher (Pre-algebra)
- Accuplacer - 44 or higher (Elementary Algebra)
This program, offered entirely online, prepares students for work as system operators and electrical dispatchers within the electrical industry. Access to course work is available entirely online, making participation flexible for shift workers in the industry.

The curriculum, developed through a partnership with several industry partners, includes 18 technical courses to be delivered sequentially in three phases, with six courses in each phase.

Students will learn all aspects of the industry, including how the electrical system operates and the role system operators take in ensuring safe and reliable power delivery to their customers.

Students who complete the program may earn a certificate or an Associate in Applied Science degree.

Industry forecasts a strong job market for applicants in the electrical field due to an aging workforce. This career path offers great pay, in addition to interesting and rewarding careers for system operators or dispatchers.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a physical exam, a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Bismarck State College is recognized by the North American Electric Reliability Corporation as a continuing education provider who adheres to NERC Continuing Education Program Criteria.
This field is among the fastest growing occupations requiring college education but less than an associate degree. Electronic technicians are vital in a world undergoing technological revolution. Virtually every industry has some electronic aspect to its operations. Manufacturing, information technology, servicing, processing, and telecommunications will continue to need skilled workers to install, maintain, and repair increasingly complex systems.

This one-year program at Bismarck State College provides a basic electronics background. The program is intense and directly applicable to the job market. Students work in BSC’s well-equipped modern laboratory. Students apply what they learn in the classroom in the new, up-to-date labs in the Bismarck Public Schools Career Academy on the BSC campus.

The program will be offered on campus and online. On-campus courses will start only in the fall. Online students can begin either semester, as all courses will be available online every semester.

Students considering this program should have good reading comprehension and aptitude for math. Technicians may have to lift equipment, work in a variety of postures, and follow standard safety procedures. Continuing education is common to keep up with changes in technology and service procedures.

Graduates earn a Program Certificate. See page 54 for requirements.

**Enrollment:** A class of 39 students will be enrolled in late August. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

**Required placement scores:**
- ACT Math - 16 or higher
- ACT Reading - 18 or higher
- COMPASS Math - (pre-algebra) 41 or higher
- COMPASS Reading - 78 or higher

**Background in these areas helpful:**
- High school algebra
- Basic computer literacy
- Physics
- Good reading skills

### ELECTRONICS TECHNOLOGY
#### CERTIFICATE PROGRAM

**FIRST SEMESTER (Fall only for on-campus students)**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Current Analysis (ELEC 100)</td>
<td>4</td>
</tr>
<tr>
<td>Direct Current Analysis Lab (ELEC 100L)</td>
<td>1</td>
</tr>
<tr>
<td>Solid State Devices (ELEC 118)</td>
<td>4</td>
</tr>
<tr>
<td>Solid State Devices Lab (ELEC 118L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics I (ELEC 114)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics I Lab (ELEC 114L)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>14</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER (Spring only for on-campus students)**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Devices (ELEC 130)</td>
<td>4</td>
</tr>
<tr>
<td>Active Devices Lab (ELEC 130L)</td>
<td>1</td>
</tr>
<tr>
<td>AC Analysis (ELEC 120L)</td>
<td>4</td>
</tr>
<tr>
<td>AC Analysis Lab (ELEC 120L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics II (ELEC 115)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics II Lab (ELEC 115L)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>14</td>
</tr>
</tbody>
</table>

Electronic and telecommunications technicians are in vital demand in a world experiencing a high technology revolution. These industries will continue to need more and more skilled workers.

According to the U.S. Department of Labor, Bureau of Labor Statistics, these are among the fastest growing occupations requiring a college education, but less than a baccalaureate degree. This is good news for graduates of this program, because they should experience excellent job opportunities and job security for years to come.

Virtually every industry has an electronic aspect, with systems designed to meet each industry’s particular needs. Students attain entry-level skills required to enter the diversified electronics industry. Most graduates gain employment in the electronic manufacturing or telecommunications industry. Some examples of the manufacturing industry include companies that build, sell, and service avionic equipment, a variety of electronic control equipment, and silicon wafers and memory chips. The telecommunications industry dealing with conventional telephone and data transmission services is a rapidly growing industry with a multitude of opportunities for employment now and in the foreseeable future. The department maintains contact in the electronic and telecommunications industries and assists with placement.

This program prepares students with a good basic electronic background as well as specialization in radio communications, telecommunications and digital electronics.
The program is intense and directly applicable to the job market. This program includes both classroom instruction and work in a well-equipped modern laboratory.

Graduates earn a program diploma or an Associate in Applied Science degree, depending on the option selected.

See page 54 for program diploma and degree requirements.

**Enrollment:** A class of 39 students will be enrolled in late August. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

### Required placement scores:

- **ACT Math:** 16 or higher
- **ACT Reading:** 18 or higher
- **COMPASS Math:** (pre-algebra) 41 or higher
- **COMPASS Reading:** 78 or higher

Background in these areas helpful:
- High school algebra
- Basic computer literacy
- Physics
- Good reading skills

---

## Electronics/Telecommunications Technology Diploma Program

### Freshman Year

#### Fall Semester

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Current Analysis (ELEC 100)</td>
<td>4</td>
</tr>
<tr>
<td>Direct Current Analysis Lab (ELEC 100L)</td>
<td>1</td>
</tr>
<tr>
<td>Solid State Devices I (ELEC 118)</td>
<td>4</td>
</tr>
<tr>
<td>Solid State Devices I Lab (ELEC 118L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics I (ELEC 114)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics I Lab (ELEC 114L)</td>
<td>1</td>
</tr>
<tr>
<td>Math 137 or higher</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
</tbody>
</table>

#### Spring Semester

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Devices (ELEC 130)</td>
<td>4</td>
</tr>
<tr>
<td>Active Devices Lab (ELEC 130L)</td>
<td>1</td>
</tr>
<tr>
<td>AC Analysis (ELEC 120)</td>
<td>4</td>
</tr>
<tr>
<td>AC Analysis Lab (ELEC 120L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics II (ELEC 115)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics II Lab (ELEC 115L)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>

### Sophomore Year

#### Fall Semester

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Electronics III (ELEC 216)</td>
<td>4</td>
</tr>
<tr>
<td>Digital Electronics III Lab (ELEC 216L)</td>
<td>1</td>
</tr>
<tr>
<td>Electronic Communications I (ELEC 222)</td>
<td>4</td>
</tr>
<tr>
<td>Electronic Communications I Lab (ELEC 222L)</td>
<td>1</td>
</tr>
<tr>
<td>Telecommunications I (ELEC 232)</td>
<td>4</td>
</tr>
<tr>
<td>Telecommunications I Lab (ELEC 232L)</td>
<td>1</td>
</tr>
<tr>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>18</td>
</tr>
</tbody>
</table>

#### Spring Semester

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Electronics IV (ELEC 218)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics IV Lab (ELEC 218L)</td>
<td>1</td>
</tr>
<tr>
<td>Electronic Communications II (ELEC 224)</td>
<td>4</td>
</tr>
<tr>
<td>Electronic Communications II Lab (ELEC 224L)</td>
<td>1</td>
</tr>
<tr>
<td>Telecommunications II (ELEC 234)</td>
<td>4</td>
</tr>
<tr>
<td>Telecommunications II Lab (ELEC 234L)</td>
<td>1</td>
</tr>
<tr>
<td>Humanities/Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Business/Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td>20</td>
</tr>
</tbody>
</table>

See page 54 for general education requirements for Associate in Applied Science degree.
The Bachelor of Applied Science (BAS) in Energy Management is designed for individuals interested in supervisory and management positions in the energy industry. The BAS builds on energy related foundations developed in previously completed energy education programs and includes general education classes, core management courses and Energy Management courses. This program is offered entirely online, allowing students to access classes around their work schedule.

To enroll in the Bachelor of Applied Science in energy management, a student must have completed an Associate in Applied Science Degree, Certificate, or Diploma in an accredited and approved program in an energy related field.

BSC offers the BAS in Energy Management to meet the needs and demands of the energy industry for qualified supervisors and managers, and to provide opportunities for energy workers to prepare for these positions of leadership. This program was developed in response to the nation's ever-increasing demand for energy and the growing need for highly trained energy workers who seek advancement in their careers. The energy industry is encouraging continued education for the diploma, certificate, or AAS degree graduates to fill the many positions soon to be vacated by a large number of retirees.

This program will enable students to acquire the management skills and knowledge to develop fulfilling careers and to maximize their potential for attaining advanced-level, leadership positions in the energy industry.

**CURRICULUM FOR BAS IN ENERGY MANAGEMENT**

Technical credit from AAS, Certificate, or Diploma (energy related) ...................................................... 48 credits
General Education .................................................................. 42 credits
Energy Management .............................................................. 30 credits
Total ..................................................................................... 120 credits

(A minimum 2.00 institutional GPA (BSC only) and a minimum 2.25 cumulative GPA (BSC+Transfer) is required for graduation. A minimum of 30 credits must be upper division (300/400 level) credits.)

**GENERAL EDUCATION**

For a listing of General Education courses, go to bismarckstate.edu/academics/catalog and click on “Graduation Requirements.”

**Communications (9 Credits)**
ENGL 110 College Composition I
ENGL 120 College Composition II or ENGL 125 Intro to Professional Writing
COMM 110 Fundamentals of Public Speaking

**Arts and Humanities (6 Credits)**
Choose 6 credits from Arts & Humanities

**Social and Behavioral Science (6 Credits)**
ECON 201 Principles of Microeconomics
ECON 202 Principles of Macroeconomics

**Business, Math, Science, and Technology (21 Credits)**
MATH 137 Applied Algebra (or higher)
Science (lab not required)
ACCT 200 Elements of Accounting I
ACCT 201 Elements of Accounting II or MATH 103 College Algebra (or higher)
BADM 202 Principles of Management
BADM 281 Organizational Behavior
BADM 282 Human Resource Management

**ENERGY MANAGEMENT (30 CREDITS)**
ENRG 302 Ethical Issues in the Energy Industry
ENRG 310 Energy Production and the Environment
ENRG 315 Energy Management Communications
ENRG 320 Workforce Safety
ENRG 330 Government Regulations in the Energy Industry
ENRG 404 New and Emerging Energy Technologies
ENRG 412 Energy Economics and Finance
ENRG 420 Energy Markets and Structures
ENRG 430 Project Management in the Energy Industry
ENRG 435 Managing Energy Facilities

Check BSC’s website at bismarckstate.edu/energy/students/bas for the most up-to-date course offerings.
The engineering curriculum at BSC provides students with basic courses in science, mathematics and other areas required by most engineering schools. Students who complete the requirements receive an Associate in Science degree, and are ready to transfer to the engineering college of their choice with junior standing.

Through agreements between BSC and the University of North Dakota and between BSC and North Dakota State University, BSC engineering students may transfer to either university to compete equally with juniors enrolled at UND or NDSU for scholarships and class registration. Students should apply for joint admission to BSC and the engineering program at the university of their choice (UND or NDSU) to facilitate the transfer process. For complete details, contact the associate professor of engineering.

One of the strengths of BSC’s engineering curriculum is that students have two options for completion of the curriculum. Those who need to review math and science skills necessary to succeed in engineering may choose Option 2, which may take three years to complete. Students who have taken college preparatory courses and who are ready to enroll in calculus and chemistry may choose Option 1. The suggested curriculum for both options is listed below.

Careers and work activities of engineers vary widely. Among the numerous branches of engineering are: agricultural, chemical, civil, construction, electrical and electronic, geological, industrial, mechanical, transportation, bio-engineering and construction management.

Work activities of engineers may include research, design, sales, manufacturing, testing, installation, development, teaching, consulting, business and management.

Engineers should have an analytical mind, the capacity for detail, creativity, be able to work as part of a team, and be able to express themselves both orally and in writing.

High school students planning to major in engineering should study physics, chemistry, and as much math as possible. Because of the strong emphasis on computer applications in all fields of engineering, students should be proficient at keyboarding. Knowledge of word processing, spreadsheets, and computer programming is also helpful.

Students should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify this curriculum if necessary.

### Career Possibilities:
- Engineer (several fields), Research
- and Design Engineer, Engineering Management.

It’s strongly recommended that students see an advisor before registering for classes. An advisor will help with your schedule of classes based on your chosen field of engineering and the school where you plan to complete a bachelor’s degree. The advisor will help you modify this suggested curriculum, if necessary.

### Suggested Curriculum for Associate in Science:

#### Option 1 - Two Years

<table>
<thead>
<tr>
<th>SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRESHMAN</td>
</tr>
<tr>
<td><em>CREDITS</em></td>
</tr>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
</tr>
<tr>
<td>Calculus (MATH 165-166)</td>
</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
</tr>
<tr>
<td>Graphical Communications (ENGR 101)</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
</tr>
<tr>
<td>Enrichment</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
</tbody>
</table>

| SOPHOMORE                                      |
| *CREDITS*                                     |
| University Physics I-II (PHYS 251-252)         | 8 |
| University Physics I-II Lab (PHYS 251L-252L)   | 2 |
| Calculus (MATH 265)                           | 4 |
| Intro. to Differential Equations (MATH 266)    | 3 |
| Applied Linear Algebra (MATH 227)             | 3 |
| Statics (ENGR 201)                            | 3 |
| Engineering Electives                         | 6-8 |
| Social Science Electives                      | 6 |
| Fundamentals of Public Speaking (COMM 110)     | 3 |
| Total credits                                 | 38-40 |

#### Option 2 - Two or Three Years:

Some students interested in a career in engineering enter college needing to review math and science skills necessary for success in the engineering field. This option allows students to take preliminary courses in science and to review algebra and trigonometry before enrolling in calculus. Since calculus is crucial for success in physics and sophomore engineering courses, these students may need up to three years of study before they are ready to transfer to an engineering college with junior status.

### First Year

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
</tr>
<tr>
<td>Algebra (MATH 102 or 103)</td>
</tr>
<tr>
<td>Pre-calculus (MATH 107)</td>
</tr>
<tr>
<td>Physical Science I-II (SCNC 101 or 101-102)</td>
</tr>
<tr>
<td>Physical Science I-II Lab (SCNC 101L-102L)</td>
</tr>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
</tr>
<tr>
<td>Keyboarding I (BOTE 102)</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
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</table>
### SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus (MATH 165-166)</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry (CHEM 115-116 or 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry Lab (CHEM 115L-116L or 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>Graphical Communication (ENGR 101)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Electives</td>
<td>3-6</td>
</tr>
<tr>
<td>Total credits</td>
<td>35-38</td>
</tr>
</tbody>
</table>

### THIRD YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus (MATH 265)</td>
<td>4</td>
</tr>
<tr>
<td>Intro. to Differential Equations (MATH 266)</td>
<td>3</td>
</tr>
<tr>
<td>Applied Linear Algebra (MATH 227)</td>
<td>3</td>
</tr>
<tr>
<td>University Physics I-II (PHYS 251-252)</td>
<td>8</td>
</tr>
<tr>
<td>University Physics I-II Lab (PHYS 251L-252L)</td>
<td>2</td>
</tr>
<tr>
<td>Statics (ENGR 201)</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Electives</td>
<td>4-6</td>
</tr>
<tr>
<td>Total credits</td>
<td>27-29</td>
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</table>

### ENGINEERING ELECTIVES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamics (ENGR 202)</td>
<td>3</td>
</tr>
<tr>
<td>Mechanics of Materials (ENGR 203)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying I (ENGR 204)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying I Lab (ENGR 204L)</td>
<td>1</td>
</tr>
<tr>
<td>Computer Aided Design I (CAD 211)</td>
<td>3</td>
</tr>
<tr>
<td>Circuit Analysis (EE 206)</td>
<td>4</td>
</tr>
<tr>
<td>Probability and Statistics (MATH 220)</td>
<td>3</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>Physical and Historical Geology (GEOL 105-102)</td>
<td>6</td>
</tr>
<tr>
<td>Physical and Historical Geology Lab (GEOL 105L-102L)</td>
<td>2</td>
</tr>
</tbody>
</table>

A complete four-year sample curriculum for each field of engineering offered by the state universities is available from the BSC Engineering Department.
Statewide projections continue to show very high or exceptional growth descriptors for Engineering Technologists in most disciplines for the next several years.

BSC’s Engineering Technology program leads to an Associate in Applied Science degree. The program is aligned most directly towards Civil Engineering Technology with most graduates gaining employment as drafters, estimators, surveying assistants, inspectors, and material testers. Graduates can also gain employment in related engineering and construction fields as estimators, drafters, site personnel and project managers.

Engineering Technologists work for a variety of employers including federal, state, county or local governments. They also work for private engineering or testing firms, utilities, mining and power companies, and construction firms.

In the Engineering Technology program, students learn how to utilize graphic techniques to produce engineering documents, how to conduct standardized field and laboratory tests on civil engineering materials, how to utilize modern surveying methods for land measurement and/or construction layout, how to determine forces and stresses in elementary structural systems, and how to design simple beams in elementary structural systems. Additionally, students will learn how to describe the participants, terms, contract provisions, and construction processes of a typical construction project, how to estimate material quantities for technical projects, how to employ productivity software to solve technical problems, how to communicate lab and field testing and surveying results, and finally how to describe the fundamental components and processes of water and wastewater collection, distribution, and treatment systems.

Students entering this program can expect to use algebra and trigonometry skills in several of the courses. Basic computing skills including keyboarding, word processing and spreadsheets are also necessary.

**CURRICULUM FOR ASSOCIATE IN APPLIED SCIENCE:**

**FRESHMAN**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Computers (CSCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>Graphical Communication (ENGR 101)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Design I (CAD 211)</td>
<td>3</td>
</tr>
<tr>
<td>Pre-Calculus (MATH 107)</td>
<td>5</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Professional Writing (ENGL 125)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying I (ENGR 204)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying I Lab (ENGR 204L)</td>
<td>1</td>
</tr>
<tr>
<td>Computer Aided Design II CAD 212)</td>
<td>3</td>
</tr>
<tr>
<td>Materials Testing (CT 251)</td>
<td>3</td>
</tr>
<tr>
<td>Materials Testing Lab (CT 251L)</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
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</table>

**SOPHOMORE**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying II (ENGR 205)</td>
<td>3</td>
</tr>
<tr>
<td>Surveying II Lab (ENGR 205L)</td>
<td>1</td>
</tr>
<tr>
<td>Computer Aided Design III (CAD 213)</td>
<td>3</td>
</tr>
<tr>
<td>Applied Statics/Mechanics of Materials (CT 250)</td>
<td>4</td>
</tr>
<tr>
<td>Total credits</td>
<td>14</td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of GIS (GIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>Construction Project Management (CT 252)</td>
<td>3</td>
</tr>
<tr>
<td>Water Management Technology (CT 232)</td>
<td>4</td>
</tr>
<tr>
<td>State and Local Government (POLS 116)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>16</td>
</tr>
</tbody>
</table>

**TOTAL PROGRAM CREDITS**

64

* Students may take College Algebra (MATH 103) AND Trigonometry (MATH 105) instead of Pre-Calculus (MATH 107), keeping in mind that MATH 105 or MATH 107 are prerequisites for ENGR 204

**TRANSFER OPTION**

Students who may possibly pursue a four-year degree in engineering at a later date should consider the following course changes:

**ADD:**

MATH 165: Calculus I (4 credits) to the curriculum

**SUBSTITUTE:**

Statics (ENGR 201) and Mechanics of Materials (ENGR 203) for Applied Statics and Mechanics (CT 250). Students should consult with the Engineering Technology program coordinator prior to this substitution.

**GIS CERTIFICATE OPTION:**

With the addition of a few more courses, students could also complete the GIS Certificate of Completion. Refer to the Geographic Information Systems Technician page for complete details on the Certificate of Completion.
The English discipline takes both a pragmatic and idealistic approach to the study of writing and reading. Along with teaching effective writing skills and sharpening critical thinking ability, we instill students with an appreciation of the power and the beauty of the written word. Students learn that they have something to say, and we help them say it effectively. We consider our classes to be a community of learners, promoting active learning through student-centered activities.

The courses listed below are suggested for students planning to major in English. The curriculum will lead to an Associate in Arts degree and will allow transfer into a bachelor degree English program.

**Career Possibilities:** Personnel Relations, Public Relations, Writing and Editing, Research and Investigation, Advertising, Management, Administration, Law, Medicine, Publishing, Journalism, Television, Education, and Free Lance Writing. English has particularly strong value in such professions as law, medicine, business, federal service, and education. Additionally, communication and writing skills are highly sought after in the workplace, and the study of literature provides insights into the human condition that can be useful to any position that deals with people, including nursing and allied health, human services, and business, to name a few.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

**FRESHMAN YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Arts &amp; Humanities*</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Math ##</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Technology ##</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>15-17</td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition II (ENGL 120)</td>
<td>3</td>
</tr>
<tr>
<td>Arts &amp; Humanities*</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Lab Science #</td>
<td>4</td>
</tr>
<tr>
<td>English Electives **</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment ***</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Total credits</td>
<td>17-19</td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR**

**FALL SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social/Behavioral Sciences #</td>
<td>6</td>
</tr>
<tr>
<td>English Electives **</td>
<td>6</td>
</tr>
<tr>
<td>Arts &amp; Humanities *</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Total credits</td>
<td>15-16</td>
</tr>
</tbody>
</table>

**SPRING SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social/Behavioral Sciences #</td>
<td>3</td>
</tr>
<tr>
<td>English Electives **</td>
<td>9</td>
</tr>
<tr>
<td>Enrichment ***</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Other Elective</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Total credits</td>
<td>16-18</td>
</tr>
</tbody>
</table>

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* Arts & Humanities. See pp. 46-47 for options, including many 200-level English courses. Recommended 8 credits of foreign language.

** English Elective – ENGL 110 should be taken first semester because it is a prerequisite for 200-level English courses. ENGL 251 is not a prerequisite for ENGL 252, and ENGL 261 is not a prerequisite for ENGL 262.

*** Enrichment. See pp. 49-51 for options, including several Journalism courses and Literary Publications (ENGL 213).

# Social/Behavioral Sciences. See p. 47 for options.

## Math/Science/Technology. See pp. 48-49 for options. Must include at least 4 credits of lab science and at least 3 credits of math (MATH 103 or 210). Recommended that math-science requirements be taken in the first two semesters and that all students take CSCI 101.

* Check pp. 46-47 for a full list of arts and humanities courses; English courses that qualify are English 211, 221, 222, 233, 251, 252, 261, 262, 236, 238, 278
The need to know another language is now a necessity for persons who want to make themselves marketable in today’s global economy. By exposing oneself to foreign languages, individuals not only learn to appreciate and value the diversity of those with whom they will be communicating, but also gain a better understanding of who they are themselves.

One personal satisfaction speakers of a second language often experience is the thrill of being able to communicate information, feelings, and ideas in both verbal and non-verbal ways, knowing that they don’t have to speak 100 percent correctly all the time to get their message across. Here at Bismarck State College, we are committed to helping students foster confidence in themselves and in each other. We implement both traditional methods and the latest cutting-edge technology to enhance their ability to develop the necessary skills required to function in day to day tasks.

Foreign language courses in Spanish fulfill the Humanities requirement for graduation from BSC and will transfer as Humanities to help fulfill university graduation requirements. Students should also be aware that more and more four-year schools demand a two-year college-level foreign language proficiency requirement in many majors. Students who plan to continue their studies in a foreign language beyond BSC should follow the Liberal Arts curriculum below while at BSC. They should also carefully check the requirements of the college to which they wish to transfer. Students who complete the requirements earn an Associate of Arts degree from BSC.

Career Possibilities: Translator, Interpreter, Foreign Language Teacher. The study of foreign languages, in combination with another major, provides opportunities in government agencies, the Foreign Service, international business, import-export, banking, or tourism.

Students will be placed in the appropriate language course according to the following two guidelines:

1. No previous foreign language study or up to 1 year of high school foreign language study – Language 101
   • 2 years of recent (within the last 4 years) high school foreign language study – Language 102
   • 3-4 years or recent high school foreign language study or 1 year of college foreign language study – Language 201/202

2. A college-level foreign language placement test will be administrated to all students with previous foreign language experience. To make a testing appointment, call Ryan Pitcher at 224-5463 or the BSC Testing and Assessment Office at 224-5658.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Language 101-102 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization (HIST 101-102)</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language 201-202 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>9</td>
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<tr>
<td><strong>Other Electives</strong></td>
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<tr>
<td>Total credits</td>
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</tr>
</tbody>
</table>

**Suggested electives:** Anthropology, Philosophy, Fundamentals of Music/Art, Sociology, Literature, Introduction to Computers.
Bismarck State College offers a program certificate, a certificate of completion, and an Associate in Applied Science degree in Geographic Information Systems (GIS). GIS allows users to ask and answer complex questions about the world around us through complex geographic queries. GIScience is the multidisciplinary science behind the technology that incorporates cartography, geodesy, photogrammetry, remote sensing, GPS, and other geospatial sciences with the technology.

We have not lived in a time when our world resources have been pushed to their limits due to explosive population growth more than the present. Business, industry, and government require a skilled and competent workforce to manage the challenges associated with a growing world population. The GIS curriculum at BSC addresses these critical workforce needs.

The Associate in Applied Science degree in Geographic Information Systems has been designed to provide a core set of skills and competencies along with a broad knowledge of the discipline. The certificate program emphasizes GIS applications and computer technology. The certificate of completion program offers proficiency in GIS as a supplement to another course of study.

Individuals who have earned a degree or certificate in GIS are in high demand. GIS proficiency is one of the top 10 skills employers look for in job applicants. Graduates with GIS skills are in demand to fill 75,000 jobs nationwide with the number of professionals using GIS growing 15 percent annually.

Career Possibilities: energy production/distribution, agriculture, science, transportation, engineering, wildlife/natural resources, law enforcement, emergency management, government, social services, archeology, planning, marketing, service and retail business.

GIS TECHNICIAN

ASSOCIATE IN APPLIED SCIENCE DEGREE

FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Computers (CSCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Fundamentals of Geographic Information Systems (GIS 105)</td>
<td>3</td>
</tr>
<tr>
<td>GIS in Science, Agriculture an Business (GIS 206)</td>
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<tr>
<td>Total credits</td>
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SPRING SEMESTER

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Professional Writing (ENGL 125)</td>
</tr>
<tr>
<td>Microcomputer Database (CIS 104)</td>
</tr>
<tr>
<td>Physical Geography (GEOG 121)</td>
</tr>
<tr>
<td>Physical Geography Lab (GEOG 121L)</td>
</tr>
<tr>
<td>Computer Aided Design I (CAD 211)</td>
</tr>
<tr>
<td>GIS Applications (GIS 107)</td>
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<td>Total credits</td>
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SOPHOMORE YEAR

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<thead>
<tr>
<th>FALL SEMESTER</th>
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<tbody>
<tr>
<td>Database Theory with SQL (CIS 204)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced GIS Applications (GIS 201)</td>
<td>3</td>
</tr>
<tr>
<td>GPS, Photogrammetry and Remote Sensing (GIS 215)</td>
<td>3</td>
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<tr>
<td>State and Local Government (POLS 116)</td>
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<tr>
<td>Elements of Economics (ECON 105)</td>
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<td>Elementary Statistics (MATH 210)</td>
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<tr>
<td>Beginning Visual Basic (CSCI 122)</td>
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<tr>
<td>GIS Project Development and Management (GIS 225)</td>
<td>3</td>
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<tr>
<td>Cartographic Design and Analysis (GIS 235)</td>
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<tr>
<td>Principles of Management (BADM 202)</td>
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<table>
<thead>
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<th>SPRING SEMESTER</th>
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</thead>
<tbody>
<tr>
<td>Advanced GIS Applications (GIS 201)</td>
<td>3</td>
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<tr>
<td>Cartographic Design and Analysis (GIS 235)</td>
<td>3</td>
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<tr>
<td>GIS Project Development and Management (GIS 225)</td>
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</tr>
<tr>
<td>State and Local Government (POLS 116)</td>
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<tr>
<td>Microcomputer Database (CIS 104)</td>
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<tr>
<td>Physical Geography (GEOG 121)</td>
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<tr>
<td>Physical Geography Lab (GEOG 121L)</td>
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<tr>
<td>Database Theory with SQL (CIS 204)</td>
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<tr>
<th>SPRING SEMESTER</th>
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<tbody>
<tr>
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GIS TECHNICIAN

CERTIFICATE PROGRAM

FALL SEMESTER

<table>
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<tbody>
<tr>
<td>Fundamentals of Geographic Information Systems (GIS 105)</td>
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<tr>
<td>GIS Applications (GIS 107)</td>
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<tr>
<td>Computer Aided Design I (CAD 211)</td>
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<tr>
<td>GIS in Science, Agriculture, and Business (GIS 206)</td>
</tr>
<tr>
<td>GPS, Photogrammetry and Remote Sensing (GIS 215)</td>
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<tr>
<td>Total credits</td>
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SPRING SEMESTER

<table>
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<th>CREDITS</th>
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<tbody>
<tr>
<td>Advanced GIS Applications (GIS 201)</td>
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<td>Cartographic Design and Analysis (GIS 235)</td>
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<td>GIS Project Development and Management (GIS 225)</td>
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<tr>
<td>Microcomputer Database (CIS 104)</td>
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<td>Physical Geography (GEOG 121)</td>
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<tr>
<td>Physical Geography Lab (GEOG 121L)</td>
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<tr>
<td>Database Theory with SQL (CIS 204)</td>
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<tr>
<td>Total credits</td>
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<table>
<thead>
<tr>
<th>SPRING SEMESTER</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Geography (GEOG 121)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Geography Lab (GEOG 121L)</td>
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<tr>
<td>Advanced GIS Applications (GIS 201)</td>
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<tr>
<td>Total credits</td>
<td>7</td>
</tr>
<tr>
<td>Certificate of Completion total credits</td>
<td>34</td>
</tr>
</tbody>
</table>
A variety of job opportunities exist for the graphic designer in advertising agencies, print shops, retail stores, company ad departments, public relations departments and in the advertising departments of all news media – from newspapers to television. As a graphic designer, you might do the technical drawings for parts and service manuals for a large company or you might work as a one-person department for a small company, coordinating all phases of graphics, publicity, and product support – from concept to production, to being responsible for organizing multimedia presentations. A wide variety of career possibilities are available depending on individual talents and experience. Salaries depend on experience and skills as well as the type of organization for which the graduate works.

The Graphic Design and Communications program at BSC is designed to give each graduating student a good exposure to the many phases of the graphic design field. Study includes both classroom instruction and lab time in a well-equipped modern computer studio, where students develop skills in layout and typography, print media, prepress operations, print production, web design, and electronic imaging. Coursework covers preparing photography, illustration and design for print and online publications as well as the design and layout of advertisements, direct mail, brochures, posters and publications. Each student is expected to prepare a portfolio – a collection of his/her best works – to be used in future job interviews.

Enrollment: A class of 32 students enrolls in the fall semester. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

Required placement scores:
- ACT Math - 15 or higher
- Reading - 15 or higher
- English - 15 or higher
- COMPASS Math - (pre-algebra) 31 or higher
- Reading - 68 or higher
- English - 43 or higher

Background in these areas helpful:
Any class related to the communications field would be helpful. The following list represents some course choices: visual/graphic art, photography, photo journalism, introduction to computers, computer graphics, desktop publishing, advertising, design, marketing, English/writing, yearbook design.

Graduates may obtain a program certificate or complete additional technical and general education credits to earn an Associate in Applied Science degree. See page 54 for program certificate and degree requirements.

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Intro to Electronic Imaging (GDES 103)</td>
<td>3</td>
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<tr>
<td>Intro to Electronic Imaging Lab (GDES 103L)</td>
<td>1</td>
</tr>
<tr>
<td>Design &amp; Desktop Publishing (GDES 107)</td>
<td>3</td>
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<tr>
<td>Design &amp; Desktop Publishing Lab (GDES 107L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Illustration (GDES 117)</td>
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**SECOND SEMESTER**

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<td>Electronic Imaging II (GDES 111)</td>
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<tr>
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<td>1</td>
</tr>
<tr>
<td>Design &amp; Layout I (GDES 113)</td>
<td>3</td>
</tr>
<tr>
<td>Design &amp; Layout I Lab (GDES 113L)</td>
<td>1</td>
</tr>
<tr>
<td>Typography (GDES 115)</td>
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<td>Typography Lab (GDES 115L)</td>
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<tr>
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**THIRD SEMESTER**

<table>
<thead>
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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Current Imaging (GDES 201)</td>
<td>3</td>
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<tr>
<td>Current Imaging Lab (GDES 201L)</td>
<td>1</td>
</tr>
<tr>
<td>Intro to Multimedia (GDES 207)</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Multimedia Lab (GDES 207L)</td>
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<tr>
<td>Design &amp; Layout II (GDES 209)</td>
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<tr>
<td>Design &amp; Layout II Lab (GDES 209L)</td>
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**FOURTH SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Current Imaging II (GDES 202)</td>
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<tr>
<td>Current Imaging II Lab (GDES 202L)</td>
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</tr>
<tr>
<td>Print Production (GDES 204)</td>
<td>3</td>
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<tr>
<td>Print Production Lab (GDES 204L)</td>
<td>1</td>
</tr>
<tr>
<td>Portfolio Presentation (GDES 213)</td>
<td>3</td>
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<tr>
<td>Portfolio Presentation Lab (GDES 213L)</td>
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<tr>
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</tbody>
</table>

Total program credits ........................................48

**SUGGESTED ELECTIVES FOR ASSOCIATE IN APPLIED SCIENCE DEGREE:**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>Drawing I (ART 130)</td>
<td>3</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
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**THIRD SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
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</table>

**FOURTH SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising I (BADM 210)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total general elective credits ................................15
Total AAS degree credits ........................................63
HEALTH EDUCATION

TRANSFER

CONTACT PERSON: Deb Shipman • Jack Science Center 201B
224-2458 • Deborah.Shipman@bismarckstate.edu

The following courses are suggested for students interested in pursuing a health education major. These courses are offered at Bismarck State College for freshmen and sophomores and should provide for smooth transfer into the four-year health education major.

The program is designed to provide lower division training for such careers as teaching, government services employment (health agencies) and other related fields.

Students who complete the requirements earn an Associate in Arts degree.

Students planning a teaching career should register for Introduction to Education (EDUC 250 - 2 credits) and Pre-Professional Experience (EDUC 298 - 1 credit) during their sophomore year. These classes should be taken during the same semester from the same instructor. Students should also check the curriculum of the four-year college/university where they plan to complete their bachelor’s degree and modify this curriculum where necessary. Because of the increased nature of licensure requirements for professional educators, students should also check on the state licensure where they plan to pursue a career during their sophomore year. Students planning to teach in North Dakota will be prepared for initial licensure testing requirements in conjunction with EDUC 250.

Career Possibilities: Health teacher, administrative positions in government health agencies.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II (BIOL 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II Lab (BIOL 150L-151L)</td>
<td>2</td>
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<tr>
<td>*Algebra (MATH 103)</td>
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</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Art History I (ART 210)</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
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<tr>
<td>Personal &amp; Community Health (HPER 217)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
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</tr>
</tbody>
</table>

*Suggested electives: Social Problems (SOC 115), Investigation of Environmental Problems (SOC 123), Special Topics in Sociology (SOC 299)

*Higher maths may be selected.

SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>First Aid/CPR (HPER 210)</td>
<td>1</td>
</tr>
<tr>
<td>Statistics (MATH 210)</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology (PSYC 250)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Economics (ECON 105)</td>
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<tr>
<td>Music Appreciation (MUSC 100)</td>
<td>3</td>
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<tr>
<td>Intro. to Philosophy (PHIL 101)</td>
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<tr>
<td>American Government &amp; Politics (POLS 201-202)</td>
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<tr>
<td>Physical Education (HPER 201-202)</td>
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<tr>
<td>**Other electives</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
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</table>

**Suggested electives: Social Problems (SOC 115), Investigation of Environmental Problems (SOC 123), Special Topics in Sociology (SOC 299)

HEATING, VENTILATION AND AIR CONDITIONING

TECHNICAL LIMITED ENROLLMENT

CONTACT PERSON: Arlan Okerson • Technical Center 239A
224-5593 • Arlan.Okerson@bismarckstate.edu

The future looks bright for those with training in the related fields of heating, ventilation and air conditioning. New technology, the demand for service in this field, and ever-changing indoor air quality standards have created a major demand for knowledgeable, trained individuals. One of the fastest growing fields in the United States is building maintenance and because of the combination of courses, Bismarck State College’s HVAC program is an excellent training ground for this field.

Technically, the term “air conditioning” includes heating and cooling the indoor environment, circulating and cleaning the air, and adding or removing humidity. The related field of refrigeration includes home and business refrigerators and freezers.

Sheet Metal is also an integral part of the air conditioning and heating industry. BSC is a nationally registered training center for sheet metal & heating, ventilation, and air conditioning, through the National Center for Construction, Education, and Research (NCCER). Students are placed on a national registry after successfully completing individual module exams and tasks.

BSC’s program prepares students for entry level employment in this service industry. Students learn to use logical, step-by-step diagnostic procedures in installation and repair. They also master the use and care of basic tools and equipment. They learn to operate by EPA standards and safety standards set by OSHA regulations.

Much of the program is devoted to work in the modern, well equipped lab facilities. Classes meet six hours daily, five days per week, with a portion of each day spent in the classroom studying basic theory, shop management and other related subjects.

Enrollment: A class of 24 students will be enrolled in the HVAC or Combination Technician program each year. Enrollment in the Combination Technician program will be limited to 8 of the 24 students. Students are able to enroll in either the fall or spring semester. The program is 42 weeks in length. Refer to the Admission section of this catalog for application procedures and requirements. Also refer to the limited enrollment program information on page 13.
Required placement scores:
- ACT Math - 15 or higher
- Reading - 14 or higher
- COMPASS Math - pre-algebra 31 or higher
- Reading - 64 or higher
Students who do not meet the above requirements should arrange an interview with a heating, ventilation and air conditioning instructor.

Background in these areas helpful:
- Basic algebra and geometry
- Basic knowledge of drafting
- Working knowledge of a scientific calculator

Industry technical standards:
Awareness of the following HVAC industry standards may help students determine if they are suited to this career:
- Must have the ability to perform close accurate work, communicate effectively with others, present information in a clear concise manner, and follow verbal and written instructions.
- Requires good finger dexterity, good vision, and hearing.
- Requires continuous walking, frequent standing, bending, stooping, climbing ladders and stairs, kneeling, lifting and carrying up to 50 pounds, and carrying long or oversized loads.
- Frequently requires working over your head.
- Requires continuous use of hand tools and frequent use of power tools.
- Frequently exposed to noise, dirt, dust, fumes, chemicals, extreme heat and cold, vibration, and confined areas.

FALL CREDITS

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Sheet Metal I (SMTL 105)</td>
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</tr>
<tr>
<td>Sheet Metal II (SMTL 106)</td>
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</tr>
<tr>
<td>Sheet Metal III (SMTL 107)</td>
<td>4</td>
</tr>
<tr>
<td>Practical Applications of Sheet Metal I (SMTL 115)</td>
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SPRING CREDITS

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<tr>
<td>Introduction to Heating, Ventilation and Air Conditioning (HVAC 100)</td>
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<tr>
<td>Air Conditioning Theory and Components (HVAC 103)</td>
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<tr>
<td>Heating Theory and Components (HVAC 104)</td>
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<tr>
<td>Heating Systems Troubleshooting (HVAC 114)</td>
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SUMMER CREDITS

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioning Systems Troubleshooting (HVAC 213)</td>
<td>5</td>
</tr>
<tr>
<td>Light Commercial Refrigeration (REFG 215)</td>
<td>2</td>
</tr>
<tr>
<td>Domestic Refrigeration (REFG 216)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>10</td>
</tr>
</tbody>
</table>

COMBINATION TECHNICIAN

The Combination Technician option is another area of study students can select. This area of study requires the student to complete the Lineworker program and the Combination Technician area of the HVAC program. Students in this area of study learn sheet metal, gas distribution fundamentals, and HVAC service through a combination of traditional classroom instruction and online classes. Students who complete this area of study would qualify for employment by utility companies.

<table>
<thead>
<tr>
<th>FALL CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet Metal Retrofit Applications (SMTL 118)</td>
</tr>
<tr>
<td>Print Reading (online) (ENRT 112)</td>
</tr>
<tr>
<td>Gas Operations and Safety Procedures (HVAC 102)</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
</tbody>
</table>

CERTIFICATE PROGRAM STUDENTS:

Students are encouraged to enroll in two classes of general education studies. Suggested classes for general education:

- CSCI 101 Introduction to Computers
- See page 54 for general education requirements

DIPLOMA PROGRAM AND ASSOCIATE IN APPLIED SCIENCE STUDENTS:

Students receive a program certificate in HVAC, from BSC, along with their national registration with NCCER, upon successful completion of all three semesters. Successful completion is determined by passing grades in both HVAC program courses and sheet metal technology courses. Additional course work may lead to a program diploma or an Associate in Applied Science degree. See page 54 for general education requirements
Traditionally, historians research and analyze the past, with the goal of making history relevant to the present. In addition, historians attempt to prepare students to understand themselves and society.

Beyond this, BSC’s history curriculum is designed to offer pre-professional training for public school social studies teaching, graduate studies in history, civil service careers, museum/archival work, journalism, and other allied fields. The study of history also serves as pre-professional training for other professions such as law or the ministry.

Students who complete the requirements earn an Associate in Arts degree.

Career Possibilities: History Professor, Historian, Curator, Genealogist, Archivist, Biographer, Researcher, Ethnographer, Market Research Analyst, Anthropologist, Archaeologist.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government (POLS 115)</td>
<td>3</td>
</tr>
<tr>
<td>State and Local Government (POLS 116)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Economics (ECON 105)</td>
<td>3</td>
</tr>
<tr>
<td>**Foreign Language 101-102 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization and U.S. History (HIST 101-102 and 103-104)</td>
<td>12</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>American Studies I-II (HIST 224 or 225)</td>
<td>3</td>
</tr>
<tr>
<td>**Foreign Language 201-202 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>History of Western Frontier (HIST 222)</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td>70</td>
</tr>
</tbody>
</table>

**Proficiency in a foreign language is required in some 4-year history programs. If you are considering a transfer program that does not have this requirement, you may substitute other arts and humanities courses and social science courses to complete the required number of credits.
The Human Services program provides training and knowledge in basic helping skills and an understanding of service delivery and program administration needed for entry-level employment in public, private and volunteer human service agencies.

“Human Services” is a term used to include all the professional disciplines that share a common goal of serving people. This program will prepare students for employment in agencies, schools, businesses and centers that value paraprofessionals who bring to the job a combination of college course work and human services field experience.

Human Service graduates assist professionals in all kinds of positions where people help people. These include community and social welfare agencies, mental health and social service agencies, group home settings, community organizations, day care centers and nursery schools, elementary and secondary schools, and home health aid and geriatric services. The human service worker may provide case management, needs assessment, advocacy, service delivery, crisis intervention, as well as program planning and continuation.

People seeking a career in human service should recognize that to be successful they must be emotionally stable, creative and flexible. Human service workers will have to be able to work with diverse groups of people and individuals with a wide variety of ages, social and cultural backgrounds and life situations. This program is designed to be flexible to meet current and future market demands so that the students may choose courses most appropriate to their interests and career goals. In addition to pursuing the curriculum for a Human Services generalist, students may specialize in eligibility worker or criminal justice.

Students will complete a coordinated set of courses emphasizing human service theory, subject matter knowledge, and professional skills necessary for their careers. In addition, they will gain practical field experience through an internship. Courses will be offered on-campus and online to provide maximum flexibility and accessibility. The candidate for the Associate in Applied Science must complete 60 semester hours with a cumulative grade point of 2.0.

While not designed as a transfer program, with careful course selection, graduates could complete the appropriate pre-requisites to go on to four-year colleges.

BSC also offers a two-semester Program Certificate in an Eligibility Worker program.

## CURRICULUM FOR ASSOCIATE IN APPLIED SCIENCE:

### PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Human Services (HMSV 130)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Helping Skills (HMSV 230)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Addictions (HMSV 201)</td>
<td>3</td>
</tr>
<tr>
<td>Minority Relations (SOC 221)</td>
<td>3</td>
</tr>
<tr>
<td>Cultural Diversity (SOC 235 or Native American Studies (SOC 275)</td>
<td>3</td>
</tr>
<tr>
<td>Human Services Internship (HMSV 197)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Sociology (SOC 110)</td>
<td>3</td>
</tr>
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</table>

### GENERAL EDUCATION REQUIREMENTS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition II (ENGL 120) or Introduction to Professional Writing (ENGL 125)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Speech (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Art &amp; Humanities/Social &amp; Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Business/Math/Science/Technology</td>
<td>6</td>
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</table>

<table>
<thead>
<tr>
<th>ELECTIVE REQUIREMENTS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PLUS 12 CREDITS FROM THE FOLLOWING:</td>
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<tr>
<td>Eligibility Worker:</td>
<td></td>
</tr>
<tr>
<td>TANF (HMSV 140)</td>
<td>3</td>
</tr>
<tr>
<td>Supplemental Nutrient Assistance Program (HMSV 141)</td>
<td>3</td>
</tr>
<tr>
<td>Medicaid (HMSV 142)</td>
<td>3</td>
</tr>
<tr>
<td>Childcare Assistance (HMSV 143)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Justice:</td>
<td></td>
</tr>
<tr>
<td>Introduction to Criminal Justice (CJ 201)</td>
<td>3</td>
</tr>
<tr>
<td>Juvenile Delinquency (CJ 253)</td>
<td>3</td>
</tr>
<tr>
<td>Juvenile Justice System (CJ 254)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Corrections (CJ 270)</td>
<td>3</td>
</tr>
<tr>
<td>Community Based Corrections (CJ 271)</td>
<td>3</td>
</tr>
<tr>
<td>Generalist:</td>
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<tr>
<td>Gerontology (SOC 251)</td>
<td>3</td>
</tr>
<tr>
<td>Family (SOC 220)</td>
<td>3</td>
</tr>
<tr>
<td>Current Social Issues: Death and Dying (SOC 122)</td>
<td>3</td>
</tr>
<tr>
<td>Development of Social Welfare (SWK 256)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Behavior Modification (PSYC 211)</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology (PSYC 250)</td>
<td>3</td>
</tr>
<tr>
<td>Abnormal Psychology (PSYC 270)</td>
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</table>

**SUGGESTED GENERAL EDUCATION & OTHER ELECTIVES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Intro to Philosophy (PHIL 101)</td>
<td>3</td>
</tr>
<tr>
<td>American Government (POLS 115)</td>
<td>3</td>
</tr>
<tr>
<td>State &amp; Local Government (POLS 116)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Accounting (ACCT 200)</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Statistics (MATH 210)</td>
<td>3</td>
</tr>
<tr>
<td>Concepts of Biology/Lab (BIOL 111/111L)</td>
<td>3/1</td>
</tr>
</tbody>
</table>
Eligibility workers are an indispensable part of the human services support system. As the first contact for people seeking public assistance, they make important decisions about food, health care, education, job training, and other social services that people need.

Eligibility workers must be adept at interviewing and gathering necessary information to determine qualifying services. Because they serve as advisors to clients, good communication skills are needed to explain eligibility requirements and program details. Within their job, an eligibility worker must be organized and accurate, exhibit care and concern, and show respect for an applicant’s need for privacy and confidentiality.

BSC’s Eligibility Worker program emphasizes core courses that provide the knowledge and skills most applicable to students preparing for this entry-level position. The program offers on-campus or online study. Students seeking a Program Certificate are required to complete 30 credit hours and to maintain a 2.0 cumulative GPA in the following coursework:

<table>
<thead>
<tr>
<th>CERTIFICATE REQUIREMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
</tr>
<tr>
<td>Introduction to Human Services (HMSV 130)</td>
</tr>
<tr>
<td>Introduction to Helping Skills (HMSV 230)</td>
</tr>
<tr>
<td>Temporary Assistance for Needy Families (HMSV 140)</td>
</tr>
<tr>
<td>Supplemental Nutrient Assistance Program (HMSV 141)</td>
</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CERTIFICATE REQUIREMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPRING</td>
</tr>
<tr>
<td>Medicaid (HMSV 142)</td>
</tr>
<tr>
<td>Childcare Assistance (HMSV 143)</td>
</tr>
<tr>
<td>Minority Relations (SOC 221) OR</td>
</tr>
<tr>
<td>Cultural Diversity (SOC 235) OR</td>
</tr>
<tr>
<td>Native American Studies (SOC 275)</td>
</tr>
<tr>
<td>Human Services Internship (HMSV 197)</td>
</tr>
<tr>
<td>Fundamentals of Accounting (ACCT 102) OR</td>
</tr>
<tr>
<td>Elements of Accounting I (ACCT 200)</td>
</tr>
<tr>
<td>Total credits</td>
</tr>
</tbody>
</table>
INSTRUMENTATION & CONTROL TECHNOLOGY

TECHNICAL     LIMITED ENROLLMENT
ONLINE OPTION

CONTACT PERSON: Vance Vesey • Career Academy 248
224-2442 • Vance.Vesey@bismarckstate.edu

Instrumentation and Control technicians are in
vital demand in a world experiencing a high technology
revolution. These industries will continue to need more
and more skilled workers.

According to the U.S. Department of Labor, Bureau
of Labor Statistics, these are among the fastest growing
occupations requiring a college education, but less than a
baccalaureate degree. This is good news for graduates of
this program, because they should experience excellent job
opportunities and job security for years to come.

Virtually every process, energy generation and
manufacturing industry has an instrumentation and control
aspect, with systems designed to meet each industry’s
particular needs.

Students attain entry-level skills required to enter
the diversified instrumentation and control industry. Most graduates gain employment in the process, energy
generation, chemical, pharmaceutical and manufacturing
industry. The department maintains contact in the
instrumentation and control industries and assists with
placement.

This program prepares students with a good basic
instrumentation and control background. The program
is intense and directly applicable to the job market. This
program includes both classroom instruction and work in
a well-equipped modern laboratory.

THE PROGRAM IS ALSO AVAILABLE ONLINE,
EXCEPT FOR SECOND-YEAR LAB COURSES.

Graduates earn a program diploma or an Associate
in Applied Science degree, depending on the option
selected.

See page 54 for program diploma and degree
requirements. Credits from this program can be applied
to BSC’s Bachelor of Applied Science degree in Energy
Management. See page 88 for information.

Enrollment: A limited number of students will be
enrolled in late August. Refer to the Admission section
of this catalog beginning on page 10 for application
procedures and requirements. Also refer to the limited
enrollment program information on page 13.

Required placement scores:
ACT Math – 16 or higher
ACT Reading - 18 or higher
COMPASS Math - (algebra) 41 or higher
COMPASS Reading - 80 or higher

Background in these areas helpful:
• High school algebra
• Basic computer literacy
• Physics
• Good reading skills

INSTRUMENTATION AND CONTROL TECHNOLOGY
DIPLOMA PROGRAM:

FRESHMAN YEAR FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Current Analysis (ELEC 100)</td>
<td>4</td>
</tr>
<tr>
<td>Direct Current Analysis Lab (ELEC 100L)</td>
<td>1</td>
</tr>
<tr>
<td>Solid State Devices I (ELEC 118)</td>
<td>4</td>
</tr>
<tr>
<td>Solid State Devices I Lab (ELEC 118L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics I (ELEC 114)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics I Lab (ELEC 114L)</td>
<td>1</td>
</tr>
<tr>
<td>Math 137 or higher</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
</tbody>
</table>

SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Active Devices (ELEC 130)</td>
<td>4</td>
</tr>
<tr>
<td>Active Devices Lab (ELEC 130L)</td>
<td>1</td>
</tr>
<tr>
<td>AC Analysis (ELEC 120)</td>
<td>4</td>
</tr>
<tr>
<td>AC Analysis Lab (ELEC 120L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics II (ELEC 115)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics II Lab (ELEC 115L)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
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</table>

SOPHOMORE YEAR FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Practices (ICTL 205)</td>
<td>4</td>
</tr>
<tr>
<td>Mechanical Practices Lab (ICTL 205L)</td>
<td>1</td>
</tr>
<tr>
<td>Instrument Drawings and Documentation (ICTL 215)</td>
<td>4</td>
</tr>
<tr>
<td>Instrument Drawings and Documentation Lab (ICTL 215L)</td>
<td>1</td>
</tr>
<tr>
<td>Input and Output Devices (ICTL 225)</td>
<td>4</td>
</tr>
<tr>
<td>Input and Output Devices Lab (ICTL 225L)</td>
<td>1</td>
</tr>
<tr>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>18</td>
</tr>
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SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Motors and Controllers (ICTL 235)</td>
<td>4</td>
</tr>
<tr>
<td>Motors and Controllers Lab (ICTL 235L)</td>
<td>1</td>
</tr>
<tr>
<td>Controls (ICTL 245)</td>
<td>4</td>
</tr>
<tr>
<td>Controls Lab (ICTL 245L)</td>
<td>1</td>
</tr>
<tr>
<td>Automation Overview (ICTL 255)</td>
<td>4</td>
</tr>
<tr>
<td>Automation Overview Lab (ICTL 255L)</td>
<td>1</td>
</tr>
<tr>
<td>Humanities/Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
</tbody>
</table>

See page 54 for general education requirements for a diploma
program.

INSTRUMENTATION AND CONTROL TECHNOLOGY AAS:

FRESHMAN YEAR FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Current Analysis (ELEC 100)</td>
<td>4</td>
</tr>
<tr>
<td>Direct Current Analysis Lab (ELEC 100L)</td>
<td>1</td>
</tr>
<tr>
<td>Solid State Devices I (ELEC 118)</td>
<td>4</td>
</tr>
<tr>
<td>Solid State Devices I Lab (ELEC 118L)</td>
<td>1</td>
</tr>
<tr>
<td>Digital Electronics I (ELEC 114)</td>
<td>3</td>
</tr>
<tr>
<td>Digital Electronics I Lab (ELEC 114L)</td>
<td>1</td>
</tr>
<tr>
<td>Math 137 or higher</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
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</table>

SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Devices (ELEC 130)</td>
<td>4</td>
</tr>
<tr>
<td>Active Devices Lab (ELEC 130L)</td>
<td>1</td>
</tr>
<tr>
<td>AC Analysis (ELEC 120)</td>
<td>4</td>
</tr>
<tr>
<td>AC Analysis Lab (ELEC 120L)</td>
<td>1</td>
</tr>
</tbody>
</table>

Bismarck State College  101
TRANSFER

CONTACT PERSON: Karen Bauer • Schafer 319A or Mystician
Office Schafer 315 • 224-5522
Karen.Bauer@bismarckstate.edu

The major focus in the journalism curriculum centers on writing and reporting for the media. Skills emphasized are the same basic skills students will need for nearly all careers in the communications field because people working in those professions must understand the nature of news and how to communicate it effectively to others.

Careers in communications include print and online newspaper reporting, writing and editing, broadcast reporting, public relations, advertising, magazine writing, technical writing, web page development, freelance writing, book publishing and other related professions.

Students planning to study journalism should have an interest in writing and a potential to communicate information obtained by observation and interviews. Other characteristics helpful to those planning a career in this field are curiosity, an eye for detail and a desire to learn by reading and talking with others.

Those enrolled in journalism classes at BSC will be writing with the intent of being published. Students are encouraged to become involved with and submit work to the student campus newspaper, the Mystician. Students gain firsthand experience in the complete process of publication, from gathering news, to writing stories, to designing the layout of pages both print and online.

Students following this curriculum may earn an Associate in Arts or an Associate in Science degree. However, to be marketable in the communications field, students should plan to obtain a four-year degree by transferring to a college or university that offers a major in journalism or communications.

The courses suggested should provide for smooth transfer of credits, but students should consult the catalog and requirements of the institution to which they anticipate transferring.

SPRING SEMESTER

Motors and Controllers (ICTL 235) ................................. 4
Motors and Controllers Lab (ICTL 235L) ......................... 1
Controls (ICTL 245) ...................................................... 4
Controls Lab (ICTL 245L) ................................................ 1
Automation Overview (ICTL 255) ................................. 4
Automation Overview Lab (ICTL 255L) ......................... 1
Humanities/Social Science Elective ................................. 3
Business/Math/Science/Technology Elective ...................... 3
Total credits ............................................................... 20

See page 54 for general education requirements for Associate in Applied Science degree.

Career Possibilities: News Analyst, Reporter, Correspondent, Editor, Public Relations Specialist, Technical Writer, News Director, Broadcaster, Web Page Writer or Editor.

(Also see the Mass Communications Program.)

JOURNALISM SUGGESTED CURRICULUM:

FRESHMAN

FALL SEMESTER

Introduction to Media Writing (COMM 200) .................... 3 credits
English Usage I (ENGL 205) ......................................... 2 credits
College Composition I (ENGL 110) ................................. 3 credits
Fundamentals of Public Speaking (COMM 110) ............. 3 credits
Arts and Humanities (see below*)
Social & Behavioral Sciences (see below*)
Math, Science & Technology (see below*)

SPRING SEMESTER

Reporting and Feature Writing (COMM 244) ..................... 3 credits
English Usage II (ENGL 206) ....................................... 2 credits
College Composition II (ENGL 120) ............................... 3 credits
Arts and Humanities (see below*)
Social & Behavioral Sciences (see below*)
Math, Science & Technology (see below*)

SOPHOMORE

FALL SEMESTER

Interpretive and Opinion Writing (COMM 201) .................. 3 credits
Media Ethics (COMM 233) ............................................ 3 credits
Reporting and Editing (COMM 281 repeatable) ............ 1 credit
Arts and Humanities (see below*)
Social & Behavioral Sciences (see below*)
Math, Science & Technology (see below*)

SPRING SEMESTER

Understanding Media and Social Change (COMM 112) ........ 3 credits
Reporting and Editing (COMM 281 repeatable) ............ 1 credit
Arts and Humanities (see below*)
Social & Behavioral Sciences (see below*)
Math, Science & Technology (see below*)
The people of ancient Greece supported the ideal of “a sound mind in a sound body.” Education should therefore be more than a preparation for making a living, but a preparation for life itself.

Education should enable people to more fully realize their intellectual, ethical, aesthetic, and creative potentialities in order that they might live more satisfying and meaningful lives and make effective contributions to their society’s well being.

Understanding this, the liberal arts curriculum is a good beginning for students who are undecided about a specific field of study. The suggested curriculum has purposely been designed to be as broad as possible to allow students to investigate several academic areas, and explore their own potentialities. Many bachelor degrees require a broad sampling of liberal arts courses, and the curriculum listed below should fulfill the general education needs of most transferring students. The curriculum is also appropriate for students who plan to major in such humanities-based majors as religion or philosophy. Students who complete the requirements earn an Associate in Arts degree.

**LIBERAL ARTS**

**TRANSFER**

**CONTACT PERSON:** Dr. Henry Riegler • Schafer Hall 219E
224-5549 • Henry.Riegler@bismarckstate.edu

**Arts and Humanities (Associate in Arts 9 Credits / Associate in Science 6 Credits)**

Foreign Language or History courses are recommended.

**Social and Behavioral Sciences (AA 9 Credits / AS 6 Credits)**

Sociology or Political Science courses are recommended.

**Math, Science & Technology (AA 9 Credits / AS 15 Credits)**

Math recommended options:

- College Algebra (MATH 103) ................................................. 4 credits
- Elementary Statistics (MATH 210) ......................................... 3 credits

**Science Recommended Options:**

- Forensic Science/lab (CHEM 112/112L) ......................... 3/1 credits
- Meteorology/lab (ASTR 150/150L) ................................. 3/1 credits
- Community Ecology/lab (BIOL 251/251L) ...................... 3/1 credits
- Physical Geology/lab (GEOL 105/105L) ......................... 3/1 credits

**Suggested Electives:**


**JOURNALISM/MASS COMMUNICATIONS ADDITIONAL OPTIONS**

- Introduction to News Photography (COMM 240) ............. 3 credits
- Advanced News Photography (COMM 242) ..................... 3 credits
- Basic TV and Video (COMM 270 repeatable) ................. 3 credits
- Advanced Video Production (COMM 272) ....................... 3 credits
- Desktop Publishing (CIS 210) ......................................... 3 credits
- Electronic Publishing (CIS 230) ..................................... 3 credits

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language 101-102 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization (HIST 101-102)</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language 201-202 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>9</td>
</tr>
<tr>
<td><strong>Other Electives</strong></td>
<td>9</td>
</tr>
<tr>
<td>Total credits</td>
<td>61</td>
</tr>
</tbody>
</table>

**Suggested electives:** Anthropology, Philosophy, Fundamentals of Music/Art, Sociology, Literature, Introduction to Computers.
A career as an electrical lineworker offers men and women the prospect of good wages, dependable and often very strong job demand, and an opportunity to work in any of nearly 3,100 public utilities across the United States.

BSC’s program is designed to educate students to become skilled apprentice lineworkers. Instruction time is divided between classroom study and indoor and outdoor laboratory work.

Classes are held and skills practiced at the electrical lineworker program’s facilities north of Mandan. This includes twenty acres of land for outside training, and inside laboratories and classrooms. Students also have access to all student facilities at the BSC Campus.

Students are required to take a two-week class, Introduction to Climbing Techniques, offered in the summer before they will be allowed to enter the Lineworker program in the fall. The class will be offered for three credits. Introduction to Climbing will provide students practice in pole climbing in an effort to increase familiarity and security with climbing experiences.

Enrollment: A class of 54 students is enrolled once each year in late August. Refer to the admission section of this catalog beginning on page 10 for application procedures and requirements. A doctor’s examination and approval is required after acceptance into this program. Also refer to the limited enrollment program information on page 13.

Required placement scores:
- ACT Math - 15 or higher
- English - 15 or higher
- COMPASS Math - (pre-algebra) 31 or higher
- English - 43 or higher

Background in these areas helpful:
- One year of high school algebra or one semester of college algebra
- Basic computer literacy
- Good written and oral communication skills

SUMMER SESSION

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Climbing Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Electrical Distribution</td>
<td>5</td>
</tr>
<tr>
<td>Electrical Distribution</td>
<td>4</td>
</tr>
<tr>
<td>Basic Electricity D.C. &amp; A.C.</td>
<td>3</td>
</tr>
<tr>
<td>Equipment Operations</td>
<td>2</td>
</tr>
<tr>
<td>Safety I</td>
<td>2</td>
</tr>
<tr>
<td>Total credits</td>
<td>16</td>
</tr>
</tbody>
</table>

SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Electrical Distribution</td>
<td>5</td>
</tr>
<tr>
<td>Electrical Distribution</td>
<td>4</td>
</tr>
<tr>
<td>Electrical Apparatus and Transformers</td>
<td>4</td>
</tr>
<tr>
<td>Safety II</td>
<td>2</td>
</tr>
<tr>
<td>Rope and Rigging</td>
<td>2</td>
</tr>
<tr>
<td>Total credits</td>
<td>17</td>
</tr>
</tbody>
</table>

Students receive a program certificate upon successful completion of the program. Additional course work may lead to an Associate in Applied Science degree. See page 54 for degree requirements.
Students in the Mass Communication program learn proficiency in the field of digital media and participate in real world experiences as mobile journalists.

Students in this program will learn different aspects of using technological media in mass communication. The curriculum provides a background of the journalism/mass communication profession and an understanding of the importance and responsibility of providing accurate information. Specific courses will cover ethical writing skills, news photography, print publication, web publication and video production.

Students get hands-on experience working with the BSC student print and online publication **Mystician** and the broadcast component **MystiCast**.

With our changing society continually in need of information, careers offered in the communications field are diverse. Graduates will find employment in a variety of areas: print, broadcast or electronic media, advertising, public relations, government agencies, power companies and other industries.

Completion of the program leads to an Associate in Applied Science degree and allows students to study the fundamentals of the field. This program is not specifically designed for transfer, but with careful selection of elective courses, students could complete an Associate in Arts degree in addition to the AAS degree. Graduates would then be prepared to make smooth transitions to four-year schools. The AAS degree offers flexibility to students by training them for immediate employment.

**Career Possibilities:** Print, Broadcast or Online Writer/Editor, Videographer, Audio and Video Equipment Technician, Public Relations Specialist, Web Reporter, Designer or Developer.

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### MASS COMMUNICATIONS SUGGESTED CURRICULUM FOR ASSOCIATE IN APPLIED SCIENCE:

#### PROGRAM REQUIREMENTS:

**FRESHMAN YEAR**

**FALL SEMESTER**

- Understanding Media and Social Change (COMM 112) ................ 3 credits
- Introduction to Media Writing (COMM 200) .......................... 3 credits
- Introduction to News Photography (COMM 240) ...................... 3 credits
- English Usage I (ENGL 205) ........................................ 2 credits

**SPRING SEMESTER**

- Reporting and Feature Writing (COMM 244) .......................... 3 credits
- Advanced News Photography (COMM 242) ........................... 3 credits
- English Usage II (ENGL 206) ........................................ 2 credits
- Desktop Publishing (CIS 210) ....................................... 3 credits

#### SOPHOMORE YEAR

**FALL SEMESTER**

- Interpretive and Opinion Writing (COMM 201) ...................... 3 credits
- Basic TV and Video (COMM 270 repeatable) ......................... 3 credits
- Reporting and Editing (COMM 281 repeatable) ...................... 1 credit
- Electronic Publishing (CIS 230) ................................... 3 credits

**SPRING SEMESTER**

- Media Ethics (COMM 233) ........................................... 3 credits
- Advanced Video Production (COMM 272) ............................. 3 credits
- Reporting and Editing (COMM 281 repeatable) ...................... 1 credit

#### GENERAL EDUCATION REQUIREMENTS (15 CREDIT HOURS TOTAL REQUIRED):

**COMMUNICATIONS (6 CREDIT HOURS)**

Recommendations:
- College Composition I (ENGL 110) 3 credits
- Fundamentals of Public Speaking (COMM 110) 3 credits

**BUSINESS, MATH, SCIENCE & TECHNOLOGY (6 CREDIT HOURS IN TWO AREAS OF STUDY)**

**MATH RECOMMENDED OPTIONS:**

- College Algebra (MATH 103) 4 credits
- Elementary Statistics (MATH 210) 3 credits

**SCIENCE RECOMMENDED OPTIONS:**

- Forensic Science/lab (CHEM 112/112L) 3/1 credits
- Meteorology/lab (ASTR 150/150L) 3/1 credits
- Community Ecology/lab (BIOL 251/251L) 3/1 credits
- Physical Geology/lab (GEOL 105/105L) 3/1 credits

**ARTS AND HUMANITIES/SOCIAL AND BEHAVIORAL SCIENCES OPTIONS: (3 CREDIT HOURS)**

Recommendation in any of the following:
- Language, Sociology, History, Political Science, Business
A complete two-year curriculum in mathematics is available for students who plan to obtain a bachelor’s degree with a major or minor in mathematics, or related field of study or computer science. An Associate in Science degree is earned by those who complete BSC requirements.

Mathematical work is divided into two broad categories—theoretical and applied. Theoretical mathematicians advance mathematical science by developing new principles and new relationships between existing principles of math. In applied mathematics, new theories, techniques and approaches are developed to solve problems in business, government, engineering, and natural and social sciences.

Many mathematicians work in colleges and universities as teachers and in research and development. Industry employs many others in the areas of communications, chemical research, aircraft, computers and data processing.

Holders of bachelor’s degrees may be qualified to enter related occupations such as statistician, actuary, computer programmer, systems analyst or economist.

Those planning a career in mathematics must have good reasoning ability, persistence and the ability to apply basic principles to new problems. They should also be good communicators since they often discuss problems with non-mathematicians.

High school students should study as much math as possible if they anticipate majoring in mathematics.

Students should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify the following suggested curriculum if necessary.


SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

**FRESHMAN**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Calculus I-II (MATH 165-166)</td>
<td>8</td>
</tr>
<tr>
<td>Beginning Visual BASIC (CSCI 122)</td>
<td>3</td>
</tr>
<tr>
<td>Art and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>*Electives</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>31</strong></td>
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</tbody>
</table>

**SOPHOMORE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Calculus III (MATH 265)</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Differential Equations (MATH 266)</td>
<td>3</td>
</tr>
<tr>
<td>Probability &amp; Statistics (MATH 220)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>University Physics I-II (PHYS 251-252)</td>
<td>8</td>
</tr>
<tr>
<td>University Physics I-II Lab (PHYS 251L-252L)</td>
<td>2</td>
</tr>
<tr>
<td>Applied Linear Algebra (MATH 227)</td>
<td>3</td>
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<tr>
<td><strong>Total credits</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

*Suggested Electives: Discrete Mathematics (MATH 208), Sociology 110, Psychology 111, Economics 105, Chemistry 121-122, 121L-122L, Computer Science I and II (CSCI 160-161).
MECHANICAL MAINTENANCE TECHNOLOGY

CONTACT PERSON: Craig Dolbeare • Mandan Campus 101
224-2490 • Craig.Dolbeare@bismarckstate.edu

BSC’s Mechanical Maintenance Technology program is the first of its kind regionally and within the North Dakota University System. Managers at energy plants requested that BSC develop this program to provide entry-level employees for anticipated openings in this field. Job opportunities should be available in the power industry, factories, institutions such as hospitals and schools, and other commercial or private enterprises that require complex, industrial machinery and equipment.

Mechanical maintenance technicians work in a high demand career installing, maintaining, and repairing turbines, compressors, pumps, valves, and other industrial production and processing equipment. Technicians must be able to read blueprints and manufacturers’ instructions and communicate effectively. As knowledgeable troubleshooters and repairers, they prevent problems and keep industrial machinery in optimal condition and readiness.

BSC’s program provides a foundation in safety, fabrication, electricity, welding, mechanics, fluid power, hydraulics, and use of tools. Students apply technical knowledge and skills to install, repair, and maintain industrial equipment such as motors, pumps, pneumatic tools, conveyor and pipeline systems, production machinery, and automated equipment. An optional summer internship is available at area plants and businesses. Top paying industries for these jobs are power generation, pipeline distribution, petroleum and coal products manufacturers, food manufacturers, large institutions, and other manufacturing companies. Applicants with broad skills in machine repair and maintenance should have favorable job prospects, according to the U.S. Bureau of Labor Statistics. Job Service North Dakota reports that growth in mechanical maintenance occupations is projected at 10 to 13 percent statewide.

Mechanical aptitude and manual dexterity are important characteristics for workers in this trade. Good reading comprehension is also necessary to understand technical manuals.

Graduates can earn a Program Certificate or an Associate in Applied Science degree. The AAS can be completed in four semesters and consists of 51 credit hours of specialized courses and 15 credit hours of general education courses. Students seeking the certificate complete the specialized skills courses and four credit hours of general education.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for information.

Enrollment: Students are enrolled twice a year on a space available basis during August and January. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. Also refer to the limited enrollment program information on page 13.

Required placement scores:
- ACT Math - 15 or higher
- COMPASS Math – (pre-algebra) 31 or higher
- ACT Reading - 17 or higher
- COMPASS Reading - 79 or higher

Background in these areas helpful:
- Shop math
- Blueprint reading
- Mechanical drawing
- Computer training
- Welding
- Electronics

FIRST SEMESTER

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>Introduction to Industrial Operations (MMAT 101)</td>
<td>1</td>
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<tr>
<td>Safety and Health (MMAT 103)</td>
<td>3</td>
</tr>
<tr>
<td>Hand and Portable Tools (MMAT 105)</td>
<td>2</td>
</tr>
<tr>
<td>Basic Mechanics (MMAT 107)</td>
<td>2</td>
</tr>
<tr>
<td>Measurements (MMAT 109)</td>
<td>2</td>
</tr>
<tr>
<td>Schematics Symbols and Blueprints (MMAT 111)</td>
<td>2</td>
</tr>
<tr>
<td>Industrial Rigging (MMAT 113)</td>
<td>1</td>
</tr>
<tr>
<td>Lubrication, Bearings and Seals (MMAT 115)</td>
<td>2</td>
</tr>
<tr>
<td>Material Handling Systems (MMAT 117)</td>
<td>1</td>
</tr>
<tr>
<td>Troubleshooting Skills (MMAT 119)</td>
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</tr>
<tr>
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<td>17</td>
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</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>COURSE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mechanical and Fluid Drive Systems (MMAT 150)</td>
<td>2</td>
</tr>
<tr>
<td>Hydraulics and Pneumatics (MMAT 155)</td>
<td>2</td>
</tr>
<tr>
<td>Valves and Steam Traps (MMAT 160)</td>
<td>3</td>
</tr>
<tr>
<td>Piping and Tubing Systems (MMAT 165)</td>
<td>3</td>
</tr>
<tr>
<td>Equipment Installation (MMAT 170)</td>
<td>3</td>
</tr>
<tr>
<td>Pumps, Compressors, and Turbines (MMAT 175)</td>
<td>4</td>
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<tr>
<td>Nonmetals in the Plant (MMAT 215)</td>
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THIRD SEMESTER

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<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Oxyfuel Operations (WELD 110)</td>
<td>2</td>
</tr>
<tr>
<td>Testing OA in Welding, Brazing, Cutting (WELD 118)</td>
<td>2</td>
</tr>
<tr>
<td>Welding Principles (WELD 135)</td>
<td>2</td>
</tr>
<tr>
<td>Methods in GMA &amp; FCA Welding (WELD 140)</td>
<td>2</td>
</tr>
<tr>
<td>Arc Welding Operations (WELD 170)</td>
<td>2</td>
</tr>
<tr>
<td>Methods in Arc Welding Operations (WELD 180)</td>
<td>4</td>
</tr>
<tr>
<td>Maintenance Pipelitting (MMAT 200)</td>
<td>1</td>
</tr>
<tr>
<td>Basic Electricity and Electronics (MMAT 205)</td>
<td>2</td>
</tr>
<tr>
<td>Metals in the Plant (MMAT 210)</td>
<td>2</td>
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<tr>
<td>Total credits</td>
<td>19</td>
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</table>

FOURTH SEMESTER

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications General Education Requirements</td>
<td>6</td>
</tr>
<tr>
<td>Arts and Humanities General Education Requirement</td>
<td>3</td>
</tr>
<tr>
<td>Business/Math/Science/Technology General Education</td>
<td>6</td>
</tr>
<tr>
<td>Requirements</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
</tbody>
</table>

Bismarck State College 107
MEDICAL LABORATORY TECHNICIAN
TECHNICAL OR TRANSFER
LIMITED ENROLLMENT

CONTACT PERSONS:
Angela Uhlich • Jack Science Center 220 • 224-5669 or 323-5482 • Angela.Uhlich@bismarckstate.edu
Cathy Janikowski • Jack Science Center 220 • 224-2485 Catherine.Janikowski@bismarckstate.edu

The mission of the Medical Laboratory Technician (MLT) Program is to provide a high quality learning-centered education in medical laboratory theory and practice that maximizes student learning and makes students partners in their education.

The MLT, under the supervision of a physician or medical laboratory scientist, performs many general laboratory tests which aid physicians in the diagnosis and treatment of disease. MLTs are in demand throughout the nation in clinical, research and public health laboratories.

The goals of the Bismarck State College MLT program are to train competent MLTs with the knowledge and skills necessary to demonstrate entry level proficiency in all areas of medical laboratory science, to provide a two-year associate degree program for students in North Dakota and surrounding states, and to operate a program in which a maximum number of credits will fulfill requirements for four-year Medical Laboratory Science programs in the state. The curriculum outlined below is prescribed to allow a student to meet these employment and transferability goals.

Medical laboratory science is a demanding field of study and career. Success depends on self-discipline, self-motivation, self-reliance, integrity and the ability to work independently to solve problems and produce accurate laboratory results under stressful conditions.

Students receive both theoretical and experiential study, including a 7-month rotation through one of the program’s clinical affiliate laboratories at Medcenter One Health Systems or St. Alexius Medical Center. Minimum grade requirements for those enrolled in the program are a 2.00 grade point average in all science and math courses and a 2.00 grade point average overall. Those who complete the requirements earn an associate in science degree and are eligible to write a national board examination to become certified as a MLT.

A strong science background (completion of high school units in chemistry, biology and algebra, or equivalent) is recommended for success in this program. The MLT program is highly selective and has a limited enrollment. Selection depends upon academic preparation as well as early date of application. The deadline for applications is May 1.

An interview and tour of Medcenter One Health Systems laboratory are required prior to acceptance into the program.

The purposes of the tour and interview are to assist students in making the right career choice, and to design a semester-by-semester curriculum plan for each student, which will afford him/her the greatest opportunity for success.

BSC’s MLT program is accredited by the National Accrediting Agency for Clinical Laboratory Science, 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119. Phone: 773-714-8880.

CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phlebotomy (MLS 103)</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy and Physiology I&amp;II (BIOL 220-221)</td>
<td>6</td>
</tr>
<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>Anatomy and Physiology I&amp;II Lab (BIOL 220L-221L)</td>
<td>2</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Human Structure and Function (MLS 100)</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry (CHEM 115 or 121)</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry Lab (CHEM 115L or 121L)</td>
<td>1</td>
</tr>
<tr>
<td>Intro. to Organic and Biochemistry (CHEM 116)</td>
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<td>Intro. to Organic and Biochemistry Lab (CHEM 116L)</td>
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</tr>
<tr>
<td>Urology (MLS 113)</td>
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</tr>
<tr>
<td>Clinical Parasitology (MLS 115)</td>
<td>1</td>
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<tr>
<td>*College Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Intro. to Medical Laboratory Science (MLS 101)</td>
<td>1</td>
</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Microbiology (MICR 202)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Microbiology Lab (MICR 202L)</td>
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<tr>
<td>Immunology (MLS 201)</td>
<td>4</td>
</tr>
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<td>Hematology (MLS 225)</td>
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<tr>
<td>Total credits</td>
<td>38-42</td>
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SUMMER SESSION

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Clinical Chemistry I (MLS 235)</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Microbiology I (MLS 245)</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Internship I (MLS 205)</td>
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</tr>
<tr>
<td>Clinical Internship II (MLS 215)</td>
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<tr>
<td>Total credits</td>
<td>9</td>
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SOPHOMORE

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>Intro. to Professional Writing (ENGL 125)</td>
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<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
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<tr>
<td>Intro. to Psychology (PSYC 111)</td>
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</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
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<tr>
<td>Art and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Chemistry II (MLS 236)</td>
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</tr>
<tr>
<td>Immunohematology (MLS 240)</td>
<td>3</td>
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<tr>
<td>Clinical Microbiology II (MLS 246)</td>
<td>1</td>
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<tr>
<td>Clinical Internship III (MLS 255)</td>
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<td>Total credits</td>
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</table>

*Higher math may be selected
Bismarck State College 109

PHLEBOTOMY TECHNICIAN

TECHNICAL  LIMITED ENROLLMENT

CONTACT PERSONS: Angela Uhlich
Jack Science Center 220 • 224-5669 or 323-5482
Angela.Uhlich@bismarckstate.edu

Cathy Janikowski • Jack Science Center 220 • 224-2485
Catherine.Janikowski@bismarckstate.edu

The mission of the Bismarck State College Phlebotomy Technician (PBT) program is to provide high quality learning centered education in phlebotomy theory and practice that maximizes student learning and makes students partners in their education. Phlebotomy is the skill of drawing blood for diagnostic purposes. BSC’s PBT program will provide students with the most comprehensive training possible to keep up with the demands of a rapidly changing health care environment.

Students who successfully complete the two-semester program will earn a program certificate and be qualified to take a national certification exam.

The demand for certified phlebotomists is increasing. Medical laboratories in many states now require phlebotomists to possess a certificate of completion from a nationally-approved and recognized program. Reasons include the steadily increasing numbers of diagnostic tests available to physicians, the growth in technology, and recent changes in the scope of phlebotomy practice itself. Blood-drawing was the domain of medical laboratory scientists and medical laboratory technicians 20 years ago. Phlebotomy is now a profession in its own right. This practice allows medical lab scientists and technicians to work more exclusively with the diagnostic procedures of laboratory medicine.

The tasks of phlebotomists today go beyond drawing blood, however. They are also required to interpret physician’s orders, use computers to enter patient demographics and send reports, process specimens and perform point-of-care test procedures in some facilities. BSC has offered a phlebotomy lecture/student lab course for many years. This program consists of one semester of courses at BSC, plus a four-week clinical rotation at one of the laboratories of the Q&R Clinic/Medcenter One Health Systems in Bismarck, Mandan, or Dickinson, or at Mid-Dakota Clinic and St. Alexius Medical Center in Bismarck.

The phlebotomy technician program has a limited enrollment of ten students per year. Selection depends upon early date of application as well as academic preparation. This is a demanding program. Successful students are those who are highly disciplined, self-motivated, self-reliant and capable of working independently.

Application deadline is May 1 for the fall semester and Oct. 1 for the spring semester. An interview is required prior to acceptance into the program.

BSC’s Phlebotomy Technician program is approved by the National Accrediting Agency for Clinical Laboratory Science, 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119. Phone: 773-714-8880.

PHLEBOTOMY TECHNICIAN

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II (Biol 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II Lab (Biol 150L-151L)</td>
<td>2</td>
</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>*Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Electives (SOC 110, PSYC 111 or ECON 201)</td>
<td>6</td>
</tr>
<tr>
<td>Immunology (MLS 201)</td>
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<tr>
<td>Total credits</td>
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SOPHOMORE  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>Anatomy and Physiology I&amp;II (BIOL 220-221)</td>
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</tr>
<tr>
<td>Anatomy and Physiology I&amp;II Lab (BIOL 220L-221L)</td>
<td>2</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>Introductory Microbiology (MICR 202)</td>
<td>3</td>
</tr>
</tbody>
</table>

SENIOR  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
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<td>Phlebotomy Internship (MLS 104)</td>
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SENIOR  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
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</tr>
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<tr>
<td>Medical Terminology (BOTE 171)</td>
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</tr>
<tr>
<td>Phlebotomy (MLS 103)</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior (BADM 281)</td>
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<td>Total credits</td>
<td>19</td>
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</table>

PHLEBOTOMY TECHNICIAN

SENIOR  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
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</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
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</tr>
<tr>
<td>Human Structure and Function (MLS 100) OR</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy and Physiology I with Lab (BIOL 220/220L)</td>
<td>4</td>
</tr>
<tr>
<td>Medical Terminology (BOTE 171)</td>
<td>3</td>
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<tr>
<td>Phlebotomy (MLS 103)</td>
<td>3</td>
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<tr>
<td>Organizational Behavior (BADM 281)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>19</td>
</tr>
</tbody>
</table>

MEDICAL LABORATORY SCIENTIST

TRANSFER

CONTACT PERSON: Deborah Shipman • Jack Science Center 201B • 224-2458 • Deborah.Shipman@bismarckstate.edu

Besides being qualified to perform general laboratory tests, medical laboratory scientists are also qualified to supervise a clinical laboratory, specialize in specific areas or go into clinical education.

To become a registered medical laboratory scientist, a student must complete three years of academic studies and one year of professional training at an accredited school of medical laboratory sciences.

Bismarck State College offers the first two years of academic training necessary for a bachelor of science in medical laboratory science from most colleges and universities. Pre-professional courses offered in the first two years of study are designed to give the medical laboratory science student the necessary scientific background to transfer into their junior year.

Students should contact the school they plan to transfer to for the specific prerequisites of that college.

Students majoring in medical laboratory science at Bismarck State College should apply to an accredited medical laboratory science program the second semester of their sophomore year. Those who complete the requirements earn an Associate in Science degree.

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II (Biol 150-151)</td>
<td>6</td>
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<tr>
<td>General Biology I&amp;II Lab (Biol 150L-151L)</td>
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</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
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<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
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<tr>
<td>*Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Electives (SOC 110, PSYC 111 or ECON 201)</td>
<td>6</td>
</tr>
<tr>
<td>Immunology (MLS 201)</td>
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<td>Total credits</td>
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SOPHOMORE  CREDITS

<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>Anatomy and Physiology I&amp;II (BIOL 220-221)</td>
<td>6</td>
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<tr>
<td>Anatomy and Physiology I&amp;II Lab (BIOL 220L-221L)</td>
<td>2</td>
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<tr>
<td>Organic Chemistry I&amp;II (CHEM 241-242)</td>
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<td>Introductory Microbiology (MICR 202)</td>
<td>3</td>
</tr>
</tbody>
</table>

Bismarck State College 109
Students with an interest in military or organizational leadership can now earn a Certificate of Completion in Military Science by completing a sequence of four courses in military science and an additional six credits of selected coursework. Students completing the certificate will have a solid understanding of the complex interactions between leaders and others in the organization including how to train, motivate, counsel personnel as well as develop teams and teamwork focused on accomplishing specific goals and tasks. Students will also be prepared to transfer into the third year of ROTC at an approved baccalaureate degree granting institution.

**CURRICULUM FOR CERTIFICATE OF COMPLETION:**

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course Name</th>
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<tbody>
<tr>
<td>Military Science I (MS 101)</td>
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<tr>
<td>Military Science I (MS 102)</td>
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<tr>
<td>Military Science II (MS 201)</td>
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<tr>
<td>Military Science II (MS 202)</td>
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</tr>
<tr>
<td>Human Resource Management (BADM 282)</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>11</strong></td>
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**PLUS ONE OF THE FOLLOWING ELECTIVES:**

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<tr>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Minority Relations (SOC 221)</td>
<td>3</td>
</tr>
<tr>
<td>Cultural Diversity (SOC 235)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

**Total credits** .............................................. **14**
The BSC music program allows students to enjoy music and develop their skills by participating in lessons, classes and performing groups. It provides the core curriculum for students planning to become music teachers or professional performers, and promotes the arts on the campus and in the community.

Students of all abilities are welcome in the music program whether they plan to major in music or plan to continue their enjoyment through classroom study or performance ensembles. Performance ensembles contribute toward graduation requirements as humanities or enrichment credits.

Students may participate in Wind Ensemble, Concert Choir, Jazz Ensemble, Chamber Choir, String Ensemble, Piano Ensemble, Guitar Ensemble, Percussion Ensemble, Brass Ensemble and Woodwind Ensemble. Opportunities also occur for students to meet, study and perform with highly regarded professional musicians.

Students may study privately with applied music instructors. Individual and group lessons are available for voice, piano, guitar, strings, percussion and wind instruments. A humanities course titled Music Appreciation is available to all students, and a course titled Music for Teachers is offered for students interested in a career in elementary education.

The Tom and Frances Leach Music Center houses a state-of-the-art rehearsal hall, electronic piano studio, computer workstation, ensemble rooms and percussion studio. The Milt and Norma Rue Fine Arts Wing includes a music classroom, private studios and the Jane Gray Stewart Studio Theatre. Sidney J. Lee Auditorium is a 440-seat performance venue for concerts, plays, lectures and the annual spring musical production.

Students who complete the requirements below earn an Associate in Arts degree and may transfer as a music major to a four-year institution.

**Career Possibilities:** Instrumental and Choral Conductor, Classroom or Private Teacher, Composer, Performer, Instrument Repair, Music Sales.
This academic program, offered entirely online, prepares students for careers in the field of nuclear generation. The curriculum was co-developed by the Energy Providers Coalition for Education (EPCE), which includes power utilities, associations, and certain IBEW locals.

This program trains students in the fundamentals needed for non-licensed operator, maintenance, chemistry and health physics technician positions within nuclear generation stations. This program is a great opportunity for students hoping to enter the industry, those presently employed in the nuclear industry who are seeking a degree and those working in non-technical areas who are hoping to move into higher paying technical positions.

Coursework is divided into four semesters. Students enroll in three to four courses per semester, with each course lasting for a three to seven-week period. This arrangement, as well as courses being available 24/7 over the Internet, makes this college program attainable for shift workers already in the industry and for other working adults.

Students who complete this program may earn a certificate and/or an Associate in Applied Science degree. Students who complete the program with no grade lower than a “B” will receive, in addition to the associate degree, a certificate of completion signed by Exelon and National Academy of Nuclear Training. This certificate will signify the student’s completion of a program of study based on the Nuclear Energy Institute’s Uniform Curriculum Standard and substitute core fundamentals training once employed.

Industry forecasts a strong job market for applicants in nuclear energy due to an aging workforce, plants gaining operating license extensions and a nation experiencing renewed interest in nuclear power. This career path offers great pay and benefits in addition to interesting and rewarding careers within nuclear energy.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include passing a physical exam, which may include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.
Bismarck State College, in collaboration with Lake Region State College, Dakota College at Bottineau, Williston State College and Fort Berthold Community College, offers the Dakota Nursing Program at the Certificate Practical Nurse and Associate Degree Nursing levels.

Students will be selected through an interview process, competing with other eligible applicants to both the PN and ADN programs.

Nursing education is organized as a career ladder that begins with Certified Nursing Assistant (CNA) training offered at BSC. CNA certification and pre-requisites are required before enrolling in the Dakota Nursing Program. Students are eligible to earn a Certificate in Practical Nursing after the first year of nursing classes. If qualifications are met, including maintaining a minimum program required GPA of 2.75, students may continue on to complete the second year, leading to an Associate in Applied Science Degree in Nursing. Students must continue to maintain a minimum program GPA of 2.75 during the second year.

The Dakota Associate Degree Nursing Curriculum prepares an individual with the professional knowledge, abilities, and skills to practice nursing independently and interdependently through application of the nursing process to provide safe nursing care to individuals and families across the lifespan in a variety of settings.

The student will receive classroom instruction via Interactive Video Network (IVN), with instructors for some courses on campus, and instructors for other courses at distant sites. Nursing courses are not currently online, so students will be required to travel to campus to attend class. Clinical/Lab practice occurs at local sites, and clinicals include nursing homes, hospitals, community settings, and may include evenings and weekend hours.

Students planning to earn a Bachelor of Science in Nursing (BSN) should consider the RN to BSN or RN to MSN bridge programs offered in the state. (See coordinator for details.)

Career Possibilities for Licensed Practical Nurses (LPNs): Clinics, hospitals, long-term care facilities, and acute care centers.

Career Possibilities for Registered Nurses (RNs): Hospital acute care settings, long-term care facilities, clinics, outpatient offices, health care industry, community and public agencies.

Prerequisites for entry into the Dakota Nursing Program include:

- High School Diploma or GED
- Admission to respective college
- Proof of completing a CNA class and current North Dakota certification.
- Current CPR Certification for Health Care Providers
- ENGL 110 Composition or higher level ENGL with “C” or better
- CHEM 115/115L Introductory to Chemistry with “C” or better
- High School Algebra/Beginning Algebra (ASC-92) or the COMPASS/ASSET exam equivalent within the last five years upon date of application. Students may verify this knowledge with a minimum COMPASS math score of 25-26 in the algebra domain or an ASSET Intermediate Algebra test of 33 or ACT math score of 16 or Accuplacer math score of 44-108.
- An ACT composite score of 19 is required of students who have not completed 12 credits of classes included in the program requirements with a minimum GPA of 2.75 unless student can provide ACT equivalents of COMPASS, ASSET, or Accuplacer test(s).
- Minimum GPA of 2.75 for all completed college courses that are requirements for the Dakota Nursing program.
- An overall minimum cumulative GPA of 2.5 of all college courses taken.
- “C” or better in all courses previously completed.
- The following courses will need to be repeated if older than 5 years from class completion date: Anatomy and Physiology I/L and II/L, Developmental Psychology, and Pharmacology.
- Students who meet the prerequisites and whose file is complete are selected for a competitive entry interview.
- Applications will be available Jan. 15. Applications received after March 1 will be considered on available space.

YEAR 1 PRACTICAL NURSE CURRICULUM:

<table>
<thead>
<tr>
<th>FALL</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Anatomy and Physiology I and lab (BIOL 220/220L)</td>
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</tr>
<tr>
<td>Introduction to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Foundations of Nursing (NURS 120)</td>
<td>3</td>
</tr>
<tr>
<td>Practical Nursing I (NURS 121)</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Practice I (NURS 122)</td>
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</tr>
<tr>
<td>Total credits</td>
<td>16</td>
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<table>
<thead>
<tr>
<th>SPRING</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Anatomy and Physiology II and lab (BIOL 221/221L)</td>
<td>4</td>
</tr>
<tr>
<td>Development Psychology (PSYC 250)</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Pharmacology (PHRM 215)</td>
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</tr>
<tr>
<td>Practical Nursing II: Introduction to Medical/Surgical Nursing (NURS 127)</td>
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</tbody>
</table>
Introduction to Maternal/Child Nursing (NURS 145)...........2
Clinical Practice II (NURS 124)........................................3
Total credits.................................................................17

SUMMER CREDITS
Practical Nursing III (NURS 129)..............................................4
Clinical Practice III (NURS 126)..............................................2
Total credits........................................................................7
Year 1 Total............................................................................40
Total Prerequisite Credits ..................................................7
Total Program Credits............................................................47

Upon successful completion of the above curriculum, students will receive a Certificate in Practical Nursing. At this time, students may choose to continue into Year 2 and/or apply to take the NCLEX PN examination with the Board of Nursing.

DAKOTA NURSING PROGRAM: YEAR 2
ASSOCIATE IN APPLIED SCIENCE IN NURSING:
Prerequisites for continuation toward the Associate in Applied Science Degree in Nursing (ADN)
1. Successful completion of the first year of the Dakota Nursing Program with a minimum GPA of 2.75 in all prerequisite courses; in the 40 credit course requirements as defined above; and maintain an overall cumulative GPA of 2.5.
2. A letter of intent desiring continuation dated no later than March 1 of the year the student would be entering the 2nd year of the program.
3. Pass a pre-admission examination.

OR
Prerequisites for External Application toward the Associate in Applied Science Degree in Nursing (ADN)
1. Unencumbered license to practice as a Licensed Practical Nurse in the United States of America.
2. Minimum GPA of 2.75 in all prerequisite courses (including nursing classes) and an overall minimum cumulative GPA of 2.5
3. Admission to the college of choice as well as completion of a formal application to the Dakota Associate Degree Nursing Program. Admission to the College does not guarantee admission to the ADN program. Application forms for admission to the Dakota ADN Program may be obtained from the Nursing Department during the second half of spring semester.
4. Pass a pre-admission examination.
5. Currently enrolled, or satisfactory completion with a C or better in each of the following courses:
   All required nursing courses from an accredited Practical Nursing Program
   Introductory Chemistry and lab (CHEM 115)
   Composition I (ENGL 110)
   An Introduction to Psychology (PSYC 111)
   Anatomy and Physiology I with lab (BIOL 220)
   Anatomy and Physiology II with lab (BIOL 221)
   Introduction to Pharmacology (PHRM 215) (must be within 5 years of ADN admission).
   Developmental Psychology (PSYC 250)

Students who meet the prerequisites and whose file is complete are accepted into the program based on each college’s admission criteria.

YEAR 2 CURRICULUM:

FALL CREDITS
Professional Role Development (NURS 224) .........................2
Alterations in Health I (NURS 225).......................................3
Maternal Child Nursing (NURS 226)...............................3
Clinical Application I (NURS 227).................................4
Microbiology and lab (MICR 202/202L) .........................4
Total credits.................................................................16

SPRING CREDITS
Alterations in Health II (NURS 228).................................4
Health Promotion and Psychosocial Nursing (NURS 229)......2
Clinical Application II (NURS 237).................................5
Role Transition (NURS 259)...........................................1
Communications Elective..................................................3
Total credits..............................................................15
Total for year....................................................................31

Upon successful completion of the above curriculum, students will receive an Associate in Applied Science Degree in Nursing.

NURSING: TRANSFER
TRANSFER TO NURSING COLLEGE OTHER THAN MEDCENTER ONE

CONTACT PERSON: Jayne Kiner • Jack Science Center 201D
224-5493 • Jayne.Kiner@bismarckstate.edu

A student considering a career as a professional nurse should have a sincere desire to be of help to those experiencing disease as well as the ability to deal with the increasingly complex technology of modern medicine. The professional nurse provides and documents direct care, monitors the patient, manages and coordinates care, collaborates with other health care professionals and serves as patient advocate.

The following curriculum is submitted as a guide, only indicating basic courses. It is suggested that students check the catalog of the particular college of nursing they plan to attend and modify this curriculum accordingly.

High School students who plan to enter BSC and follow a registered nursing curriculum should take biology, chemistry and the appropriate mathematics courses in high school. Students who do not have the appropriate high school courses should expect to spend longer than two years at BSC to complete the courses listed below.
Career possibilities: Nursing, Nursing Education, Administration, Home Health Care, Patient Advocate.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:**

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry (CHEM 115-116)</td>
<td>8</td>
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<tr>
<td>Chemistry Lab (CHEM 115L-116L)</td>
<td>2</td>
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<tr>
<td>Algebra (MATH 103 or higher)</td>
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</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Microbiology (MICR 202)</td>
<td>3</td>
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<tr>
<td>Introductory Microbiology Lab (MICR 202L)</td>
<td>1</td>
</tr>
<tr>
<td>Total credits</td>
<td>33</td>
</tr>
</tbody>
</table>

**SOPHOMORE | CREDITS**

| †Anatomy and Physiology I&II (Biol 220-221) | 6 |
| †Anatomy and Physiology I&II Lab (Biol 220L-221L) | 2 |
| Arts and Humanities Electives | 6 |
| Developmental Psychology (PSYC 250) | 3 |
| Principles of Nutrition (NUTR 240) | 3 |
| Intro. to Computers (CSCI 101) | 3 |
| Statistics (MATH 210) | 3 |
| Electives | 1-3 |
| Total credits | 29-31 |

†Prerequisites for these courses are listed in the course description section.

**TRANSFER TO MEDCENTER ONE COLLEGE OF NURSING**

**CONTACT PERSON:** Jayne Kiner • Jack Science Center 201D 224-5493 • Jayne.Kiner@bismarckstate.edu

The Medcenter One College of Nursing (MOCN) is an accredited single purpose college that offers an upper division registered professional nursing program. Graduates of MOCN receive a Bachelor of Science in Nursing (BSN) degree and are eligible to write the NCLEX-RN Examination.

Students usually complete the prerequisites for MOCN at BSC within two years and graduate from BSC with an Associate in Science degree. To meet the academic requirements of MOCN, students must have a minimum of a 2.5 overall GPA, and a 2.5 science GPA composed of at least three courses selected from two semesters of chemistry, two semesters of anatomy and physiology and one semester of microbiology.

The MOCN admits one class each spring. Application of admission to the College of Nursing is made directly to MOCN following completion of the freshman year. Applications will be accepted until November 7 or classes are filled. For progression into the Junior year nursing courses, students must have completed all prerequisite courses and have obtained certification as a nursing assistant (CNA).

High school students who plan to enter BSC and follow a registered nursing curriculum should take biology, chemistry and the appropriate mathematics courses in high school. Students who do not have the appropriate high school courses should expect to spend longer than two years at BSC before transfer to MOCN.

**Career Possibilities:** Providing nursing care in a variety of settings, i.e.: hospitals, clinics, home health, long term care, community health, schools.

**CURRICULUM FOR ASSOCIATE IN SCIENCE:**

<table>
<thead>
<tr>
<th>SEMESTER I</th>
<th>CREDITS</th>
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<tr>
<td>*College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry (CHEM 115)</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry Lab (CHEM 115L)</td>
<td>1</td>
</tr>
<tr>
<td>Speech (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Nurse Assistant Training (NURS 100)</td>
<td>1-2</td>
</tr>
<tr>
<td>Total credits</td>
<td>19-20</td>
</tr>
</tbody>
</table>

**SEMESTER II | CREDITS**

| College Composition II or Intro. to Professional Writing (ENGL 120 or 125) | 3 |
| Chemistry (CHEM 116) | 4 |
| Chemistry Lab (CHEM 116L) | 1 |
| †Anatomy and Physiology I (Biol 220) | 3 |
| †Anatomy and Physiology I Lab (Biol 220L) | 1 |
| Developmental Psychology (PSYC 250) | 3 |
| Electives | 2 |
| Total credits | 17 |

†Prerequisites for these courses are listed in the course description section.

**SEMESTER III | CREDITS**

| Elementary Statistics (MATH 210) | 3 |
| Anatomy and Physiology II (Biol 221) | 3 |
| Anatomy and Physiology II Lab (Biol 221L) | 1 |
| †Introductory Microbiology (MICR 202) | 3 |
| †Introductory Microbiology Lab (MICR 202L) | 1 |
| **Elective | 3 |
| Arts and Humanities elective | 3 |
| Total credits | 17 |

**SEMESTER IV | CREDITS**

| Introduction to Sociology (SOC 110) | 3 |
| Principles of Nutrition (NUTR 240) | 3 |
| **Foundations of Nursing Practice (NURS 251) | 3 |
| **Health Assessment (NURS 260) | 3 |
| Arts and Humanities Elective | 3 |
| Total credits | 15 |

**English course with computer component recommended.

**Suggested electives include Intro. to Computers (CSCI 101) and/or Medical Terminology (BOTE 171).

**Courses to be taught by MOCN faculty at Medcenter One College of Nursing.

†Prerequisites for these courses are listed in the course description section.

Prerequisites to Foundations of Nursing and Health Assessment are: Nursing Assistant certification (CNA), acceptance to MOCN and satisfactory completion of three science courses.
The various schools of optometry in the United States differ in their requirements. An extended (more than 60 credits) Associate in Science degree from Bismarck State College will satisfy the requirements of many optometry schools. Students with a strong background in high school science and math may complete the suggested curriculum in two years.

Applicants are selected by optometry schools based on academic ability, letters of reference from instructors, and the Optometric College Admission Test. Although no special requirements are shared by all schools of optometry, they generally want an applicant to have a good science and mathematics background. This background will also prepare the applicant for the rigors of the OAT. Students must maintain a GPA of 3.0 to complete this exam with an acceptable score.

It is critical that the student check the catalog of the particular school of optometry to which they plan to transfer, bring this information to their advisor, and modify this curriculum accordingly. Students may find www.opted.org to be a helpful website for those interested in a career in optometry.
Paramedics provide care to emergency patients in and out of hospital settings. Through proper patient assessment and medical care, the paramedic’s goal is to prevent and reduce mortality and morbidity due to illness and injury. Paramedics are an essential component of the continuum of care and serve as links to other health care professionals. Paramedics are responsible and accountable to medical direction.

BSC offers a Program Certificate and an Associate in Applied Science degree in Paramedic (EMT) Technology. The paramedic program is affiliated with St. Alexius Medical Center in Bismarck and subject to limited enrollment. Instruction begins spring semester and continues for four semesters. Program goal is to ensure quality education and to prepare students to become competent entry-level EMT-paramedic practitioners. The national Commission on Accreditation of Allied Health Education Programs accredits the paramedic program. Students are prepared to take the National Registry of Emergency Medical Technicians written and practical exams.

Clinical and field internship experiences are completed concurrently with the classroom schedule at different sites across North Dakota and South Dakota. Those include Bismarck’s St. Alexius Medical Center, and medical facilities in Dickinson, Williston, Grand Forks and Watford City, N.D., Mobridge, S.D., and other approved hospital sites. Other approved facilities will serve as in-hospital clinical sites. Paramedic field Internship experiences are completed at Metro Area Ambulance Service, Dickinson Area Ambulance Service, Williston Ambulance Service, Mobridge Ambulance Service, and other approved field internship sites in North Dakota and South Dakota.

Application deadline is Nov. 1. Prospective students must complete an application process that includes an interview and written examination. A criminal background check may be required before clinical training begins. Prerequisites include current CPR and Emergency Medical Technician - Basic certifications. Qualified applicants are enrolled in the order they apply.

Students may obtain either a Program Certificate (43 credits) or an Associate in Applied Science degree, which requires additional general education courses.
The production of petroleum has been, and will continue to be, of vital importance to the economy of North Dakota and the country as a whole. There has been significant growth of petroleum production in North Dakota recently and the technology to recover petroleum is constantly improving. Even with today’s techniques it is anticipated that four billion barrels of oil will be recovered through some 20,000 wells drilled between now and 2050. Natural gas production and treatment will follow a similar growth curve.

The petroleum industry in North Dakota will require many more wells to fully develop the state’s oil reserves. North Dakota is among the most active states in oil and natural gas drilling. Each rig represents approximately 120 direct and indirect jobs in the state. The need for trained petroleum engineering technicians will be continuous and ongoing. Positions will be high-paying and provide an entry point for productive and rewarding careers for young North Dakotans.

Bismarck State College offers an Associate in Applied Science degree in Petroleum Engineering Technology (PET). This program is intended to meet the needs of students interested in better understanding the petroleum industry, as well as preparing them for employment in that industry. Graduates of the Petroleum Engineering Technology program will be prepared for entry-level, highly technical positions that support and work closely with petroleum engineers, geophysicists, and business managers.

Students who successfully complete the PET program at BSC will also have an opportunity to complete the requirements for a Certificate of Completion in GIS (Geographic Information Systems).

Required Placement Scores for 4-semester option:
- ACT Math - 15 or higher
- ACT MATH 20 or higher
- COMPASS MATH (Algebra) 61 or higher
- ACT English 15
- COMPASS English 43

Background in introductory computer skills helpful

FOUR SEMESTER OPTION:

SEMIESTER 1

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>Pre-Calculus (MATH 107*)</td>
<td>5</td>
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<tr>
<td>Introduction to the Petroleum Industry (PET 110**)</td>
<td>4</td>
</tr>
<tr>
<td>Safety, Health and the Environment (PET 111**)</td>
<td>3</td>
</tr>
<tr>
<td>Graphical Communications (ENGR 101*)</td>
<td>3</td>
</tr>
<tr>
<td>English Composition I (ENGL 110*)</td>
<td>3</td>
</tr>
<tr>
<td>Semester Total</td>
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SEMIESTER 2

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Petroleum Geology and Lab (PET 115/115L)</td>
<td>5</td>
</tr>
</tbody>
</table>

Petroleum Data Management I (PET 121)                          | 3       |
Exploration & Production and Lab (PET 131/131L)                | 4       |
Fundamentals of GIS (GIS 105*)                                 | 3       |
Introduction to Professional Writing (ENGL 125*)              | 3       |
Semester Total                                                | 18      |

SEMIESTER 3

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Data Management II (PET 221)</td>
<td>3</td>
</tr>
<tr>
<td>Exploration &amp; Production and Lab (PET 231/231L)</td>
<td>4</td>
</tr>
<tr>
<td>GIS Applications (GIS 107*)</td>
<td>3</td>
</tr>
<tr>
<td>Petroleum Project Economics (PET 261)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Elective (A&amp;H Gen Ed*)</td>
<td>3</td>
</tr>
<tr>
<td>Networking for Industry (PET 132)</td>
<td>2</td>
</tr>
<tr>
<td>Semester Total</td>
<td>18</td>
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SEMIESTER 4

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Principles of Reservoir Engineering (PET 241)</td>
<td>3</td>
</tr>
<tr>
<td>Well Completions (PET 251)</td>
<td>3</td>
</tr>
<tr>
<td>Petroleum Operations (PET 255)</td>
<td>3</td>
</tr>
<tr>
<td>Natural Gas Production (PET 258)</td>
<td>4</td>
</tr>
<tr>
<td>Advanced GIS Applications (GIS 201*)</td>
<td>3</td>
</tr>
<tr>
<td>Semester Total</td>
<td>16</td>
</tr>
</tbody>
</table>

Program Totals Without Certificate of Completion in GIS ......70
With Certificate of Completion in GIS ............................ 74

*Core curriculum common to extant programs and already developed and offered by BSC.
**Cross cataloged courses, also offered in related programs

CERTIFICATE OF COMPLETION IN GIS OPTION:

Students interested in earning the Certificate of Completion in GIS will take GEOG 121 / 121L on-line over the summer.

Find updated information in the Petroleum Engineering Technology pages at bismarckstate.edu/academics

A five semester option is available for students entering college in the Spring prior to enrollment in the Petroleum Engineering Technology Program.

Required Placement Scores for 5 semester option
- ACT MATH 19 or higher
- COMPASS MATH (Algebra) 51 or higher
- ACT English 13
- COMPASS English 40

FIVE SEMESTER OPTION:

Semester 1 of the five semester option includes all open enrollment courses. Application to the PET program must be made prior to semester 2 to continue in the limited enrollment PET Program.

SEMIESTER 1

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>College Algebra (MATH 103*)</td>
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</tr>
<tr>
<td>English Composition I (ENGL 110*)</td>
<td>3</td>
</tr>
<tr>
<td>Graphical Communications (ENGR 101*)</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of GIS (GIS 105*)</td>
<td>3</td>
</tr>
<tr>
<td>Semester total</td>
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SEMIESTER 2

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Petroleum Geology and Lab (PET 115/115L)</td>
<td>5</td>
</tr>
</tbody>
</table>

Petroleum Data Management I (PET 121)                          | 3       |
Exploration & Production and Lab (PET 131/131L)                | 4       |
Fundamentals of GIS (GIS 105*)                                 | 3       |
Introduction to Professional Writing (ENGL 125*)              | 3       |
Semester Total                                                | 18      |
SEMESTER 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Trigonometry (MATH 105*)</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to the Petroleum Industry (PET 110**)</td>
<td>4</td>
</tr>
<tr>
<td>Safety, Health and the Environment (PET 111**)</td>
<td>3</td>
</tr>
<tr>
<td>GIS Applications (GIS 107*)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Professional Writing (ENGL 125*)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>15</td>
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</table>

SEMESTER 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Geology and Lab (PET 115/115L)</td>
<td>5</td>
</tr>
<tr>
<td>Petroleum Data Management I (PET 121)</td>
<td>3</td>
</tr>
<tr>
<td>Exploration &amp; Production and Lab (PET 131L/131L)</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Applications in GIS (GIS 201*)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>15</td>
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SEMESTER 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Petroleum Data Management II (PET 221)</td>
<td>3</td>
</tr>
<tr>
<td>Exploration &amp; Production and Lab (PET 231L/231L)</td>
<td>4</td>
</tr>
<tr>
<td>Physical Geography (GEOG 121)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Geography Lab (GEOG 121L)</td>
<td>1</td>
</tr>
<tr>
<td>Arts and Humanities Elective (A&amp;H Gen Ed*)</td>
<td>3</td>
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<tr>
<td><strong>Semester Total</strong></td>
<td>14</td>
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SEMESTER 5

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Principles of Reservoir Engineering (PET 241)</td>
<td>3</td>
</tr>
<tr>
<td>Well Completions (PET 251)**</td>
<td>3</td>
</tr>
<tr>
<td>Petroleum Operations (PET 255)**</td>
<td>3</td>
</tr>
<tr>
<td>Natural Gas Production (PET 258)**</td>
<td>4</td>
</tr>
<tr>
<td>Networking for Industry (PET 132)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

Program Totals With Certificate of Completion in GIS ........................ 72

*Core curriculum common to extant programs and already developed and offered by BSC.
**Cross cataloged courses, also offered in related programs

CERTIFICATE OF COMPLETION IN GIS OPTION:

Students successfully completing the five semester option will earn the Certificate of Completion in GIS.

Find updated information in the Petroleum Engineering Technology pages at Bismarckstate.edu/academics

PETROLEUM PRODUCTION TECHNOLOGY

TECHNICAL
OFFERED ONLINE ONLY

CONTACT PERSON: Mike Myers • NECE 227 • 701-224-2594
Michael.M.Myers@bismarckstate.edu

Working in the petroleum industry provides a high paying career and exciting opportunities for employment throughout the world. The need for trained operators and technicians continues to increase as oil and gas production volumes and reserve estimates have increased significantly in North Dakota and the region.

This program is designed to provide students with a broad background to operate and maintain the equipment used in the operations of the oil and gas industry in a safe and responsible manner. Graduates will have the foundation to enter the industry in a number of capacities including but not limited to operator positions at production field locations.

The Petroleum Production Technology program will help meet a growing demand in North Dakota and beyond by increasing student knowledge and skills for employment in the petroleum industry. Graduates of this program will be more readily employable in this high need industry.

Prospective students should be prepared for the physical demands of the work of entry-level technicians when considering this program. Typical industry entry-level position requirements include: lifting 50+ pounds, climbing ladders, working in confined spaces, etc. When applying for jobs, applicants may be required to pass a physical exam, a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Students receive a program certificate upon successful completion of the program. Additional course work may lead to an Associate in Applied Science degree. See page ?? for program degree requirements.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Enrollment:

Online program: Enrollment is not limited in the online classes.

Required placement scores:

Online program:
ACT Math – 16 or higher
COMPASS Math – (pre-algebra) 41 or higher
Accuplacer Math – 44 or higher

Background in these areas helpful:
• Basic chemistry
• Basic physics
• High school algebra I

Please check BSC’s website, bismarckstate.edu/energy for course offerings and schedule.
Students may complete the first two years in pharmacy at Bismarck State College. The Associate in Science degree will be granted to students who complete this two-year program.

Careers within the field of pharmacy vary because a number of specialties exist. Among the special areas of study are pharmaceutics and pharmaceutical chemistry, pharmacology, hospital pharmacy and pharmacy administration.

Others may teach in colleges of pharmacy, supervise the manufacture of pharmaceuticals, research and develop new medicines, or write and edit articles for pharmaceutical journals.

A business sense and the ability to gain the confidence of the clients are important attributes of those who anticipate being self-employed as pharmacists. Other important characteristics for persons in this field are integrity, orderliness and accuracy.

High school students planning careers in pharmacy should study algebra, geometry, trigonometry, biology, physics and chemistry.

The following curriculum has been developed based on the suggested preprofessional curriculum given by North Dakota State University’s School of Pharmacy. Students planning to transfer to NDSU should regularly check the School of Pharmacy’s most current curriculum. Students planning to transfer to a pharmacy school other than NDSU should refer to that institution’s catalog and modify this curriculum accordingly.

**Career Possibilities:** Pharmacists, Pharmaceutical Research.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:**

**FRESHMAN**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>Calculus I&amp;II (MATH 165-166)</td>
<td>8</td>
</tr>
<tr>
<td>General Biology I (BIOL 150)</td>
<td>3</td>
</tr>
<tr>
<td>General Biology I Lab (BIOL 150L)</td>
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</tr>
<tr>
<td>Elements of Economics (ECON 105) OR Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
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</tr>
<tr>
<td>Total credits</td>
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</tbody>
</table>

**SOPHOMORE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Chemistry I&amp;II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>College Physics I&amp;II (PHYS 211-212)</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I&amp;II Lab (PHYS 211L-212L)</td>
<td>2</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology I&amp;II (BIOL 220-221)</td>
<td>6</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology I&amp;II Lab (BIOL 220L-221L)</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>6</td>
</tr>
<tr>
<td>Total credits</td>
<td>35</td>
</tr>
</tbody>
</table>
Physical education is education through physical activities which are selected and carried on with full regard to values in human growth, development, and behavior. The curriculum is designed to prepare students for upper division work leading to a bachelor’s degree. Students completing a four-year program may consider such career areas as elementary or secondary education, coaching and management (athletic clubs, public and private recreation programs, etc.). A student working toward a degree of bachelor of science in education with a major in physical education should complete the requirements below. Students who complete the requirements earn an Associate in Arts degree from BSC.

Students planning a teaching career should register for Introduction to Education (EDUC 250 - 2 credits) and Pre-Professional Experience (EDUC 298 - 1 credit) during their sophomore year. These classes should be taken during the same semester from the same instructor. Students should also check the curriculum of the four-year college/university where they plan to complete their bachelor’s degree and modify this curriculum where necessary. Because of the increased nature of licensure requirements for professional educators, students should also check on the state licensure where they plan to pursue a career during their sophomore year. Students planning to teach in North Dakota will be prepared for initial licensure testing requirements in conjunction with EDUC 250.

Career Possibilities: Physical Education Teacher—elementary, secondary or college, Coaching, Aerobics Instructor, Camp Recreation Director.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II (BIOL 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II Lab (BIOL 150L-151L)</td>
<td>2</td>
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<tr>
<td>U.S. History (HIST 103-104) or Western Civilization (HIST 101-102)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Physical Education (HPER 208)</td>
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<tr>
<td>First Aid/CPR (HPER 210)</td>
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</tr>
<tr>
<td>Enrichment</td>
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</tr>
<tr>
<td>*Selected Phy. Ed. Activity &amp; Skills Courses</td>
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</tr>
<tr>
<td>Total credits</td>
<td>34</td>
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<table>
<thead>
<tr>
<th>SOPHOMORE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Prevention and Care of Injuries (HPER 207)</td>
<td>2</td>
</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>Personal &amp; Community Health (HPER 217)</td>
<td>3</td>
</tr>
<tr>
<td>**Algebra (MATH 103)</td>
<td>4</td>
</tr>
<tr>
<td>Art History I (ART 210)</td>
<td>3</td>
</tr>
<tr>
<td>Music Appreciation (MUSC 100)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Philosophy (PHIL 101)</td>
<td>3</td>
</tr>
<tr>
<td>*Selected Phy. Ed. Activities &amp; Skills Courses</td>
<td>8</td>
</tr>
<tr>
<td>Total credits</td>
<td>35</td>
</tr>
</tbody>
</table>

* Suggested Phy. Ed. Activity & Skills Courses: Concepts of Fitness and Wellness 100, Sports Officiating 110-111, Dance Skills/Techniques 204, Physical Education 101 or 202 (examples: aerobics, kick boxing, yoga, bowling, fitness)
**Higher maths may be selected.
PHYSICS

TRANSFER

CONTACT PERSON: Tony Musumba • Jack Science Center 226
224-5506 • Tony.Musumba.Mwene@bismarckstate.edu

The science of physics is concerned with the nature of matter and energy and encompasses all phenomena in the physical world from elementary particles to the structure and origin of the universe. Physics provides, together with mathematics and chemistry, the foundation of work in all fields of physical science and engineering, and contributes to other fields such as biology and medicine. A student completing a curriculum in physics should be prepared for careers in education and industry, and for advanced work in the various fields of physics.

SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>Calculus (MATH 165-166)</td>
<td>4</td>
</tr>
<tr>
<td>Computer Programming (CSCI 101 or 122)</td>
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<tr>
<td>Arts and Humanities Electives</td>
<td>3</td>
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<tr>
<td>Social Science Electives</td>
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SOPHOMORE

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<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Physics I-II (PHYS 251-252)</td>
<td>8</td>
</tr>
<tr>
<td>University Physics I-II Lab (PHYS 251L-252L)</td>
<td>2</td>
</tr>
<tr>
<td>Calculus (MATH 265)</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Differential Equations (MATH 266)</td>
<td>3</td>
</tr>
<tr>
<td>Arts and Humanities Electives</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Special Topics in Physics (PHYS 299)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>35-36</td>
</tr>
</tbody>
</table>

POLITICAL SCIENCE

TRANSFER

CONTACT PERSON: Dr. Henry Riegler • Schafer Hall 219E
224-5549 • Henry.Riegler@bismarckstate.edu

Students may complete the first two years of study toward a bachelor’s degree in political science by following the suggested curriculum below. An Associate in Arts degree is earned if all requirements are completed.

In addition to providing basic courses for the political science major, the program’s courses also are designed to help all students gain knowledge and understanding of politics and political events on all levels of government.

The study of political science is an excellent background for those planning careers in law, foreign affairs, government service, politics, journalism and related fields.

Political scientists study politics and institutions, with much of their work being research-oriented. A political scientist might conduct public opinion surveys, analyze election results or other data, or compare principal features of tax or welfare program proposals. Many in this field teach in colleges and universities, and others work for government, political organizations, research institutes, labor unions, or business firms.

Among personal characteristics which political scientists should possess are: strong analytical skills, the ability to think objectively and independently, and the ability to communicate, both orally and in writing.

Students should refer to the catalog of the school they anticipate transferring to, and modify this curriculum accordingly.

Career Possibilities: Administrative positions in government, political organizations or political research institutes. Political science is also used as a pre-professional degree for careers in law, foreign affairs and politics.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

<table>
<thead>
<tr>
<th>Course</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government (POLS 115)</td>
<td>3</td>
</tr>
<tr>
<td>State and Local Government (POLS 116)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Economics (ECON 105)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>**Foreign Language 101-102 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>University Physics I-II Lab (PHYS 251L-252L)</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>U.S. History (HIST 103-104)</td>
<td>6</td>
</tr>
<tr>
<td>International Politics (POLS 220)</td>
<td>3</td>
</tr>
<tr>
<td>**Foreign Language 201-202 (Spanish)</td>
<td>8</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Electives</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>61</td>
</tr>
</tbody>
</table>

**Foreign Language 101-102 (Spanish) is required in some political science programs. If you are considering a transfer program that does not have this requirement, you may substitute other arts and humanities courses and social science courses to complete the required credits.
The field of power plant technology offers one of the best paying and most interesting careers for the technician. Job demand is strong in the power plant technology field.

Students learn all phases of the industry including how to operate, repair and maintain all types of power plant equipment. These include fossil steam plants, hydroelectric plants, gas turbine and combined cycle plants, pressure vessels and other equipment.

Employers often hire graduates for work in other operations besides power plants, taking advantage of their theoretical and practical training in mechanical and electrical technology. Besides power plants, job settings include research and development facilities, industrial process operations, or the sales and service fields.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include passing a physical exam, which may include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Students receive a program certificate upon successful completion of the program. Additional course work may lead to a program diploma or an Associate in Applied Science degree. See page 54 for program diploma and degree requirements.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Enrollment:

On-campus program:

Enrollment is limited. Refer to the Admissions section of this catalog beginning on page 10 for application procedures and requirements. Also, refer to the limited enrollment program information on page 13.

Online program: Enrollment is not limited in the online classes.

Check BSC’s website, bismarckstate.edu/energy, for the most up-to-date list of course offerings and schedule.
Students entering medical school are now required to have four years of college preparation. A student should plan a program so that if admission to a medical school is denied, a bachelor’s degree in another area may be obtained without additional study.

Admission to a medical school is very competitive. To be considered by a school of medicine, a student must maintain a grade-point average of “B” and place high on the Medical College Admission Test.

The following courses are either required or strongly recommended for the first two years of a typical premedical curriculum. Students should refer to the catalog of the school to which they plan to transfer and modify the curriculum accordingly. Students who complete the requirements earn an Associate in Science degree from BSC.

**Career Possibilities**: Medical related.

### SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE:

#### FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry I&amp;II (CHEM 121-122)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry I&amp;II Lab (CHEM 121L-122L)</td>
<td>2</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Calculus (MATH 165) or Applied Calculus (MATH 146)</td>
<td>4</td>
</tr>
<tr>
<td>General Biology I&amp;II (BIOL 150-151)</td>
<td>6</td>
</tr>
<tr>
<td>General Biology I&amp;II Lab (BIOL 150L-151L)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>31</strong></td>
</tr>
</tbody>
</table>

#### SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science Electives</td>
<td>6</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II (CHEM 241-242)</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry I&amp;II Lab (CHEM 241L-242L)</td>
<td>2</td>
</tr>
<tr>
<td>College Physics I-II (PHYS 211-212)</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I-II Lab (PHYS 211L-212L)</td>
<td>2</td>
</tr>
<tr>
<td>Art and Humanities Elective</td>
<td>6</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total credits</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

Suggested Electives: Biology 220-221, 220L-221L, Microbiology 202 & 202L and Biochemistry 260 & 260L.
A career in Process Plant Technology provides excellent pay and employability for years to come. High demand is expected for process plant operators as the existing workforce retires and as the industry evolves and expands.

The goal of this program is to produce a graduate with the technical background necessary for entry-level job skills as a process operator in a chemical or petrochemical plant, natural gas processing facility, petroleum refinery, ethanol or biofuels facility, coal gasification plant, or power generation facility.

This program will provide the student with an understanding of the process equipment and the principles of operation involved. The graduate will understand the technical aspects, the responsibilities and the work and safety environment of this very important, shift-oriented position.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a physical exam, a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Students receive a program certificate upon successful completion of the program. Additional course work may lead to a program diploma or an Associate in Applied Science degree. See page 54 for program diploma and degree requirements.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Enrollment:
On-campus program: Enrollment is limited. Refer to the Admissions section of this catalog beginning on page 10 for application procedures and requirements. Also, refer to the limited enrollment program information on page 13.

Online program: Enrollment is not limited in the online classes.

Required placement scores:
On-campus program:
ACT Math – 15 or higher
COMPASS Math – (pre-algebra) 31 or higher

Online program:
ACT Math – 16 or higher
COMPASS Math – (pre-algebra) 41 or higher
Accuplacer Math – (pre-algebra) 41 or higher

Background in these areas helpful:
• Basic chemistry
• Basic physics
• High school algebra I

<table>
<thead>
<tr>
<th>SEMESTER I</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Introduction to Energy Technology (ENRT 101) ...........................................</td>
<td>4</td>
</tr>
<tr>
<td>Safety, Health and Environmental Practices (ENRT 105) ................................</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical Fundamentals (ENRT 107) ...........................................................</td>
<td>2</td>
</tr>
<tr>
<td>Plant Equipment &amp; Systems (ENRT 110) .........................................................</td>
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</tr>
<tr>
<td>Total credits .................................................................................................</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>SEMESTER II</th>
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<tr>
<td>Print Reading (ENRT 112) ..............................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Applied Math (ENRT 103) .............................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Electrical Fundamentals (ENRT 104) ............................................................</td>
<td>3</td>
</tr>
<tr>
<td>Instrumentation &amp; Control (ENRT 116) .........................................................</td>
<td>4</td>
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<td>Total credits .................................................................................................</td>
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<table>
<thead>
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<th>SEMESTER III</th>
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<tbody>
<tr>
<td>Heat Transfer, Fluid Flow &amp; Thermodynamics (ENRT 118) ..............................</td>
<td>3</td>
</tr>
<tr>
<td>Water Purification and Treatment (ENRT 120) .............................................</td>
<td>3</td>
</tr>
<tr>
<td>Steam Generation (ENRT 219) .........................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Operations, Troubleshooting &amp; Communications (ENRT 215) ............................</td>
<td>3</td>
</tr>
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<td>Total credits .................................................................................................</td>
<td>12</td>
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<table>
<thead>
<tr>
<th>SEMESTER IV</th>
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<tr>
<td>Hydrocarbon Chemistry (PROP 235) ..................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Distillation &amp; Refinery Operations (PROP 237) ............................................</td>
<td>3</td>
</tr>
<tr>
<td>Ethanol &amp; Biofuels Production (PROP 244) ...................................................</td>
<td>3</td>
</tr>
<tr>
<td>Gas Processing (PROP 239) ............................................................................</td>
<td>3</td>
</tr>
<tr>
<td>Practical Applications (ENRT 220) ..................................................................</td>
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<tr>
<td>Total credits .................................................................................................</td>
<td>14</td>
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</tbody>
</table>

Please check the Process Plant Technology website at: bismarckstate.edu/energy for the most up-to-date course information and details.
Psychologists study and explain animal and human behaviors including mental processes. Psychologists apply this knowledge to optimize people’s lives. BSC’s psychology curriculum enhances knowledge and understanding of human behavior for students 1) entering the work force, 2) seeking service courses in psychology as a non-major and/or 3) preparing to transfer into a four-year degree in psychology.

BSC and Minot State University have a cooperative agreement that allows students to complete the Associate in Science degree or the Associate in Arts degree at BSC and continue with a bachelor’s degree in psychology from Minot State University on the BSC campus. BSC suggested curriculum prepares students for this option.

Students also complete the suggested curriculum for an Associate in Science degree or an Associate in Arts degree preparing them to transfer for a bachelor’s degree in psychology at other four-year colleges/universities. Bachelor degree requirements at four-year colleges/universities do vary, therefore, students may need to modify their curriculum according to a specific transfer school catalog.

Career Possibilities: Those with a bachelor’s degree are qualified to assist psychologists and other professionals in community and research settings. Areas of emphasis for career possibilities beyond bachelor degree include: Clinical/Counseling, Educational/Teaching, Experimental/Research, Organizational/Industrial, Social, Developmental, Psychometrics (testing), Neuropsychology, and Vocational Rehabilitation.

---

**SUGGESTED CURRICULUM FOR ASSOCIATE IN SCIENCE DEGREE:**

**CREDITS**

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<tr>
<th>Communication</th>
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<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
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<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
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<table>
<thead>
<tr>
<th>Math, Science and Technology</th>
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</thead>
<tbody>
<tr>
<td>Math elective (MATH 103 or higher)</td>
</tr>
<tr>
<td>General Biology I&amp;II (BIOL 150-151)</td>
</tr>
<tr>
<td>General Biology Lab (BIOL 150L-151L)</td>
</tr>
<tr>
<td>Math, Science, Technology elective (MATH 210 recommended)</td>
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</tbody>
</table>

**Arts and Humanities**

**Foreign Language 101-102 (Spanish)** | 8 |
**Foreign Language 201-202 (Spanish)** | 8 |

**Social and Behavioral Sciences**

| Intro. to Psychology (PSYC 111) | 3 |
| Intro. to Sociology (SOC 110) | 3 |
| Psychology electives | 9 |
| Introduction to Behavior Modification (PSYC 211) | 3 |
| Child Psychology (PSYC 252) | 3 |
| Abnormal Psychology (PSYC 270) | 3 |
| Social Psychology (PSYC 276) | 3 |
| Educational Psychology (PSYC 230) | 3 |

**Note:** PSYC 250 Developmental Psychology is recommended for non-psychology majors.

**Enrichment** | 2 |
**Additional elective credits** | 3 |
Total credits | 60-61 |

* Biology 150 & 151 with labs would be most appropriate for the Associate in Science psychology emphasis. Substitutions: Eight credits of any Science with a lab can be taken to fulfill the Associate in Science. **2nd year proficiency in a foreign language is required in some 4-year psychology programs. Substitutions: Six other arts and humanities credits. Add 10 additional elective credits to reach 60 total credits for the Associate in Science degree. Additional electives may come from any of BSC’s areas of study. ***Additional electives may come from any of BSC’s areas of study.

---

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS DEGREE:**

**CREDITS**

<table>
<thead>
<tr>
<th>Communication</th>
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<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Math, Science and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math elective (MATH 103 or higher)</td>
</tr>
<tr>
<td>Biology (BIOL 150 or 126)</td>
</tr>
</tbody>
</table>
**Biology Lab (BIOL 150L or 126L)..................................................1
Math, Science, Technology elective
(MATH 210 recommended) .................................................. 2-3

Arts and Humanities
**Foreign Language 101-102 (Spanish)......................................8
**Foreign Language 201-202 (Spanish)......................................8

Social and Behavioral Sciences
Intro. to Psychology (PSYC 111)...........................................3
Intro. to Sociology (SOC 110).................................................3
Social Science elective .......................................................... 3
Psychology Electives .............................................................9
Introduction to Behavior Modification (PSYC 211)....................3
Child Psychology (PSYC 252)................................................3
Abnormal Psychology (PSYC 270).........................................3
Social Psychology (PSYC 276)...............................................3
Educational Psychology (PSYC 230)......................................3
Note: PSYC 250 Developmental Psychology is recommended for
non-psychology majors

Enrichment .............................................................................2
****Additional elective credits .............................................. 5
Total credits ...........................................................................60-61

** Biology 150 with lab or 126 with lab would be most appropriate
for the Associate in Arts psychology emphasis. Substitutions:
Four credits of any science with a lab can be taken to fulfill the
Associate in Arts.
*** 2nd year proficiency in a foreign language is required in some
4-year psychology programs. Substitutions: Nine other arts and
humanities credits. Add 7 additional elective credits to reach 60
total credits for the associate degree.
****Additional electives may come from any of BSC’s areas of
study.
PUBLIC ADMINISTRATION

TRANSFER

CONTACT PERSON: Dr. Henry Riegler • Schafer Hall 219E  
224-5549 • Henry.Riegler@bismarckstate.edu

Students planning to work toward a bachelor’s degree in public administration should register for the following courses while attending BSC. An Associate in Arts degree is earned if all requirements are completed.

Career possibilities for public administration majors include city manager, safety inspector, construction inspector, welfare investigator, employment interviewer, mayor, government agency director, and police and fire chiefs.

Job duties will vary because of the various types of agencies that employ managers and administrators.

Persons planning to work in public administration should be able to get along with others, be able to motivate and influence others, be able to communicate effectively, and should possess leadership and organizational skills, good judgment, and the ability to make decisions.

Students should refer to the catalog of the school where they plan to complete their bachelor’s degree requirements and modify this curriculum if necessary.


SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government (POLS 115-116)</td>
<td>6</td>
</tr>
<tr>
<td>Beginning Visual BASIC (CSCI 122)</td>
<td></td>
</tr>
<tr>
<td>Elements of Accounting (ACCT 200-201)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120, or 125)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Foreign Language 101-102 (Spanish)</strong></td>
<td>8</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
<td>3</td>
</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Business Law I (ACCT 225)</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Accounting (ACCT 201)</td>
<td>2</td>
</tr>
<tr>
<td>Principles of Microeconomics (ECON 201)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Macroeconomics (ECON 202)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>61</td>
</tr>
</tbody>
</table>

**Proficiency in a foreign language is required in some 4-year public administration programs. If you are considering a transfer program that does not have this requirement, you may substitute other arts and humanities courses and social science courses to complete the required credits.

RADIOLOGIC TECHNOLOGY

TRANSFER

CONTACT PERSON: Jean Rolandelli • Jack Science Center 201H  
• 224-5401 • Jean.Rolandelli@bismarckstate.edu

Radiographers are medical personnel who perform diagnostic imaging examinations, accurately position patients, and ensure quality diagnostic images are produced. They work closely with radiologists, the physicians who interpret medical images, to diagnose or rule out disease or injury. They may specialize in radiation therapy or a specific imaging technique such as computer tomography (CT) or magnetic resonance imaging (MRI). Most radiographers or radiologic technologists work in hospitals and physicians’ offices and clinics, including diagnostic imaging centers.

High school students planning careers in radiologic technology should study the sciences and mathematics.

A Bachelor of Science in radiologic technology may be earned by first completing the science, math, business and general education requirements of the college or university, then completing a clinical program at a school of radiologic technology. Upon completion of the clinical program, the student can become certified by passing the Radiologic Radiographers Registry Examination.

It is essential that students check the catalog of the transfer university of their choice and bring this information to their advisor so the curriculum can be modified according to the specific requirements of the degree-granting institution. In North Dakota, bachelor’s degree programs are available at Jamestown College, Minot State University, North Dakota State University, and the University of Mary.

SUGGESTED CURRICULUM

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Composition I &amp; II (ENGL 110, 120)</td>
<td>6</td>
</tr>
<tr>
<td>*Human Biology and lab (BIOL 126, 126L)</td>
<td>4</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology I &amp; II (BIOL 220, 221)</td>
<td>6</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology I &amp; II labs (BIOL 220L, 221L)</td>
<td>2</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Chemistry &amp; lab (CHEM 115, 115L)</td>
<td>5</td>
</tr>
<tr>
<td>College Physics I &amp; II (PHYS 211, 212)</td>
<td>6</td>
</tr>
<tr>
<td>College Physics I &amp; II labs (PHYS 211L, 212L)</td>
<td>2</td>
</tr>
<tr>
<td>Introductory Microbiology &amp; lab (MICR 202, 202L)</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>44</td>
</tr>
</tbody>
</table>

*Students should speak with an advisor to see if these courses are required.
Bismarck State College

REGISTERED NURSING - SEE NURSING

RENEWABLE GENERATION TECHNOLOGY

TECHNICAL
LIMITED ENROLLMENT ON CAMPUS
ONLINE OPTION

CONTACT PERSON: Mike Myers • NECE 227 • 224-2594
Michael.M.Myers@bismarckstate.edu

BSC’s renewable energy program is designed for entry-level employment in several established and emerging fields. The program provides the most recent advancements in energy education and technical skill needed for this fast-moving industry. During the first year, students receive a broad background in energy production from established BSC curriculum. From this foundation, students focus the second year on specialized courses.

Curriculum is industry-approved and based on what employees do in the workplace. Students learn basic electrical and mechanical fundamentals, equipment and systems, print reading, applied math and safety practices. Second year study includes electronics, hydraulics, wind systems, solar array grid systems, automation and control, troubleshooting and an integrated practice lab.

Students can study theory components on campus or online. On-campus lab time is required for most students. Different learning styles are addressed with online multimedia technology and audio presentations that create a realistic and interactive experience.

Prospective students should be prepared for the physical demands of the work of entry-level technician positions when considering this program. Typical industry entry-level position requirements include: lifting 50+ pounds, climbing ladders, working in confined spaces, heights, etc. When applying for jobs applicants may also be required to pass a physical exam, a drug screen and an eye exam, including the ability to distinguish between colors accurately.

Students receive a program certificate upon successful completion of the program. Additional course work may lead to an Associate in Applied Science degree. See page 54 for program certificate and degree requirements.

Credits from this program can be applied to BSC’s Bachelor of Applied Science degree in Energy Management. See page 88 for additional information.

Enrollment:

• On-campus program: Enrollment is limited. Refer to the Admissions section of this catalog beginning on page 10 for application procedures and requirements. Also, refer to the limited enrollment program information on page 13.

• Online program: Enrollment is not limited in the online classes.

Required placement scores:

On-campus program:
ACT Math – 15 or higher
COMPASS Math – (pre-algebra) 31 or higher

Online program:
ACT Math – 16 or higher
COMPASS Math – (pre-algebra) 41 or higher
Accuplacer Math – 44 or higher

Background in these areas helpful:
• Basic chemistry
• Basic physics
• High school algebra I

SEMESTER I CREDITS
Introduction to Energy Technology (ENRT 101).............................4
Safety, Health and Environmental Practices (ENRT 105) ...............3
Mechanical Fundamentals (ENRT 107) ........................................2
Plant Equipment & Systems (ENRT 110) ........................................4
Total credits ....................................................................................13

SEMESTER II
Print Reading (ENRT 112) ...............................................................3
Applied Math (ENRT 103) ..............................................................3
Electrical Fundamentals (ENRT 104) ..............................................3
Instrumentation & Control (ENRT 116) ..........................................4
Total credits ....................................................................................13

SEMESTER III
Safe Work Practices (RENG 210) ....................................................3
Hydraulic Fundamentals (RENG 213) .............................................3
Advanced Mechanical (RENG 216) ................................................4
Solar and Distributed Grid Systems (RENG 218) ...........................4
Total credits ....................................................................................14

SEMESTER IV
Applied Electronics (RENG 221) ....................................................3
Automation and Control (RENG 224) ............................................3
Commercial Wind Systems (RENG 226) ........................................3
Renewable Applications and Troubleshooting (RENG 228) ...........5
Total credits ....................................................................................14

Check BSC’s website at: bismarckstate.edu/energy for the most up-to-date course information.
RESPIRATORY THERAPY

CONTACT PERSON: Dr. Ron Jyring • Jack Science Center 201C
224-5459 • Ronald.Jyring@bismarckstate.edu

Respiratory therapists (RT’s) help people of all ages who have heart and lung problems. Their patients range from newborns to the elderly, and from people who can care for themselves to critically ill people on mechanical life support. RT’s work in hospitals, outpatient clinics, nursing homes, rehabilitation centers, and patient homes.

Respiratory therapists are a vital part of the health care team, continually interacting and communicating with other medical professionals. In critical care and emergency areas, Respiratory therapists insert artificial airways, perform CPR, draw and analyze blood, manage mechanical ventilation, and monitor heart and lung function. They help plan for the patient’s discharge to make sure any ongoing respiratory needs will be met outside of the hospital. Respiratory therapists teach patients with asthma and other chronic respiratory problems how to manage their disease and treat themselves effectively. They promote prevention by educating young people in public schools about tobacco’s harmful effects.

Respiratory therapists are in high demand throughout the nation. The U.S. Department of Labor predicts a 19% increase in employment opportunities through the year 2008. Salaries are highly competitive. Sign-on bonuses and paid moving expenses are common nationwide.

Students must transfer to a four-year school to complete the requirements for this career. Colleges in North Dakota that offer a B.S. degree in respiratory therapy include University of Mary and North Dakota State University.

CURRICULUM FOR ASSOCIATE IN SCIENCE:

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
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</tr>
<tr>
<td>General Biology (BIOL 150)</td>
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<tr>
<td>General Biology Lab (BIOL 150L)</td>
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<tr>
<td>Introductory Microbiology (MICR 202)</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Microbiology Lab (MICR 202L)</td>
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<tr>
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<td>Chemistry (CHEM 115-116)</td>
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<td>Chemistry Lab (CHEM 115L-116L)</td>
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SOPHOMORE

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<tr>
<td>Anatomy and Physiology I&amp;II (BIOL 220-221)</td>
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<td>Anatomy and Physiology I&amp;II Lab (220L-221L)</td>
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<tr>
<td>College Physics I (PHYS 211)</td>
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<td>College Physics I Lab (PHYS 211L)</td>
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<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computers (CSCI 101)</td>
<td>3</td>
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<tr>
<td>Ethics (PHIL 210)</td>
<td>3</td>
</tr>
<tr>
<td>*Intro to Pharmacology (PHRM 215)</td>
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</tr>
<tr>
<td>Arts and Humanities Electives</td>
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<td>Ethics (PHIL 210)</td>
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</tr>
</tbody>
</table>

* Available through the University of Mary
Transfer

Contact Person: Lisa Hoynes • Schafer Hall 319D
224-5611 • Lisa.Hoynes@bismarckstate.edu

Students may complete the first two years of study toward a bachelor’s degree in social work by following this suggested curriculum. An Associate in Arts degree is earned if all requirements are completed.

Career Possibilities: Anthropologist, Historian, Philosopher, Political Scientist, Psychologist, Sociologist or Social Sciences Teacher.

Suggested Curriculum for Associate in Arts:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government (POLS 115-116)</td>
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</tr>
<tr>
<td>Elements of Economics (ECON 105)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition I-II, and Intro. to Professional Writing (ENGL 100 or 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Psychology (PSYC 111)</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Sociology (SOC 110)</td>
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</tr>
<tr>
<td>Math Elective (MATH 103 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization or U.S. History (HIST 101-102 or 103-104)</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Math/Science/Technology elective</td>
<td>3</td>
</tr>
<tr>
<td>Enrichment</td>
<td>2</td>
</tr>
<tr>
<td>Arts and Humanities Elective</td>
<td>9</td>
</tr>
<tr>
<td>Social Science Electives</td>
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</tr>
<tr>
<td>Total credits</td>
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</tr>
</tbody>
</table>

Minot State Social Work program also requires SWK 250: Interpersonal Skills prior to applying to the social work program. You can take that as a collaborative student and use it as “elective” at BSC.
**SOCIOLoGY**

**TRANSFER**

CONTACT PERSON: Wendy Pank • Schafer Hall 312E
224-5649 • Wendy.Pank@bismarckstate.edu

Students may complete the first two years of study toward a bachelor’s degree in sociology, anthropology or social and criminal justice by following the suggested curriculum below. An Associate in Arts degree is earned if all requirements are completed.

Sociology is the discipline which explores how people create and maintain society, develop culture and organize the patterns of their lives in families, groups and institutions. Through sociology, students develop skills in analysis, communication and reasoning.

Career Possibilities: Administrator, Consultant, Human Service Professional, Researcher, Personnel Director, Teacher, or preparation for graduate studies in Criminal Justice, law, Public Administration or Social Work.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
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<tr>
<td>American Government (POL 115)</td>
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</tr>
<tr>
<td>Elements of Economics (ECON 105)</td>
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</tr>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
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<tr>
<td>Intro. to Psychology (PSYC 111)</td>
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<tr>
<td>Intro. to Sociology (SOC 110)</td>
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<tr>
<td>Math Elective (MATH 103 or higher)</td>
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<tr>
<td>Western Civilization or U.S. History</td>
<td>6</td>
</tr>
<tr>
<td>Developmental Psychology (PSYC 250)</td>
<td>3</td>
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<td>Laboratory Science</td>
<td>4</td>
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<tr>
<td>Math/Science/Technology elective</td>
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<tr>
<td>Enrichment</td>
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<td>Arts and Humanities Electives</td>
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<tr>
<td>Social Science Electives</td>
<td>9</td>
</tr>
<tr>
<td>Total credits</td>
<td>60</td>
</tr>
</tbody>
</table>

**SPEECH COMMUNICATION**

**TRANSFER**

CONTACT PERSON: Carol Cashman • Schafer Hall 212D
224-5446 • Carol.Cashman@bismarckstate.edu

The speech communication curriculum provides the first two years of study toward a bachelor’s degree.

The ability to communicate effectively is essential in all careers and areas of life. A solid foundation in speech is particularly vital in the practice of law, in politics, public relations and broadcasting, as well as in the business and teaching professions.

A healthy balance between theory and practice is emphasized in the speech communication program.

Those who complete the requirements receive an Associate in Arts degree. Students should refer to the catalog of the school they anticipate transferring from and modify this curriculum if necessary.

Career Possibilities: Teaching, Public Relations, Radio or Television Broadcasting, Management, Law, or other graduate studies.

**SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:**

**FRESHMAN**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>College Composition I-II, Intro. to Professional Writing (ENGL 110 and 120 or 125)</td>
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<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
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<td>Social Science Electives</td>
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<tr>
<td>Math/Science/Technology Electives</td>
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<tr>
<td>Enrichment</td>
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</tr>
<tr>
<td>Communication/Other Electives</td>
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**SOPHOMORE**

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<th>COURSE and Credits</th>
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<tr>
<td>Arts and Humanities Elective or Oral Interpretation (COMM 211)</td>
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<tr>
<td>Social Science Elective</td>
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<td>Math/Science/Technology Electives</td>
<td>5-8</td>
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<td>Interpersonal Communications (COMM 212)</td>
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<td>Communication/Theatre Electives</td>
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<td>Total credits</td>
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</table>
Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings. The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works to ensure that the operating room environment is safe, that equipment functions properly, and that the procedure is conducted under conditions that maximize patient safety. A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation of tools and technologies to facilitate a physician’s performance of invasive therapeutic and diagnostic procedures.

Surgical technologists are in demand throughout the nation in hospitals, ambulatory surgery centers, and clinics. A strong science background is recommended for success in this program. This includes completion of high school units in biological sciences, especially anatomy and physiology. Successful students are those who are able to perform under pressure in stressful and emergency situations, have a strong sense of responsibility, patience, and a concern for order. Manual dexterity and physical stamina are vital.

Completion of the program prepares students for employment and for eligibility to take the surgical technologist certifying examination which is offered at the end of their sophomore year. The program is accredited by the Commission on the Accreditation of Allied Health Education Programs. Bismarck State College developed the Surgical Technology program in cooperation with local medical facilities and health care providers. Students receive both theoretical instruction and clinical internship study. Those who complete the requirements earn an Associate in Applied Science in Surgical Technology degree. This is a degree program, no certificate is offered.

The Surgical Technology program is a limited enrollment program, which means there is a process for admittance. Students must first designate Surgical Technology as their intended field of study. Next, they must complete one full time semester of college (minimum 12 credit hour load) with a minimum overall 2.0 (C) grade point average. The grade point requirement includes successful completion of Human Anatomy and Physiology I (BIOL 220), Human Anatomy and Physiology I Laboratory (BIOL 220L) with a 2.0 grade point average. Note: Admittance to Human Anatomy and Physiology has placement criteria. For information regarding these criteria, contact the department chair of biology or the individual instructors. The final step of this process is to fill out an application to the program and participate in an interview. Program applications are available in the Allied Health Campus Classroom 268 or from a member of the Surgical Technology faculty. They are due by Nov. 15 of the fall semester, prior to the spring semester in which the student wants to begin the introductory surgical technology classes. Students may only register for introductory program courses after being officially notified by mail of admittance to the program by the faculty. These notifications occur during the Holiday Break and after all transcripts have been checked.

Provisional admittance into the entry-level surgical technology classes is possible for students who have met all general education requirements, with the exception of the sciences (BIOL 220, 220L, BIOL 221, BIOL 221L, and MICR 202 and 202L). Enrollment under the Provisional Acceptance Policy requires concurrent enrollment in BIOL 220 and 220L and completion of BIOL 221 and 221L prior to enrollment in the upper level surgical technology courses. Provisional admittance is granted by the faculty after reviewing the student’s transcripts. Re-admittance into the program requires repeating all SRGT lab courses and may require repeating some or all of the didactic courses. Re-admittance policy is discussed in detail in the Surgical Technology Student Handbook.

Students are required to provide documentation of current vaccinations, including Hepatitis B vaccination, Tetanus Toxoid booster within ten years of enrollment, chicken pox vaccination (or a statement confirming the student has had chicken pox), and, immediately prior to the clinical internship, a two step Tuberculosis Mantoux skin testing. Also, students accepted to the BSC Surgical Technology Program will be required to have a medical examination at their own expense (after all other requirements have been met).

A minimum 2.0 GPA must be earned in all (*) courses and an overall cumulative 2.0 GPA must be maintained in order to continue in the program. A student handbook will be issued to each student during the introductory surgical technology courses that describes specific program requirements. A clinical internship handbook of policies and procedures will be issued prior to the clinical internship course. Among the requirements is performance of a criminal background check at the student’s expense prior to the start of the OR Clinical Internship course.

The credit load for the program may be taken over three years as opposed to two. This does not impact the delivery of the surgical technology courses. They must be taken as described and are the same classes in the two-year or three-year cycle.
### Suggested Curriculum for Associate in Applied Science: Two-Year Cycle:

**Semester 1**
- *Anatomy & Physiology I (BIOL 220)* 3
- *Anatomy & Physiology I Lab (BIOL 220L)* 1
- *Medical Terminology for Surgical Technology (SRGT 105)* 3
- College Composition I (ENGL 110) 3
- Introduction to Psychology (PSYC 111) 3
- Introduction to Computers (CSCI 101) 3
- *General Pathology (BIOL 213)* 2
- Total credits 11

**Semester 2**
- *Anatomy & Physiology II (BIOL 221)* 3
- *Anatomy & Physiology II Lab (BIOL 221L)* 1
- *Introduction to Surgical Technology (SRGT 110)* 3
- *Introduction to Operating Room Procedures and Materials Lab (SRGT 125L)* 2
- *Introduction to Operating Room Materials (SRGT 130)* 3
- College Composition II (ENGL 120), Intro to Professional Writing (ENGL 125), or Fundamentals of Public Speaking (COMM 110) 3
- Total credits 10

**Semester 3**
- *Introductory Microbiology (MICR 202)* 3
- *Introductory Microbiology Lab (MICR 202L)* 1
- *Introduction to Pharmacology for Surgical Technology (SRGT 215)* 3
- *Specialty Surgical Procedures (SRGT 240)* 5
- *Surgical Procedures Lab (SRGT 250)* 2
- *Professional Skills for the Surgical Technologist (SRGT 260)* 3
- Total credits 17

**Semester 4**
- Operating Room Clinical Internship (SRGT 280) 12

**Three-Year Cycle:**

**Semester 1**
- *Human Biology (BIOL 126)* 3
- *Human Biology Lab (BIOL 126L)* 1
- *Medical Terminology for Surgical Technology (SRGT 105)* 3
- College Composition I (ENGL 110) 3
- Introduction to Computers (CSCI 101) 3
- Total credits 13
- Students may choose to attend a summer session to complete some of the requirements for this program

**Semester 2**
- *Anatomy & Physiology I (BIOL 220)* 3
- *Anatomy & Physiology I Lab (BIOL 220L)* 1
- *Introduction to Psychology (PSYC 111)* 3
- College Composition II (ENGL 120), Intro to Professional Writing (Computers) (ENGL 125), or Fundamentals of Public Speaking (COMM 110) 3
- Total credits 10

**Semester 3**
- *General Pathology (BIOL 213)* 2
- *Anatomy & Physiology II (BIOL 221)* 3
- *Anatomy & Physiology II Lab (BIOL 221L)* 1
- *Introductory Microbiology (MICR 202)* 3
- *Introductory Microbiology Lab (MICR 202L)* 1
- Total credits 10

**Semester 4**
- *Introduction to Surgical Technology (SRGT 110)* 3
- *Introduction to Operating Room Procedures (SRGT 120)* 3
- *Introduction to Operating Room Procedures and Materials Lab (SRGT 125L)* 2
- *Introduction to Operating Room Materials (SRGT 130)* 3
- Total credits 11

**Semester 5**
- *Introduction to Pharmacology for Surgical Technology (SRGT 215)* 3
- *Specialty Surgical Procedures (SRGT 240)* 5
- *Surgical Procedures Lab (SRGT 250)* 2
- *Professional Skills for the Surgical Technology (SRGT 260)* 3
- Total credits 13

**Semester 6**
- *Operating Room Clinical Internship (SRGT 280)* 12
SUSTAINABLE CONSTRUCTION TECHNOLOGY

CONTACT PERSON: Earl Torgerson, Technical Center 251
224-5561 • Earl.Torgerson@bismarckstate.edu

Sustainable/Green Building, Green Jobs and Green Living are growing and enduring forces in our global society. Developing a perspective and philosophy of societies’ impact on the environment is a crucial part of contemporary education. These issues are touching every aspect of our lives - economical, political, social and philosophical. Throughout the developed world education and legislation are changing the way in which the built environment interacts with the natural environment.

Sustainable Construction Technology will provide training and knowledge in the latest green building trends. Emphasis is placed on residential construction. Students will study the concept of whole house design and be exposed to all aspects of residential systems. Course work will include participation in practical problems in construction planning, scheduling and management. Upon successful completion of this program, students will receive a Program Certificate or an Associate in Applied Science degree. Students will be prepared for entry-level jobs in residential construction management with an emphasis on Green Building.

The following curriculum leads to the Associate in Applied Science degree. See the Graduation Requirements section for details on the Program Certificate on page 54.

SEMESTER 1

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Introduction to the Green Environment (CARP 112)</td>
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<tr>
<td>Sustainable Building Science I (BCT 216)</td>
<td>3</td>
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<tr>
<td>Blueprint Reading (CARP 110)</td>
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</tr>
<tr>
<td>Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
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<tr>
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SEMESTER 2

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Sustainable Building Science II (BCT 218)</td>
<td>3</td>
</tr>
<tr>
<td>Construction Safety (BCT 222)</td>
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</tr>
<tr>
<td>Residential Energy Rating Systems (BCT 264)</td>
<td>3</td>
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<tr>
<td>Business, Math, Science &amp; Technology Elective</td>
<td>3</td>
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<tr>
<td>Communications Elective</td>
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SEMESTER 3

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<td>Construction Estimating (ARCT 144)</td>
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</tr>
<tr>
<td>Project Management (CMT 252)</td>
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<tr>
<td>Introduction to Energy Industry (ENRT 101)</td>
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<td>Arts and Humanities or Social &amp; Behavioral Sciences Elective</td>
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</tr>
<tr>
<td>Elective</td>
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SEMESTER 4

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<tr>
<th>Course</th>
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<tr>
<td>Construction Scheduling (CMT 253)</td>
<td>3</td>
</tr>
<tr>
<td>Residential Building Codes (BCT 260)</td>
<td>3</td>
</tr>
<tr>
<td>House Systems (BCT 276)</td>
<td>3</td>
</tr>
<tr>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td>Business, Math, Science &amp; Technology Elective</td>
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</tr>
<tr>
<td>Total credits</td>
<td>15</td>
</tr>
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</table>

Program total credits ...................................... 61
The Technical Studies program permits a qualified individual to plan a unique program of study to meet his or her own career goals. The program is intended for currently employed individuals or other students whose career objectives cannot be met by BSC’s existing programs. Each student works with an advisor to customize a program that combines skills and knowledge of different disciplines. For example, a student pursuing the Technical Studies degree or certificate may want to combine work in a trade area with management courses with a goal of owning his or her own business. Or, someone may wish to combine marketing and Web design courses that will assist in his or her work with a small business.

The objectives of the program are:
1) to provide flexibility in programming,
2) to help meet the career goals of students that cannot be met by a single instructional program,
3) to provide a customized and individualized plan of study, and
4) to provide opportunities for those in the workforce to broaden or enhance skills.

This program will be especially helpful for workers who are expected to handle multiple tasks using new technologies, or a combination of technologies. These expectations for a worker to be multi-skilled might not be met through an existing BSC technical program. However, the Technical Studies program can provide the means for workers to gain the skills and competencies required in their workplace.

Students in the Technical Studies program may be eligible for credit based on prior learning through their employment or other non-collegiate trainings. Students will develop a plan of study in conjunction with the Prior Learning Coordinator. The plan of study must include a rationale and career objectives, the sequenced courses, and evidence of sufficient academic rigor.

Students may develop a program that allows them to earn a Program Certificate or Associate in Applied Science degree.

**CURRICULUM FOR ASSOCIATE IN APPLIED SCIENCE:**

<table>
<thead>
<tr>
<th>CREDITS</th>
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<td>Communications (general education requirement) ...........6</td>
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<tr>
<td></td>
<td>Arts &amp; Humanities/Social &amp; Behavioral Sciences (general education requirement) ...........................................3</td>
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<td>Business, Math, Science &amp; Technology (general education requirement) ..........................................................6</td>
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<tr>
<td></td>
<td>Technical Credits ..........................................................45</td>
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<td></td>
<td>Required Credits ..................................................................60</td>
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**CURRICULUM FOR CERTIFICATE PROGRAM:**

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<tr>
<th>CREDITS</th>
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<tbody>
<tr>
<td></td>
<td>Technical Credits ................................................................27</td>
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<td></td>
<td>Communications Credits ....................................................3</td>
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<td></td>
<td>Elective Credits .............................................................3</td>
</tr>
<tr>
<td></td>
<td>Required Credits ..................................................................33</td>
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</tbody>
</table>

Students in the Technical Studies program may be eligible for credit based on prior learning through their employment or other non-collegiate trainings. Students will develop a plan of study in conjunction with the Prior Learning Coordinator. The plan of study must include a rationale and career objectives, the sequenced courses, and evidence of sufficient academic rigor.

Students may develop a program that allows them to earn a Program Certificate or Associate in Applied Science degree.

**CURRICULUM FOR ASSOCIATE IN APPLIED SCIENCE:**

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<td></td>
<td>Business, Math, Science &amp; Technology (general education requirement) ..........................................................6</td>
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<tr>
<td></td>
<td>Technical Credits ..........................................................45</td>
</tr>
<tr>
<td></td>
<td>Required Credits ..................................................................60</td>
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**CURRICULUM FOR CERTIFICATE PROGRAM:**

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<td>Elective Credits .............................................................3</td>
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<tr>
<td></td>
<td>Required Credits ..................................................................33</td>
</tr>
</tbody>
</table>
TRANSFER

CONTACT PERSON: Dan Rogers • Schafer Hall 23A
224-5530 • Daniel.Rogers@bismarckstate.edu

The theatre arts program offers an Associate in Arts degree with either a performance or technical theatre emphasis. Theatre training can enhance performance, communication and visual art skills while providing students an opportunity to participate in the lively art of theatre.

The theatre program offers a wide selection of technical and performance classes and students are encouraged to apply their craft in a variety of production opportunities.

In addition, theatre students can get involved in the Drama Club where they can participate in such activities as the American College Theatre Festival and student-directed one-act plays.

The Bismarck State College theatre program exists so that anyone who wants to explore the theatre arts will find the freedom to experiment and the encouragement to learn. The program is large enough to offer a variety of classes and activities, but small enough to allow both freshmen and sophomore students the opportunity to become involved. Students planning to transfer to a four-year program can do so with strong basic training and practical experience. Non-majors are able to explore theatre arts according to their own interests. Students who complete the requirements earn an Associate in Arts degree.

Performance and technical theatre scholarships are available. Information is available from Dan Rogers, Assistant Professor of Speech and Theatre.

Career Possibilities: Actor, Dancer, Director, Teacher, Playwright, Scenic Craftsman, Scenic or Costume Designer, Arts Manager, Live Event Technician, Control Board Operator, Technical Director, Audio Engineer.

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS: EMPHASIS IN PERFORMANCE

FRESHMAN CREDITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>College Composition I-II (ENGL 110-120)</td>
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<tr>
<td>Fundamentals of Public Speaking (COMM 110)</td>
<td>3</td>
</tr>
<tr>
<td>Acting I (THEA 161)</td>
<td>3</td>
</tr>
<tr>
<td>Acting II (THEA 261)</td>
<td>3</td>
</tr>
<tr>
<td>Dance-Theatre Movement (THEA 167)</td>
<td>3</td>
</tr>
<tr>
<td>Oral Interpretation (COMM 211)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Theatre Arts (THEA 110)</td>
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</tr>
<tr>
<td>Theatre Practicum (THEA 201)</td>
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<td>Total credits</td>
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</table>

SUGGESTED CURRICULUM FOR ASSOCIATE IN ARTS:

EMPHASIS IN TECHNICAL THEATRE

FRESHMAN CREDITS

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>College Composition I-II (ENGL 110-120)</td>
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<td>Fundamentals of Public Speaking (COMM 110)</td>
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<td>Lab Science</td>
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<td>Social Science</td>
<td>3</td>
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<tr>
<td>Acting I (THEA 161)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Theatre Arts (THEA 110)</td>
<td>3</td>
</tr>
<tr>
<td>Stage Craft (THEA 270)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Design (THEA 226)</td>
<td>3</td>
</tr>
<tr>
<td>Special Topics: Scene Painting/Lighting Design (THEA 299)</td>
<td>3</td>
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<tr>
<td>Theatre Practicum (THEA 201)</td>
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<td>Total credits</td>
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SOPHOMORE CREDITS

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<tr>
<td>Math/Science/Technology Elective</td>
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<tr>
<td>Social/Behavioral Science</td>
<td>6</td>
</tr>
<tr>
<td>Stage Makeup (THEA 247)</td>
<td>3</td>
</tr>
<tr>
<td>Special Topics: Scene Painting/Lighting Design (THEA 299)</td>
<td>3</td>
</tr>
<tr>
<td>Theatre Practicum (THEA 201)</td>
<td>2</td>
</tr>
<tr>
<td>Drawing I (ART 130)</td>
<td>3</td>
</tr>
<tr>
<td>2D or 3D Design (ART 122 or ART 124)</td>
<td>3</td>
</tr>
<tr>
<td>Art History I (ART 210)</td>
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<td>Art History II (ART 211)</td>
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<td>Elective</td>
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<td>Total credits</td>
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</tbody>
</table>

SUGGESTED ELECTIVES

Graphical Communication (ENGR 101), AutoCAD I (CAD 211), AutoCAD II (CAD 212)
This curriculum is designed for students who want to specialize in Web Page Development and Design. Completion of the two-year program leads to an Associate in Applied Science (AAS) degree in Web Page Development and Design.

This curriculum offers nationally recognized CIW (Certified Internet Webmaster) Certifications and Paths - http://www.ciwcertified.com. Over the course of their study, Web candidates take a series of CIW exams based on their area of study. In some courses, these exams may be required for completion of the course requirements, although passing the exam is not required for a passing grade in the course.

Successful completion of any of these exams results in the designation of Certified Internet Webmaster (CIW). The level of mastery depends on the exam taken and how many exams are taken in a particular CIW track. Certain CIW exams may be prerequisites for others. Web languages covered in the Web Page Development and Design curriculum are XHTML, CSS, XML, Javascript, and PHP. The curriculum additionally offers training and certification in software Adobe Dreamweaver, Flash, Fireworks, InDesign, Illustrator, and Photoshop and training in Search Engine Optimization (SEO).

Online option: All program required classes in BSC’s Web Page Development and Design AAS (2 years) and Program Certificate (1 year) program are offered online. BSC’s general education course requirements for AAS degrees may or may not be offered online, depending on the course selected.

Special Note: Specified courses within the curriculum require separate purchases of software in order to complete course requirements. Students will be required to obtain access to the software for the duration of the course, whether by purchase of the software for their home computer, completing course requirements working in the BSC labs, or other means. For specific software requirements for each course, please see the course description in the BSC catalog.
WEB PAGE DEVELOPMENT AND DESIGN
CERTIFICATE
TECHNICAL  ONLINE OPTION

CONTACT PERSON: Amy Helgeson • Technical Center 132D
224-5616 • Amy.Helgeson@bismarckstate.edu

The curriculum is designed for those students who want to add Web page development and design to their background. Students must complete 30 credits from the courses listed. Completion of the one-year program leads to a Program Certificate in Web Page Development and Design.

CERTIFICATE:

SEMESTER I - FALL

<table>
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<tr>
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<tr>
<td>Web Foundations (CIS 151)</td>
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<tr>
<td>Web Design Theory (CIS 154)</td>
<td>3</td>
</tr>
<tr>
<td>Desktop Publishing (CIS 210)</td>
<td>3</td>
</tr>
<tr>
<td>Electronic Publishing (CIS 230)</td>
<td>3</td>
</tr>
<tr>
<td>Beginning Visual Basic (CSCI 122)</td>
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SEMESTER II - SPRING

<table>
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<tr>
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<tr>
<td>Cascading Style Sheets (CIS 152)</td>
<td>3</td>
</tr>
<tr>
<td>Networking Essentials (CIS 221)</td>
<td>3</td>
</tr>
<tr>
<td>Vector Graphics and Web Animation (CIS 233)</td>
<td>3</td>
</tr>
<tr>
<td>Site Design (CIS 251)</td>
<td>3</td>
</tr>
<tr>
<td>XML (CIS 252)</td>
<td>3</td>
</tr>
<tr>
<td>College Composition I (ENGL 110)</td>
<td>3</td>
</tr>
<tr>
<td>Total credits</td>
<td>18</td>
</tr>
</tbody>
</table>
The welding program provides students with the basic welding skills needed for entry-level jobs and apprenticeship programs. Wage scales are average to above average for qualified people depending on experience.

The class uses the textbook “Arc Welding” for theory, along with workbooks in weld symbols and blueprint reading. Students spend a majority of their hours in school working in a modern, well-equipped laboratory. Shop time is divided between the practice of the different welding processes. In oxyacetylene welding, students develop skills in all positions of welding, brazing and the use of the oxyacetylene cutting torch and cutting machines.

In shielded metal arc welding, students learn to weld in all positions with a variety of electrodes developing skills needed to pass the welder’s certification test of the American Welding Society. Students also receive instruction in arc air cutting.

Gas tungsten arc welding, known as heliarc, is practiced on aluminum and steel. Students practice gas metal arc welding (wire feed welding), and flux cored arc welding on light and heavy metals. One of the most modern techniques, it is being used more and more in manufacturing and the construction industry.

Students are taught non-destructive testing. Students will learn the different tests used in the welding field. Radiographic testing will be done by the students on their own welding coupons.

A third semester of advanced welding courses is available to interested students.

**Enrollment:** Students are enrolled two times a year on a space available basis during the months of August and January. Summer session is optional depending on demand. Refer to the Admission section of this catalog beginning on page 10 for application procedures and requirements. A doctor’s examination and approval is required after acceptance into this program. Also refer to the limited enrollment program information on page 13.

**Required placement scores:**
- ACT Math - 15 or higher
- COMPASS Math - (pre-algebra) 31 or higher
- ACT Reading - 15 or higher
- COMPASS Reading - 68 or higher

Students who do not meet the above requirements should arrange an interview with a welding instructor.

**Background in these areas helpful:**
- Basic math (addition, subtraction, division)
- Metrics (conversion of)
- Geometry (areas, volume, circumference)
- Basic trigonometry (SIN, COSIN, TANG)
- Basic knowledge of drafting

### FALL Credits
- Blueprint Symbols for Welding (WELD 165) .................................................. 3
- Arc Welding Operations (WELD 170) .................................................. 2
- Methods in Arc Welding Operations (WELD 173) .................................................. 4
- Shielded Metal Arc Welding (WELD 180) .................................................. 2
- Testing in Shielded Metal Arc Welding (WELD 183) .................................................. 4
- Types of Non-Destructive Testing (WELD 187) .................................................. 3
- Total credits .................................................................................. 18

### SPRING Credits
- Oxyfuel Operations (WELD 110) .................................................. 2
- Testing OA in Welding, Brazing, Cutting (WELD 118) .................................................. 2
- Advanced Testing in OA Welding, Brazing, Cutting (WELD 130) .................................................. 2
- Welding Principles (WELD 135) .................................................. 2
- Methods in GMA & FCA Welding (WELD 140) .................................................. 2
- Advanced Methods in GMA & FCA Welding (WELD 145) .................................................. 2
- Methods in GTA & PA Welding (WELD 150) .................................................. 2
- Blueprint Reading for Welders (WELD 155) .................................................. 3
- Advanced Methods in GTA & PA Welding (WELD 160) .................................................. 2
- Total credits .................................................................................. 19

### OPTIONAL (offered fall and spring) Credits
- Gas Tungsten Arc Pipe Welding (WELD 210) .................................................. 3
- Testing in Gas Tungsten Arc Pipe Welding (WELD 215) .................................................. 3
- Shielded Metal Arc Pipe Welding (WELD 220) .................................................. 3
- Testing in Shielded Metal Arc Pipe Welding (WELD 225) .................................................. 3
- Gas Metal Arc Pipe Welding (WELD 230) .................................................. 3
- Testing in Gas Metal Arc Pipe Welding (WELD 235) .................................................. 3
- Special Projects (WELD 240) .................................................. 3
- Special Projects (WELD 245) .................................................. 3
- Cooperative Education (WELD 197-297) .................................................. 1-3

A program certificate is awarded to students upon successful completion of the fall and spring semesters. A program diploma is awarded to students who complete the fall and spring semesters, a minimum of 15 credit hours of specialty welding courses listed as Optional courses, and 9 credit hours of required general education.

An Associate in Applied Science degree is awarded to students who successfully complete fall and spring semesters, a minimum of 12 credit hours of specialty welding courses listed as Optional courses, and 15 credit hours of required general education.

See page 51-52 for general education requirements for program diploma and degree requirements.
COURSE DESCRIPTIONS
Course descriptions are organized alphabetically by discipline or program name. The descriptions contain several sets of capital letter codes. The code or name of a semester after the course title indicates when a course is normally offered, for example, during fall or spring semester. Following are the codes used:
- F&S - Fall and Spring
- EO - Evenings Only
- BD - By Demand
- SM - Summer Session

ACADEMIC SKILLS COURSES (ASC)
The following Academic Skills Courses (ASC) are pre-college courses that will prepare students for college level work. The credits awarded are NOT college credits.

ASC 076 Applied Study Skills Fall 1 credit
An embedded study skills application for specific content areas. Learning and study strategies will be presented and applied using students’ texts and classroom assignments. Instruction includes handouts, study guides, cooperative and individualized learning, and computer instruction.

ASC 082 Effective Reading F&S SM 2 credits
This course provides strategies to help students increase reading efficiency, comprehension, and vocabulary in order to meet the demands of college level reading. Students will select, read, write, and critically evaluate a variety of written material to improve their reading skills and increase their enjoyment of reading. Students with ACT reading scores of 0-14 or COMPASS reading scores of 0-67 should take this course.

ASC 087 College Writing Preparation F&S SM 3 credits
To succeed in college and beyond, today’s students must be able to read, think critically, interpret, react to what they have read, and express their ideas clearly and correctly in written form. This course helps students gain confidence in their writing and thinking skills and bring their writing proficiency up to an acceptable college level. Elements of effective writing are covered to include strategy, organization, style, sentence structure, grammar and usage, and punctuation. Students with ACT English scores of 0-14 or COMPASS 0-42 are required to take this class before taking English 110.

ASC 088 Composition Lab F&S SM 1 credit
Composition Lab is designed as a co-requisite with English 110 for students who demonstrate a need for support instruction in grammar and punctuation based on their placement scores. Students will gain confidence in their editing skills, reduce mechanical errors in their writing, and be able to focus more attention on the craft of thoughtful writing. The course is offered on-campus or online. Students who are required to take ASC 088 must pass the lab in order to pass English 110. Placement is based on the following:

<table>
<thead>
<tr>
<th>ACT (English)</th>
<th>COMPASS (English)</th>
<th>Course</th>
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<tbody>
<tr>
<td>0-14</td>
<td>0-42</td>
<td>ASC 087 College Writing Prep</td>
</tr>
<tr>
<td>15-17</td>
<td>43-67</td>
<td>ENGL 110 +ASC 088 (Composition Lab on-campus or online)</td>
</tr>
<tr>
<td>18-36</td>
<td>68-100</td>
<td>ENGL 110 (no Composition Lab required)</td>
</tr>
</tbody>
</table>

ASC 092 Beginning Algebra F&S SM 3 credits
Fundamental skills in mathematics beginning with basic arithmetic and proceeding to elementary algebra. Designed for those students with little or no mathematics background who wish to prepare for future study in mathematics. Will not satisfy the mathematics/science/technology requirements at BSC and will not be accepted for credit at transfer institutions.

MATH 102 Intermediate Algebra F&S SM 3 credits
Prerequisite: ASC 092, or qualifying ACT or COMPASS score.
Review of basic algebra concepts including signed numbers, linear equations and inequalities, operations with algebraic fractions, exponents, radicals, systems of equations and inequalities, and the quadratic formula. Will not satisfy the mathematics/science/technology requirements at BSC and will not be accepted for credit at transfer institutions. It is expected that Spring 2012 will be the last session or semester that Math 102 will be offered. Alternate courses are in development. Contact your advisor for more information.

ASC 098 Basic Biology BD 3 credits
The study of Basic Biology 098 is intended to help those students without sufficient background in biology and chemistry to be successful in General Biology 150, Introductory Microbiology 202 or Anatomy & Physiology 220. Selected topics will include: chemistry as required to comprehend biology, basic cellular concepts, and human body systems and their functions. Concurrent registration in or previous successful completion of ASC 098L is required.

ASC 098L Basic Biology Lab BD 1 credit
Basic Biology 098 Lab is intended to help familiarize students with techniques and equipment necessary to be competent in the laboratory. Lab work will focus on introducing students to the process of scientific investigation, the use and care of the microscope, basic biological concepts, and the structure and function of the human body. Concurrent registration in or previous successful completion of ASC 098 lecture is required.

ACCOUNTING (ACCT)

ACCT 102 Fundamentals of Accounting F&S 3 credits
Covers accounting procedures, accounting cycle, financial statements, cash, voucher systems and controls, notes and interest, deferrals and accruals, receivables and temporary investments, and inventories using a fully integrated accounting software package. This course will not fulfill the accounting requirement for accounting and/or business administration majors.

ACCT 200 Elements of Accounting I F&S SM 3 credits
Covers accounting procedures, accounting cycle, financial statements, deferrals and accruals, cash, receivables and temporary investments, inventories, plant and intangible assets, current liabilities (including payroll and taxes), and a practice set. Primary focus is on service and merchandise businesses using a sole proprietor form of entity.

ACCT 201 Elements of Accounting II F&S SM 3 credits
Covers accounting procedures, corporate entities, transactions involving stocks, bonds, and dividends, consolidated statements, financial statement analysis, annual reports, statements of cash flows, an introduction to managerial accounting using job order and process cost systems, budgeting and a practice set. Prerequisite: Accounting 200.
ACCT 215 Business in the Legal Environment
Spring 3 credits
This course, taught by a local attorney, is a study of the nature, formation, and application of law in general, with emphasis on public law and the regulation of business.

ACCT 218 Computer Applications in Business
F&S 3 credits
A study of accounting applications using computers, including programs on accounts receivable, accounts payable, payroll and inventories. This course is taught using software currently used in the business working environment. This course will not fulfill the accounting requirement for accounting and/or business administration majors. Prerequisite ACCT 102 or 200.

ACCT 225 Business Law I
F&S 3 credits
This course, taught by a local attorney, covers introduction to law, contracts, agency, employment, and negotiable instruments.

ACCT 231 Income Tax Procedure
Spring 3 credits
A course dealing with the basic principles of federal income tax with the application and interpretation of the Internal Revenue Code to problems relating to individuals.

ACCT 294 Independent Study
BD 1-3 credits
Independent or directed study of special topics in Accounting. Department chairperson approval required.

ACCT 299 Special Topics
BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in accounting.

ACCT 195-295 Service Learning
1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

ACCT 197-297 Cooperative Education/ Internship
F&S SM 1-3 credits
Repeatable up to a maximum of 6 hrs. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

AGRICULTURE (AGEC, AGRI, ANSC, ASM, H&CE, PLSC, SOIL, VETS)
AGRICULTURAL ECONOMICS (AGEC)

AGEC 141 Introduction to Agribusiness Management
Spring 2 credits
This is an introductory course dealing with the economic importance of the agribusiness community and the potential for employment with the agribusiness industry.

AGEC 142 Agricultural Accounting
Fall 3 credits
An introduction to the preparation of farm records and financial statements for use in business analysis.

AGEC 242 Introduction to Agricultural Management
Fall 4 credits
Economic and managerial concepts related to farm or agribusiness production process, development of cost data, enterprise analysis, organization and management of production inputs.

AGEC 244 Introduction to Agricultural Marketing
Spring 3 credits
A study of the agricultural marketing system to include cash marketing, commodity futures trading, branded products merchandising and the interrelationship of the government and international trade.

AGEC 246 Introduction to Agricultural Finance
Spring 3 credits
Introduction to agricultural finance; provides background in farm and agribusiness credit use and evaluation. Discussion of specific financial conditions on farms and in agribusiness.

AGEC 250 AgriSales
Spring 3 credits
The principles of salesmanship applied to the agricultural business. Topics include attitudes and value systems, basic behavioral patterns, relationship of sales to marketing, selling strategies, preparing for sales calls, making sales presentations, and closing sales.

AGRICULTURE (AGRI)

AGRI 191 First Year Seminar
Fall 2 credit
This course is designed to address selected topics in agriculture.

AGRI 241 Farm Management Education
F&S 2 credit hours repeatable
The Farm Management Education program provides a practical study of the farming business for farm families currently engaged in managing their farms or ranches. Three semesters of enrollment per year.

AGRI 242 Advanced Farm Management Education
F&S 2 credit hours repeatable
Prerequisite: Agri 241 or department approval. This course continues the application of farm management principles for decision making. Fall and spring enrollment only. Requirements - 3 years of AGRI 241 or a degree in Agriculture.

AGRI 275 Introduction to Precision Farming
Fall 3 credits
This course is designed to introduce the student to precision farming applications. Students will receive hands-on training using handheld global positioning systems, differential global positioning systems and GIS software.

AGRI 285 Precision Agriculture Systems-Software
Spring 2 credits
This course introduces various precision farming software in real-world applications. Discussion of how geographic information systems (GIS) can be used to input and store data, assist in the analysis of data and create interpretive maps. It focuses on initial setup of software, data management and evaluation, saving and unloading data cards, processing field data, and compiling prescription application maps. Prerequisite: AGRI 275.

AGRI 291 Second Year Seminar
Fall 2 credit
This course is designed to address selected topics in agriculture.
AGRI 294 Independent Study  1-3 credits
Independent or directed study of special topics in agribusiness. Department chairperson approval required.

AGRI 299 Special Topics BD  Variable 1-3 credits
Variable instructional topics in the field of agriculture. Repeatable with varied content. Consent of department chairperson.

AGRI 195-295 Service Learning  F&S  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods. Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum

AGRI 197-297 Cooperative Education/Internship  1-3 credits repeatable up to 6 semester hours
Students get on-the-job experience under qualified supervision in agribusiness occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.

ANIMAL SCIENCE (ANSC)

ANSC 114 Introduction to Animal Sciences  F&S  2 credits
General principles of the livestock industry and relationship to mankind. Concurrent registration in or previous successful completion of ANSC 114L is required.

ANSC 114L Introduction to Animal Sciences Lab  Fall  1 credit
Concurrent registration in or previous successful completion of ANSC 114 is required.

ANSC 123 Feeds and Feeding  Spring  2 credits
Principles of feeding livestock including digestive systems, nutrient requirements, nutrient characteristics, and sources utilized in the formulation of balanced rations. Concurrent registration in or previous successful completion of ANSC 123L is required.

ANSC 123L Feeds and Feeding Lab  Spring  1 credit
Concurrent registration in or previous successful completion of ANSC 123 is required.

ANSC 220 Livestock Production  Spring  2 credits
General production and management of major meat animal species. Topics include: production systems, feeding, facilities, health, economics, and marketing. Concurrent registration in or previous successful completion of ANSC 220L is required.

ANSC 220L Livestock Production Lab  Spring  1 credit
Concurrent registration in or previous successful completion of ANSC 220 is required.

ANSC 252 Large Ruminant Production  Spring  2 credits
Large ruminant production will explore common production practices of beef and dairy in the upper Midwest. A focus of the class will be making production decisions based on profitability and efficiency.

AGRICULTURAL SYSTEMS MANAGEMENT (ASM)

ASM 130 Agriculture Industry Machinery Operations  Spring  2 credits
Operation of skid and oscillating loaders, fork lifts, tractors, trucks, trailers, agriculture application equipment and other agribusiness equipment. Students prepare for commercial driver’s license. Defensive driving taught. Equipment lease service fee.

ASM 155 Agricultural Welding  Spring  3 credits
Principles and operation of oxyacetylene, electrode, and wire feed welding.

ASM 175 Agriculture Industry Skills  Fall  3 credits
The purpose of this course is to provide students the basic fundamentals and applications of agriculture industry skills in electricity, plumbing, selecting and using hardware, measurement, and structures.

HUMAN AND COMMUNITY EDUCATION (H&CE)

H&CE 241 Leadership & Presentation Techniques  Fall  2 credits
Development of youth leadership professionals in educational settings; methods, principles, and practices in organizing, developing, conducting, and evaluating community-based student organizations and student leadership programs.

H&CE 281 Early Experience  F&S  1 credits
Field-based experience in a middle or high school educational setting. Provides an opportunity to observe and interact with students, teachers, and administrators.

PLANT SCIENCE (PLSC)

PLSC 110 World Food Crops  Fall  2 credits
Scientific principles of crop growth, worldwide production, management alternatives, and processing for domestic and international consumption. AAS-MST. Concurrent registration in or previous successful completion PLSC 110L is required.

PLSC 110L World Food Crops Lab  Fall  1 credit
Concurrent registration in or previous successful completion of PLSC 110 is required.

PLSC 223 Introduction to Weed Science  Spring  2 credits
Introduction of a basic knowledge of weeds, herbicide groups, the use of pesticides, economic and environmental considerations, personal safety, modes of action and terminology. Concurrent registration in or previous successful completion PLSC 223L is required.

PLSC 223L Introduction to Weed Science Lab  Spring  1 credit
Concurrent registration in or previous successful completion of PLSC 223 is required.

PLSC 225 Principles of Crop Production  Spring  3 credits
Principles of field crop production with emphasis on relationships of crops to their climate and production considerations as a means of managing resources and the environment.
The purpose of this course is to provide students the skills necessary for proper pest identification and crop scouting techniques. Information such as crop growth and development, pest life cycles, damage symptoms and economic thresholds will be covered. Communications skills and presentation techniques will also be emphasized.

Repeatable up to four times. Field scouting activities will be done in the field at various locations throughout the summer to give the student practical field experience. Prerequisite: PLSC 235.

Interpretation and understanding of herbicide mode of action, herbicide resistance, herbicide efficacy, herbicide toxicology, herbicide selectivity, and characteristics of weeds. Prerequisite: PLSC 223/223L.

This is an advanced examination of crop production principles: nutrient management, soil and water management, integrated pest management, and crop management. Prerequisite: Completion of PLSC 225 Principles of Crop Production or instructor approval.

Principles of range management, which include plant identification, range evaluation, and range improvement.

Physical, chemical, and biological properties of soils as related to use, conservation, and plant growth. AAS-MST. Concurrent registration in or previous successful completion of SOIL 210L is required.

Concurrent registration in or previous successful completion of SOIL 210 is required.

Principles of plant nutrition and soil nutrient availability; soil testing and fertilizer recommendations and management. Macronutrient emphasis. Concurrent registration in or previous successful completion of SOIL 222L is required.

Concurrent registration in or previous successful completion of SOIL 222 is required.

This course introduces the subdisciplines of anthropology, the concept of culture, genetics, the evolution of the human species, the development of human culture up to the historic period, including the appearance of domestication and the origin of the state.

Study and analysis of artistic methods and the meaning of the visual arts.

Study of line, shape, texture, value and color and the organizing principles of design that will allow students to become more effective visual communicators. There will be emphasis on problem solving, the creative process and critical thinking as they are applied to two-dimensional projects. Art fee $35.

Continued study of the visual elements and design principles as they relate to three dimensional spaces, including applications in areas such as sculpture, architecture, landscape design, industrial design and other allied fields. There will be continued emphasis on cultivating creativity, solving problems and developing critical thinking skills. Art fee $35.

Introduction, study and application of the visual elements using various drawing media and methods. There will be an emphasis on visual thinking through observation, analysis and expression.

This is an introduction to basic jewelry making where students will learn to design and create jewelry in various media. Clay, wire, enameling, metal fabrication, and lost wax casting will be covered. Art fee $100.

This is a survey course covering art of prehistoric humans through the Gothic Era (1400 A.D.) Students will gain an appreciation and understanding of art during this period through class discussion, lecture, slides, videos, and text reading. Art History I is designed to demonstrate the important role art has placed in history, politics and government, religion, and human development.
ART 211  Art History II  Spring  3 credits
This is a survey course covering art of the Renaissance through the Modern Era. Students will gain an appreciation and understanding of the major art movements through class discussion, lecture, slides, videos, and text reading. Art History II is designed to demonstrate the important role art has placed in history, politics, and government, religion, and human development.

ART 220  Painting I  F&S  3 credits
Introduction to the basics of painting through a variety of media and materials using still life subjects, models and imaginative expressions. Prerequisite: ART 130 or consent of instructor. Art fee $30.

ART 221  Painting II  F&S  3 credits
A continuation of the concepts and techniques explored in Painting I with an emphasis on personal expression. Prerequisite: ART 220. Art fee $30.

ART 225-226  Water Media I-II  BD  2 credits
Basic courses in the techniques of transparent watercolor. Art fee $15.

ART 230  Drawing II  Spring  3 credits
Continuation of Drawing I emphasizing color and composition, as well as developing conceptual and critical abilities related to the visual expression of ideas. Prerequisite: ART 130.

ART 231  Figure Drawing I  BD  3 credits
A study of the human figure as an end in itself through the use of pencils, charcoal and pastels. Prerequisite: ART 130.

ART 250-251  Ceramics I & II  F&S  3 credits
Introductory course on origin, nature, and use of clay and glazes. Includes hand-building processes and basic wheel-forming methods. Art fee $70.

ART 252  Advanced Ceramics  F&S  1-3 credits
Credits are repeatable or directed study of topics in ceramics. Advanced hand-building and wheel throwing techniques. Glazing and firing with emphasis on individual experimentation. Prerequisite: ART 250-251 or consent of instructor. Art fee $70. BSC ENR. Repeatable.

ART 265  Sculpture I  F&S  2 credits
Introduction and study of visual expression in three-dimensional form using various sculptural media and methods. Art fee $35.

ART 266  Sculpture II  Spring  2 credits
Continuation of Sculpture I with an emphasis on developing more advanced technical skills, as well as exploring media and concepts. Prerequisite: ART 265. Art fee $35.

ART 270-271  Printmaking I & II  BD  3 credits
This is a basic course in the history of intaglio and collagraph printmaking. Fundamental intaglio and collagraph printing techniques will be emphasized. Prerequisite: ART 130 or ART 122 or consent of instructor. Art fee $25

ART 294  Independent Study  BD  1-3 credits
Repeatable or directed study of special topics in art.

ART 296  Study Tour  BD  1-3 credits
Students can earn credits by participating in BSC’s annual trip to a foreign destination. Students will be required to keep an evaluative journal, do research and write a report on the art and architecture of the area visited.

ART 299  Special Topics in Art  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics in art.

ART 195-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

ART 197-297  Cooperative Education/Internship  F&S SM  1-3 credits
each, repeatable up to a maximum of six hours.
Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

ASTRONOMY (ASTR, PHYS)

ASTR 150  Meteorology  F&S EO  3 credits
An introduction to the atmosphere, including fronts and air masses, clouds and precipitation, our seasons, and global climate. Basic atmospheric processes and phenomena are studied to provide the student an understanding of our ever changing and sometimes dangerous day-to-day weather. Emphasis is placed on central North America. Concurrent registration ASTR 150L is required.

ASTR 150L  Meteorology Lab  F&S EO  1 credit
Students learn to plot and interpret weather maps and atmospheric temperature, moisture, and wind profiles. Real-time surface and upper air data are used to bring relevance to observations and resultant weather. Students develop basic forecasting skills, as well as basic observational skills. Concurrent registration in ASTR 150 is required.

PHYS 110  Introductory Astronomy  Fall  3 credits
Concurrent registration in PHYS 110L is required. Brief history of ancient astronomy; the Copernican revolution and the beginning of modern astronomy (Copernicus, Kepler, Galileo, Newton); the appearance of the night sky, revolution and rotation of the Earth, celestial coordinate systems, the calendar and seasons; the nature of light and telescopes; structure and origin of the solar system; the Earth, atmospheric phenomena (rainbows, haloes, aurora, etc.) the Moon; the planets and their satellites; comets and solar system debris (asteroids and meteorites); distances and motions of the stars; formation of stellar spectra; the Sun; evolution of ordinary stars; evolution of massive stars and supernovae; neutron stars, pulsars and black holes; the Milky Way and other galaxies; the expanding universe, quasars and cosmology.

PHYS 110L  Introductory Astronomy Lab  Fall  1 credit
Students are required to submit an accounting of their experiences and to keep an evaluative journal. Student-advisor conferences are required to discuss progress or problems. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

AUTOCAD (CAD)

SEE ENGINEERING
**AUTOMOTIVE COLLISION TECHNOLOGY (ABOD)**

**ABOD 100 Introduction to Automotive Collision Technology**  
**Fall**  
2 credits  
Students are introduced to automotive collision technology career requirements, the language of the trade, and shop safety.

**ABOD 105 Introduction to Metal Finishing**  
**Fall**  
5 credits  
This course covers the proper methods of filing, metal picking, and use of power grinders to properly finish metal surfaces, as well as the theory of expansion and contraction of metals during welding. Students are introduced to when and how to use plastic fillers. Shop safety is stressed.

**ABOD 107 Introduction to Sanding, Priming and Painting**  
**Fall**  
6 credits  
Students are introduced to thinning and the proper use of primer. The proper use of sandpaper and the art of sanding are initiated and practiced at this time.

**ABOD 108 Intermediate Metal Finishing**  
**Spring**  
4 credits  
Prerequisite or departmental approval: ABOD. A lab course in which students are introduced to roughing out and aligning damaged areas of a vehicle. Students upgrade their manipulative skills.

**ABOD 109 Plastics and Adhesives**  
**Spring**  
4 credits  
Different types of plastic material are introduced. Students are in lab practicing the use of adhesives on plastic repairs.

**ABOD 110 Auto Body Welding**  
**Fall**  
4 credits  
Students are introduced to basic training in the use of oxyacetylene torch and wire feed welders. Equipment, safety, and common weld joints are covered using both welding processes. Lecture and shop instruction apply welding techniques and process used in industry. Welding fuels, gases, electric current, electrodes and their applications are introduced.

**ABOD 112 Introduction to Painting**  
**Spring**  
4 credits  
Prerequisite or departmental approval: ABOD 105 and 107. The proper use, maintenance and adjustment of paint equipment is demonstrated. Students are introduced to thinners, reducers and additives in paint, and to painting damaged vehicles.

**ABOD 114 Component Parts - Replacement and Adjustment**  
**Spring**  
5 credits  
Students are introduced to the techniques of installing and properly adjusting doors, hoods, and trunk lids, and replacing and aligning new body panels. This course also covers the proper techniques of installing windshields, window regulators and glass channels.

**ABOD 200 Mechanical and Electrical Components**  
**Summer**  
5 credits  
Demonstrate the proper use, maintenance, and adjustment of electrical and mechanical equipment. Introduce multi-meters, various testing equipment, and troubleshooting techniques. The course consists of theory and receiving hands-on experience in the different types of electrical and mechanical components.

**ABOD 210 Advanced Painting**  
**Summer**  
1 credit  
This is a lecture demonstration and application course in learning color control to apply and blend with existing color in spot painting. Factory representatives will also demonstrate the latest paints and painting techniques.

**ABOD 216 Frame Straightening and Wheel Alignment**  
**Summer**  
3 credits  
A lab course in which students are introduced to frame straightening equipment used to align damaged channel frames, installation of bumpers on vehicle, and setting caster, camber, and toe-in of modern car.

**ABOD 220 Estimating and Industrial Management**  
**Summer**  
1 credit  
Students are introduced to estimating, bidding and using crash manuals by appraising jobs. Students also get practical experience in management by operating the storeroom and stock control room. Personal and public relations are also covered.

**ABOD 294 Independent Study**  
**1-3 credits**  
Independent or directed study of special topics in automotive collision technology. Department chairperson approval required.

**ABOD 299 Special Topics**  
**1-3 credits**  
Variable instructional topics in the field of automotive collision technology. Repeatable as long as content varies. Consent of department chairperson.

**ABOD 195-295 Service Learning**  
**1-3 credits**  
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

**ABOD 197-297 Cooperative Education/Internship**  
**1-3 credits**  
Repeatable as long as content varies. Consent of department chairperson.

**AUTOMOTIVE TECHNOLOGY (AUTO)**

**AUTO 101 Introduction to Automotive Technology**  
**F&S**  
3 credit  
This course is a study of the basic terms, principles, operation and testing of the eight major operating systems of the automobile. The major automotive systems include electrical, brakes, engine repair, air conditioning, suspension and steering, engine performance, manual transmissions and automatic transmissions.

**AUTO 108 Mechanical and Shop Orientation**  
**F&S**  
1 credit  
A course in safety and shop procedures applied specifically to the automotive field. Students will become familiar with safety equipment, hoists, and shop operating procedures. Included are hazardous waste handling, disposal, and use of material safety data sheets. This course is based on a satisfactory/unsatisfactory basis.

**AUTO 128 Automatic Transmissions and Transaxles**  
**Spring**  
5 credits  
Prerequisite: AUTO 161 and 108 or departmental approval. This course concentrates on study of basic principles of operation in automatic transmission hydraulic control systems, planetary gear systems, and torque converters through classroom lecture and demonstration. The diagnosis of problems and methods of repair are actual hands-on projects in shop on live vehicles and trainers.
AUTO 131      Clutches, Drive Trains and Axles      Spring      3 credits
Prerequisite: AUTO 161 and 108 or departmental approval. This course concentrates on a study of the mechanical transmission of torque through clutches, gear boxes, drive lines and front driving axles. The diagnosis of problems and methods of repair and actual hands-on projects in the shop on live vehicles and trainers.

AUTO 132      Manual Transmissions and Transaxles      Spring      3 credits
Prerequisites: AUTO 161 and 108 or departmental approval. This course concentrates on the transmission of torque through manual transmissions and transaxles. Course content includes a study of bearing and gear types. A variety of gear boxes on hand allows hands-on projects in the shop class.

AUTO 148      Suspension and Steering      Spring      4 credits
Prerequisites: AUTO 161 and 108 or departmental approval. This course concentrates on a study of the principles of operation and design of suspension systems on modern cars and light trucks. Actual hands-on work in the shop on live vehicles and new trainers complements the classroom training.

AUTO 151      Brake Fundamentals      Fall      2 credits
Prerequisites: AUTO 161 or 108 or departmental approval. The study of automotive braking system and theory and operation. Included are hydraulic fundamentals, brake system construction, and antilock brake system fundamentals. The course consists of classroom theory, demonstration and lab application.

AUTO 152      Brake Repair      Fall      3 credits
Prerequisite: AUTO 151, 161 and 108 or departmental approval. This course will be a study of brake components, application, testing and repair. The use of trainer and live vehicles will be used to develop proper service techniques in the lab.

AUTO 161      Electronics      F&S      2 credits
Prerequisites: AUTO 108 or departmental approval. This course develops an understanding of the concepts using Ohms Law relationships and how they are applied to circuits and component operation. The use of meter testing and calculation methods will be used to develop problem solving skills.

AUTO 163      Starting and Charging Systems      Fall      3 credits
Prerequisites: AUTO 161 and 108 or departmental approval. The theory of operation for batteries, starting motor system, and charging systems are covered. An in-depth review of types of components, their construction and how they are tested is done using bench units and live cars. Extensive use of manuals, test equipment and proper tools are stressed for doing proper service, repair and replacement of system components.

AUTO 164      Instruments and Accessory Systems      Fall      4 credits
Prerequisites: AUTO 161 and 108 or departmental approval. This course will familiarize the student with the lighting systems used on today's automobiles. It will introduce the major manufacturers use of different types of instrumentation systems and their operation. The use of power accessory systems and component interrelationship, testing procedures and service procedures to maintain operation to specification are dealt with. Extensive use of manuals and test equipment are needed.

AUTO 211      Engine Fundamentals      Fall      4 credits
Prerequisite: AUTO 161 and 108 or departmental approval. A course in gasoline engine theory and basic diagnosis. Common mechanical engine problems and diagnostic techniques are covered in the classroom and lab. Students will learn the proper use of measuring tools and fastener methods so critical to engine repair work as well as all automotive work.

AUTO 212      Engine Repair      Fall      4 credits
Prerequisite: AUTO 161, 108 and 211 or departmental approval. Class and laboratory practice devoted to disassembly and assembly of automotive engines. This will include measuring and fitting components such as bearings, pistons, and rings. Cylinder head reconditioning work will include guide repair, valve and seat machining operations.

AUTO 271      A/C Heating Theory and Operation      Fall      3 credits
Prerequisites: AUTO 161 and 108 or departmental approval. This course will familiarize the student with terms, how heat is transferred, pressure-temperature relationships, system components, and how they operate to provide heat or cooling. Extensive use of manuals is needed to understand the varied methods used by the industry in today's automobiles.

AUTO 272      AC Heating Diagnosis and Service      Fall      4 credits
Prerequisites: AUTO 108, 161 and 271 or departmental approval. This course will familiarize the student with the safe handling of coolants and refrigerants. An in-depth use of special tools and testing equipment is used in the servicing of both the systems and the components.

AUTO 282      Ignition Systems      Spring      3 credits
Prerequisites: AUTO 161 and 108 or departmental approval. This course is the study of the types of ignition systems in use by major automotive manufacturers. Theory and lab classes will cover operation and service procedures, including the use of basic and specialized test equipment.

AUTO 283      Fuel Delivery Systems      Spring      6 credits
Prerequisites: AUTO 161 and 108 or departmental approval. A course consisting of theory, diagnosis and repair of basic fuel delivery systems. These systems will include various types of gasoline fuel injection and carburetion.

AUTO 284      Emission Control Systems      Spring      6 credits
Prerequisites: AUTO 161 and 108 or departmental approval. A course consisting of theory, diagnosis and repair of emission control systems used on automotive gasoline engines. Systems covered will include evaporative, crankcase and exhaust emission controls.

AUTO 294      Independent Study      1-3 credits
Independent or directed study of special topics in automotive technology. Department chairperson approval required.

AUTO 299      Special Topics      1-3 credits
Variable topics on the technology of the automotive industry. Repeatable as long as content varies. Consent of department chairperson.

AUTO 195-295      Service Learning      1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

AUTO 197-297      Cooperative Education/Internship      1-3 credits
Repeatable up to six semester hours. Students get on-the job experience under qualified supervision in automotive technology occupations. Work hours arranged by employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/ or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.
**Biology (ASC, BIOL, BOT, MICR)**

**Academic Skills Courses**

**ASC 098 Basic Biology**

The study of Basic Biology 098 is intended to help those students without sufficient background in biology and chemistry to be successful in General Biology 150, Introductory Microbiology 202 or Anatomy & Physiology 220. Selected topics will include: chemistry as required to comprehend biology, basic cellular concepts, and human body systems and their functions. Concurrent registration in or previous successful completion of ASC 098L is required.

**ASC 098L Basic Biology Lab**

Basic Biology 098 Lab is intended to help familiarize students with techniques and equipment necessary to be competent in the laboratory. Lab work will focus on introducing students to the process of scientific investigation, the use and care of the microscope, basic biological concepts, and the structure and function of the human body. Concurrent registration in or previous successful completion of ASC 098L is required.

**College Level Courses**

**Biol 102 Introduction to Aquarium Keeping**

Introduction to Aquarium Keeping will explore the types of aquaria, aquarium equipment and maintenance, plants and animals for the aquarium and how to troubleshoot problems aquarium keepers may face.

**Biol 108 Beginning Birding**

This course is an introduction to the fascinating world of birds. Students will become familiar with the tools of birding such as binoculars, spotting scopes, field guides, and multimedia references. The course will also focus on characteristics of bird families and the identification of individual species before we go out in the field. The last portion of the class will concentrate on locating and identifying birds in their natural habitats. Students must be able to walk over uneven terrain.

**Biol 109 The Living World**

This course will cover basic concepts in biology, natural history, sociobiology and human biosocial interaction. The course is not intended for students pursuing careers in the biological sciences or students requiring a full year of general biology. This course does not meet the lab science requirement.

**Biol 111 Concepts of Biology**

Biology 111, in conjunction with Biology 111L, is designed to fulfill the lab science requirement of the student planning a non-science major. Included are discussions on the nature of living things, genetics, DNA, biotechnology, evolution, the diversity of living things, and ecology. Concurrent registration in or previous successful completion of Biol 111L is required.

**Biol 111L Concepts of Biology Lab**

Biology 111L, in conjunction with Biology 111, is designed to fulfill the lab science requirement of the student planning a non-science major. Included are laboratory activities on the nature of scientific thinking, genetics, biotechnology, evolution and ecology. Concurrent registration in or previous successful completion of Biol 111 is required.

**Biol 124 Environmental Science**

Prerequisite ENGL 110. An introduction to the basic concepts of ecology will provide the framework for investigating current and potential environmental problems. Over-population, air and water pollution, contamination of food, accumulation of medical and other biohazardous wastes, and depletion and exploitation of natural resources will be discussed. The role of individuals, businesses, and professions in limiting environmental problems will be stressed. No prerequisite. This course does not meet the lab science requirement, but it counts as a science course.

**Biol 126 Human Biology**

Biology 126 is designed to be an introduction for students planning on taking higher level anatomy and physiology courses. The course will include a wide range of topics associated with the human body and human life. This course, when taken with the associated lab, will fulfill the lab science requirements for the student planning a non-science major.

**Biol 126L Human Biology Lab**

Biology 126L, in conjunction with Biology 126, is designed to introduce students to the study of human anatomy and physiology. Included are laboratory activities on structure and function of the human body.

**Biol 150-151 General Biology I-II**

Biology 150 (no prerequisite) will cover the fundamental concepts of biology. Included will be discussions of the cellular nature of living things, cell anatomy and basic cell physiology. Special emphasis will be placed on DNA and protein synthesis, cellular respiration, photosynthesis, and the cell cycle. Instruction in Mendelian inheritance and molecular genetics will complete the semester. Biology 151 (no prerequisite) introduces theories of the origin of life on earth, evolution and describes current biological diversity. An overview of prokaryotes, protists, fungi, animals and plants will be included. The final segment of the course will include discussions on biogeography, population dynamics and community ecology. Concurrent registration in or previous successful completion of BIOL 150L-151L is required.

**Biol 150L-151L General Biology I-II Lab**

Laboratories to accompany BIOL 150-151. Concurrent registration in or previous successful completion of BIOL 150-151 is required.

**Biol 213 General Pathology**

This course will give students basic introduction to the human disease process. It will encompass an overview of normal anatomy and physiology followed by discussions relating to diagnoses, signs, symptoms and treatment options for various diseases in the 12 body systems.

**Biol 220 Anatomy and Physiology I**

Prerequisite: BIOL 126 or departmental consent; chemistry strongly recommended. This is the first in a sequence of two courses in which discussions of anatomy and physiology are interwoven in an attempt to present a unified picture of the structure and function of the organs and systems of the human body. These courses include biochemistry, cells, tissues, and the following systems: integumentary, skeletal, muscular, nervous, and special senses. Both gross and microscopic structures are studied. Concurrent registration in or previous successful completion of BIOL 220L is required.

**Biol 220L Anatomy and Physiology I Lab**

Concurrent registration in or previous successful completion of BIOL 220 is required. Anatomical structures are studied at both gross and microscopic levels. Experiments are performed demonstrating fundamental physiological principles.
BIOL 221 Anatomy and Physiology II  
F&S 3 credits

Prerequisite: BIOL 220 and 220L. This is the second of two courses in which discussions of anatomy and physiology are interwoven in an attempt to present a unified picture of the structure and function of the organs and systems of the human body. The following systems are examined: endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive. Both gross and microscopic structures are studied. Concurrent registration in, or previous successful completion of BIOL 221L is required.

BIOL 221L Anatomy and Physiology II Lab  
F&S 1 credit

Concurrent registration in or previous successful completion of BIOL 221 is required. Anatomical structures are studied at both gross and microscopic levels. Experiments are performed demonstrating fundamental physiological principles.

BIOL 294 Independent Study  
1-3 credits

Independent or directed study of special topics in biology. Department chairperson approval is required.

BIOL 250 Survey of Tropical Biology  
SM BD 3 credits

This course will survey the basic concepts of tropical biology. It will provide the student with a sound foundation in tropical ecosystems and biodiversity. This course will include formal lectures and laboratory field work in a tropical setting. When taken with BIOL 250L, it satisfies a four-credit lab science requirement. The lecture topics will include tropical plant adaptations and defenses, tropical invertebrate and vertebrate diversity and conservation issues. Special emphasis will be given to comparing the differences between tropical areas and temperate zones. This course is intended for any student regardless of major or background and there are no prerequisites. Instructor’s approval required for admission. Corequisite: BIOL 250L.

BIOL 250L Survey of Tropical Biology Lab  
SM BD 1 credit

This lab accompanies BIOL 250. The lab will consist of laboratory field work in a tropical setting and experiments designed to help the students better understand tropical biological concepts and techniques. Experiments that will be performed include marking and recapturing spiders, fish species diversity, identification of neotropical moths, population estimates, and more. Corequisite: BIOL 250L.

BIOL 251 Community Ecology  
Fall 3 credits

This course will introduce basic ecological concepts; describe the ecological structure, patterns, processes, and interactions of selected ecological communities and their organisms; and discuss human influences to these communities. Travel to specific ecological communities may be required. Corequisite: BIOL 251L.

BIOL 251L Community Ecology Lab  
Fall 1 credit

The laboratory includes fieldwork in selected ecological communities. Students will measure and analyze various biotic and abiotic factors and relate these to observed differences in community structure. Corequisite: BIOL 251.

BIOL 299 Special Topics  
BD 1-3 credits

Repeatable up to six semester hours. An examination of special topics in biology and related fields.

BIOL 195-295 Service Learning  
1-3 credits

Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

BIOL 197-297 Cooperative Education/Internship  
F&S SM 1-3 credits each

Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

BOTANY (BOT)

BOT 170 Plant Form and Diversity  
Spring 3 credits

Botany 170 is designed for the plant lover in all of us – the science major and non-major alike. Topics include the cellular nature of plants; plant structure, anatomy, and physiology; diversity of plants, and fungi; and human uses for plants. Concurrent registration in or previous successful completion of BIOL 170L is required.

BOT 170L Plant Form and Diversity Lab  
Spring 1 credit

Botany 170L is the laboratory to accompany Botany 170. Topics included are the cellular nature of plants; plant structure, anatomy, and physiology; diversity of plants, and fungi; and human uses for plants. Concurrent registration in or previous successful completion of BIOL 170 is required.

MICROBIOLOGY (MICR)

MICR 202 Introductory Microbiology  
F&S 3 credits

This course will include the study of cell structure and physiology of microorganisms, methods of microbial control, specific and nonspecific host defenses and epidemiology. Emphasis will be given to medically significant pathogens including bacteria, viruses, fungi and protozoa. Concurrent registration in or previous successful completion of MICR 202L is required. Prerequisite (one of the following): BIOL 150, 151, 126, 220 or 221.

MICR 202L Introductory Microbiology Laboratory  
F&S 1 credit

Students will learn basic microbiology techniques and principles as they study the characteristics of representative bacteria and fungi. Concurrent registration in or previous successful completion of MICR 202 is required.

BUSINESS (BADM, BUSN)

BADM 201 Principles of Marketing  
F&S 3 credits

An introductory course designed to cover the basic marketing concepts. Discussion focuses on market segmentation, consumer behavior and marketing mix strategy of products or services.

BADM 202 Principles of Management  
F&S 3 credits

The study of management is approached from a system basis. It ensures the student will receive a thorough understanding of the environment, problems and duties that confront the manager. Topics include planning and decision making, organizing, controlling, and leadership.
BADM 210 Advertising I F&S 3 credits
This course covers advertising from a marketing perspective. The focus is on planning and strategy development of an advertising program. Topics covered are campaign planning and development, marketing mix relationships, media options and buying and creative strategy.

BADM 224 Management Information Systems Spring 3 credits
Prerequisite: Principles of Management 202. An introduction to management information systems, microcomputer applications in business, office information systems and systems analysis and design.

BADM 240 Sales F&S 3 credits
An introductory study of salesmanship. All aspects of selling are introduced including the psychology of selling and recommended personality traits for sales people.

BADM 241 Sales Management F&S 3 credits
This course is a study of sales management with contemporary business firms. The course focuses on the development of managerial knowledge and skills including: developing sales strategies, organizing sales activities, developing leadership and supervision, motivation, evaluation techniques and development of sales forecasts. This is intended to be a capstone course for the business management program.

BADM 260 Principles of Retailing F&S 3 credits
Covers retail store operations—the independent retailer, the chain store, the specialty shop, the department store, etc. The operations of buying, selling, selecting personnel, pricing, markup, and markdowns are all covered. Also retail stores promotion, window display, and credit, selection of business location, layout, control and methods of computing various ratios.

BADM 274 Project Management F&S 3 credits
This course is designed to familiarize individuals with how project management differs from general management. Additional topics include project phases/steps, the role of the project manager. A variety of project tools such as, PERT/CPM/Gantt Charts, Precedence Diagram, Scheduling, Scope Control, Cost Control, Change Control and Resource Planning. A review of project management software is also included. People are a vital element of a project therefore selecting the right team members, building the team, gaining commitment, organizational structures, power and politics in project management will be discussed.

BADM 281 Organizational Behavior F&S 3 credits
This course covers principles, concepts and processes involved in interpersonal relationships in an organization. Discussion focuses on individual, group and organizational situations through case studies and role plays.

BADM 282 Human Resource Management F&S 3 credits
The course covers the various processes of personnel management such as recruiting, training, motivating, and counseling. Discussion centers around the tools, techniques, and methods that can be utilized in the management of personnel in any organization.

BADM 299 Special Topics BD 1-3 credits
Variable instructional topics under the broad umbrella of management. Repeatable as long as content varies. Consent of department chairperson. BSC-ENR.

BADM 195-295 Service Learning 1-3 credits
Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

BADM 197 Cooperative Education/Internship F&S SM 1-3 credits each
Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

BUSINESS (BUSN)

BUSN 120 Fundamentals of Business F&S 3 credits
Fundamentals of business management from the point of view of the business as a whole including basic management concepts and principles, forms of business organizations, organizations for administration, and major functions of management.

BUSN 170 Entrepreneurship F&S 3 credits
This course is designed to provide training for students who want to plan and organize their own business idea. It will provide information, resources and methods used in the development of a market research study, a feasibility study and a business plan.

BUSN 224 Electronic Commerce (E-Commerce) F&S 3 credits
This course is designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage, managing electronic commerce funds transfer, reinventing the future of business through electronic commerce, business opportunities in electronic commerce, electronic commerce website design, social, political and ethical issues associated with electronic commerce, and business plans for technology ventures. The purpose of this course is to educate a new generation of managers, planners, analysts, and programmers of the realities and potential for electronic commerce.

BUSN 294 Independent Study 1-3 credits
Independent or directed study of special topics in business. Department chairperson approval is required.

BUSN 299 Special Topics in Business Administration BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in business administration.

BUILDING CONSTRUCTION TECHNOLOGY (BCT)

SEE CARPENTRY

BUSINESS AND OFFICE TECHNOLOGY (BOTE)

BOTE 102 Keyboarding I F&S 3 credits
Learning the alphanumeric keyboard on the microcomputer with emphasis on skill building, letters, reports and tabulation.

BOTE 108 Business Mathematics F&S 3 credits
Review of fundamental processes and their application to business. Among topics studied are percentages, commissions, inventories, payrolls, taxes, interest, insurance, stocks and bonds.
This is a first semester course and a concise course designed for medical administrative assistants and others who will not go into the biological sciences. Emphasis will be placed on a broad basic knowledge of the skin, bones, muscles, and nerves and the development of a vocabulary of common anatomical terms.

This is a second semester course designed for medical administrative assistants and others who will not go into the biological sciences. Emphasis will be placed on a broad basic knowledge of the special senses, the heart, respiration, digestion, and reproductive systems. Students will develop a vocabulary of common anatomical terms.

A course using the microcomputer with selected software on concentrated drills to increase speed and accuracy. Students will also prepare letters, memos, reports, tabulations, as well as special problems. Prerequisite: Keyboarding I or ability to key with proper technique approximately 30–35 words per minute.

This course is a study of prefixes, suffixes, and root words of medical terms and their meaning, spelling and pronunciation. Designed for medical administrative assistants and related areas.

A review of medical vocabulary, this course also covers aspects of pathology, surgical operations, and diagnostic and therapeutic procedures, with a greater comprehension of human anatomy and physiology. The course also covers medical abbreviations and the principal terms used in pharmacology and radiology. Prerequisite: BOTE 171 or permission from instructor.

Introduction of office management concepts and technology, including office facilities development, office systems, human relations, office ethics and etiquette, and various administrative duties and responsibilities.

A creative business letter-writing course with emphasis on vocabulary and review of grammar combined with computer skills to produce clear, concise, correct, courteous and complete business letters. Report writing, team presentation, and oral communication included.

First semester course. Arrangement of professional charts, medical records, history sheets, and laboratory reports dictated by a professional dictator and covering physicals, radiology, operations, pathology, and autopsies.

Second semester course. Arrangement of professional charts, medical records, history sheets, and laboratory reports dictated by foreign doctors and covering endocrinology, special senses, neurology, pediatrics, obstetrics, and corrective surgery.

Development of the administrative assistant’s skills in the area of legal transcription. Students gain understanding of letters, legal documents, and forms used in the legal office. Students learn how to plan and organize legal forms and documents used in the litigation process.

This course familiarizes students with law office setup, ethics, mailing procedures, law office dockets, and communication skills. Emphasis on terminology and spelling. Emphasis will also be placed on law office procedures and the legal administrative assistant’s responsibility to employers and clients.

Independent or directed study of special topics in business and office technology. Department chairperson approval required.

Variable topics in the field of office technology. Repeatable as long as content varies. Consent of department chairperson.

Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

Repeatable up to six semester hours. Students get on-the-job experience under qualified supervision in computer applications and office technology occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.
CARPENTRY (CARP)

BUILDING CONSTRUCTION TECHNOLOGY (BCT)

CMT 252 Project Management Fall 3 credits
Prerequisite: BCT 216 and BCT 218. This course is designed to provide study in construction project management. Students will study, develop and apply work place interpersonal skills, construction documentation, trades and resource scheduling and control and construction planning.

CMT 253 Construction Scheduling Spring 3 credits
Prerequisite CMT 252. This course is designed to give an overview of construction scheduling. Emphasis will be placed on coordinating plans, specifications, construction materials, employees, subcontractors, equipment and evaluating if resources and schedules are being utilized in an efficient and profitable process.

BCT 216 Sustainable Building I Spring 3 credits
This course introduces and defines sustainable/green building. Energy efficiency and conservation will be studied as a system considering materials production, site selection and design, building construction, owning and maintaining a sustainable/green home, impact on the natural environment by the built environment, and the end of life cycle and deconstruction of buildings. Emphasis will be placed on preparing students for Sustainable Building II in which students will design a sustainable/green-built home and study the construction process and contracting of the home.

BCT 218 Sustainable Building Science II Spring 3 credits
Prerequisite: BCT 216. This course is a study of how the systems of a house are combined to form a sustainable/green built whole house system. Emphasis will be placed on the sequence of construction and the functioning interrelationship of the systems. Students will be required to design a home based on the concepts studied in BCT 216 and 218.

BCT 222 Construction Safety Spring 3 credits
This course is designed to parallel the 29CFR1926 OSHA Construction Industry Regulations and to conform to the National Center for Construction Education and Research (NCCER). The course covers both the compliance as well as best practices in the construction industry as they pertain to safety.

BCT 260 Residential Building Codes Spring 3 credits
This course is a study of residential building codes. Students will learn specific codes, effective use of code books, and the importance of building codes on the home building industry.

BCT 264 Residential Energy Rating Systems Spring 3 credits
This course covers how energy is used, conserved, and measured in a residential structure. National home energy rating and certification systems will be studied including LEED, Energy Star, and National Green Building Standard systems.

BCT 276 House Systems Spring 3 credits
Prerequisite: CARP 110 or BCT 216. This course is designed to give an overview of integrated residential home systems. Introductory study in the areas of mechanical and electrical systems will be provided. The study will be designed for students with little or no experience in the mechanical or electrical trades.

Bismarck State College
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHEM 110</td>
<td>Survey of Chemistry</td>
<td>Fall BD</td>
<td>3 credits</td>
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<tr>
<td>CHEM 110L</td>
<td>Survey of Chemistry Lab</td>
<td>Fall BD</td>
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<tr>
<td>CHEM 112</td>
<td>Introduction to Forensic Science</td>
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<td>3 credits</td>
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<tr>
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<td>Introduction to Forensic Science Lab</td>
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<tr>
<td>CHEM 114</td>
<td>Chemistry in Art</td>
<td>Spring BD</td>
<td>3 credits</td>
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<tr>
<td>CHEM 115</td>
<td>Introductory Chemistry</td>
<td>F&amp;S SM</td>
<td>4 credits</td>
</tr>
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<td>CHEM 115L</td>
<td>Introductory Chemistry Lab</td>
<td>F&amp;S SM</td>
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<td>CHEM 116</td>
<td>Introduction to Organic and Biochemistry</td>
<td>F&amp;S SM</td>
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<tr>
<td>CHEM 117</td>
<td>Physical Chemistry</td>
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<td>Physical Chemistry Lab</td>
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<td>CHEM 118</td>
<td>Analytical Chemistry</td>
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<td>CHEM 118L</td>
<td>Analytical Chemistry Lab</td>
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<tr>
<td>CHEM 119</td>
<td>Chemical Engineering</td>
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<td>Chemical Engineering Lab</td>
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<tr>
<td>CHEM 120</td>
<td>Advanced Chemistry</td>
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<td>Advanced Chemistry Lab</td>
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<tr>
<td>CHEM 121</td>
<td>General Chemistry I</td>
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<td>CHEM 121L</td>
<td>General Chemistry I Lab</td>
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<tr>
<td>CHEM 122</td>
<td>General Chemistry II</td>
<td>F&amp;S</td>
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<td>General Chemistry II Lab</td>
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<td>Topics in Chemistry</td>
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<td>Special Topics in Organic and Biochemistry</td>
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<td>Special Topics in Organic and Biochemistry Lab</td>
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<td>Special Topics in Physical Chemistry</td>
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<td>Special Topics in Physical Chemistry Lab</td>
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<td>CHEM 127</td>
<td>Special Topics in Analytical Chemistry</td>
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<tr>
<td>CHEM 128</td>
<td>Special Topics in Chemical Engineering</td>
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<td>Special Topics in Advanced Chemistry</td>
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<td>CHEM 131</td>
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<td>CHEM 131L</td>
<td>Special Topics in Special Topics in Chemistry Lab</td>
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**CHEMISTRY (CHEM)**

**CHEM 110** Survey of Chemistry Fall BD 3 credits

This course is designed specifically for non-science majors who wish to obtain a basic understanding of chemistry as applied in the world today. Does not serve as a prerequisite for other chemistry courses. Concurrent registration in CHEM 110L is required.

**CHEM 110L** Survey of Chemistry Lab Fall BD 1 credit

One two-hour lab session per week. An introduction to general and organic chemistry laboratory techniques with an emphasis on applications drawn from health, environmental and industrial sciences. Concurrent registration in CHEM 110 is required.

**CHEM 112** Introduction to Forensic Science F&S 3 credits

Prerequisite: MATH 102. Introduces the basic principles and relationships between the applications of chemistry to forensic sciences as they relate to the criminal investigative process. Areas included are blood analysis, hair analysis, firearm identification, fiber comparisons, paints, glass compositions, soil comparison, and seminal fluid analysis. Upon completion of this course students should understand the potential value of forensic science and also the limitations. Concurrent registration in CHEM 112L is required.

**CHEM 112L** Introduction to Forensic Science Lab F&S 1 credit

Prerequisite: MATH 102. Concurrent registration in CHEM 112 is required.

**CHEM 114** Chemistry in Art Spring BD 3 credits

This course is designed specifically for non-science majors and liberal arts majors who wish to obtain the elementary principles and theories of chemistry and the study of chemical elements and their compounds as relevant to art topics and real-world uses. It does NOT serve as a prerequisite for any other chemistry courses. Concurrent registration in CHEM 114L is required.

**CHEM 114L** Chemistry in Art Lab Spring BD 1 credit

One two-hour lab session per week. Concurrent registration in CHEM 114 is required.

**CHEM 115** Introductory Chemistry F&S SM 4 credits

Elementary principles and theories of chemistry and the study of chemical elements and their compounds. Concurrent registration in CHEM 115L is required. Prerequisite: MATH 102 or higher or instructor permission.

**CHEM 115L** Introductory Chemistry Lab F&S SM 1 credit

One two-hour lab session per week. Concurrent registration in CHEM 115 is required.

**CHEM 116** Introduction to Organic and Biochemistry F&S SM 4 credits

Prerequisite: Passing grade of ‘C’ or better in CHEM 115 or CHEM 121 within the past three years. Emphasis is placed on organic and biochemistry. Especially intended for students who wish to include organic and biochemistry their first year. Required for students planning degrees in nursing, clinical lab technician and other allied health fields. Concurrent registration in CHEM 116L is required.

**CHEM 116L** Introduction to Organic and Biochemistry Lab F&S SM 1 credit

One two-hour lab session per week. Concurrent registration in CHEM 116 is required.

**CHEM 121** General Chemistry I F&S 4 credits

Prerequisite: CHEM 115 or one year high school chemistry and MATH 103 or higher. Required of engineers, pre-medical students, clinical lab scientists, pharmacists, chiropractors and others planning on advanced courses in chemistry. Covers matter, measurement, atoms, ions, molecules, reactions, chemical calculations, thermochromy, bonding, molecular geometry, periodicity, and gases. Concurrent registration in CHEM 121L is required.

**CHEM 121L** General Chemistry I Lab F&S 1 credit

One three-hour lab session per week. Concurrent registration in CHEM 121 is required.

**CHEM 122** General Chemistry II F&S 4 credits

Prerequisite: A passing grade of ‘C’ or better in CHEM 121. Covers intermolecular forces, liquids, solids, kinetics, equilibria, acids and bases, solution chemistry, precipitation, thermodynamics, electrochemistry. Concurrent registration in CHEM 122L is required.

**CHEM 122L** General Chemistry II Lab F&S 1 credit

One three-hour lab session per week. Concurrent registration in CHEM 122 is required.

**CHEM 241** Organic Chemistry I Fall 4 credits

Prerequisite: a passing grade of ‘C’ or better in CHEM 122. Recommended for pharmacy, pre-med, clinical lab science, chemistry, chemical engineering, chiropractic, and related fields. Concurrent registration in CHEM 241L is required.
Provides hands-on operation of personal computers using Microsoft Word. Students should have keyboarding skills before enrolling in this class. This class prepares students to take the Word section of the Microsoft Office Specialist exam. Students will need access to Word 2010 software for this course. The program is included in the Office 2010 suite. The software is available through the BSC Bookstore at academic pricing. The software is also located on campus in most computer labs. The MOS exam is required for completion of the course, and lab fees are the student’s responsibility. Final grade is not based upon whether student passes or fails MOS exam.

This is an introduction to the planning, design and programming of database systems using software designed for database management, Microsoft Access. Students should have keyboarding skills before enrolling in this class. This class prepares students the Access section of the Microsoft Office Specialist exam. Students will need access to Access 2010 software for this course. The program is included in the Office 2010 suite. The software is available through the BSC Bookstore at academic pricing. The software is also located on campus in most computer labs. The MOS exam is required for completion of the course, and lab fees are the student’s responsibility. Final grade is not based upon whether student passes or fails MOS exam.

Provides hands-on operation of personal computers using Microsoft Excel. Students should have keyboarding skills before enrolling in class. This class prepares students to take the Excel section of the Microsoft Office Specialist exam. Students will need access to Excel 2010 software for this course. The program is included in the Office 2010 suite. The software is available through the BSC Bookstore at academic pricing. The software is also located on campus in most computer labs. The MOS exam is required for completion of the course, and lab fees are the student’s responsibility. Final grade is not based upon whether student passes or fails MOS exam.

Provides hands-on operation of personal computers using Microsoft PowerPoint. Students should have keyboarding skills before enrolling in this class. This class prepares students to take the PowerPoint section of the Microsoft Office Specialist exam. Students will need access to PowerPoint 2010 software for this course. The program is included in the Office 2010 suite. The software is available through the BSC Bookstore at academic pricing. The software is also located on campus in most computer labs. The MOS exam is required for completion of the course, and lab fees are the student’s responsibility. Final grade is not based upon whether student passes or fails MOS exam.

This course introduces students to the Linux operating system. It will provide practical skills in using Linux commands and utilities, including editors and file system management. This course prepares students for numerous industry-standard Linux certifications.

This course introduces students to the Linux operating system. It will provide practical skills in using Linux commands and utilities, including editors and file system management. This course prepares students for numerous industry-standard Linux certifications.

This course provides hands-on production of researching, creating and delivering electronic business presentation projects using Microsoft PowerPoint. Students should have keyboarding skills before enrolling in this class. This class prepares students to take the PowerPoint section of the Microsoft Office Specialist exam. Students will need access to PowerPoint 2010 software for this course. The program is included in the Office 2010 suite. The software is available through the BSC Bookstore at academic pricing. The software is also located on campus in most computer labs. The MOS exam is required for completion of the course, and lab fees are the student’s responsibility. Final grade is not based upon whether student passes or fails MOS exam.

Concepts covered include the tasks involved in various Information Technology (IT) job roles, Internet connection methods, Internet protocols, the Domain Name System (DNS), URLs, customization of Web browsers, plug-ins, e-mail, search engines, security and project management. Course prepares students to write the Internet Business Associate exam. This exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certifications.
CIS 152  Cascading Style Sheets  Spring  3 credits
Students will learn how to format Web pages using Cascading Style Sheets (CSS). Concepts covered are the anatomy of a CSS rule, inline, embedded and external style use, contextual selectors, classes, ids, pseudo-classes, font and text properties, style inheritance, the box model, and basic and advanced page layout. Prerequisite: CIS 154 or CIS 230 or instructor’s consent.

CIS 154  Web Design Theory  Fall  3 credits
Students will learn how to create and manage their own Web pages using Hypertext Markup Language (HTML), Extensible HTML (XHTML), and CSS. Students will learn to write code manually, as well as use graphical user interface (GUI) authoring tools. Students will further learn the importance of marketing and implementing fundamental design concepts along with validating their HTML or XHTML code. This course will introduce students to the complete planning and design phases of good web design. Topics include planning phases, color choices, interactivity, branding, cultural concerns, navigation, accessibility and planned maintenance for proper web design. Course prepares students to write the Site Development Associate exam. This exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certifications.

CIS 164  Networking Fundamentals I  F&S  4 credits
This course focuses on network terminology and protocols, LANs, WANs, the OSI model, cabling, cabling tools, routers, IP addressing, and network standards. The first of four courses leading to the Cisco Certified Network Associate (CCNA) certification. Prerequisite: CIS 102 or CIS 104, CIS 105 and CIS 130.

CIS 165  Networking Fundamentals II  F&S  4 credits
This course introduces the architecture, components, and operation of routers, and principles of routing and routing protocols. Students will learn the primary routing protocols RIP, EIGRP, and OSPF. The second of four courses leading to the Cisco Certified Network Associate (CCNA) certification. Prerequisite: CIS 164 or instructor approval.

CIS 202  Advanced Software Applications  Spring  3 credits
Provides hands-on experience with the powerful integration capabilities of the Microsoft Office suite. Students enrolled in this course must have access to Microsoft Office 2010, specifically Word, Excel, Access, and PowerPoint for the duration of the entire course. Required software MAY NOT BE included with the textbook; required software may be a separate purchase. Required software is available in selected BSC computer labs for student use. Prerequisite/Co-requisite: CIS 102, CIS 104, CIS 105 and CIS 130.

CIS 204  Database Design and Structured Query Language (SQL)  F&S  3 credits
This course provides students with a foundation in database theory and provides the technical skills required to write basic SQL queries.

CIS 206  Database Implementation and Administration  BD  3 credits
This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot client-server database management systems.

CIS 208  Database Programming  BD  3 credits
This course provides students with the technical skills required to program a database solution, using stored procedures, SQL, and proper database design principles. Prerequisite: CIS 204.

CIS 209  Data Warehousing  BD  3 credits
This course provides students with the technical skills required to plan, implement, and maintain a data warehouse. Prerequisite: CIS 208.

CIS 210  Desktop Publishing  Fall  3 credits
A layout and design course using Adobe Creative Suite software to produce a variety of desktop publishing application projects. Students should have keyboarding and word processing skills before enrolling in this class. Students enrolled in this course must have access to the required software listed in the syllabus for the duration of the course. Required software MAY NOT BE included with the textbook; required software may be a separate purchase. Required software is available in selected BSC computer labs for student use.

CIS 211  Database Programming Project  BD  3 credits
This course requires students to produce a comprehensive database programming project. Design issues, implementation, and database troubleshooting will be discussed. Prerequisite: CIS 208.

CIS 212  Microsoft Windows Operating System Client  F&S  3 credits
The course helps learners to gain the knowledge and skills to install, configure, customize, optimize, and troubleshoot the Microsoft Windows operating system in a stand-alone and network environment. Windows 7 is the current focus of the class. This course leads to the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications.

CIS 213  Implementing Microsoft Windows Server Applications  F&S  3 credits
This course introduces the learner to the Microsoft Windows Server and the application server technologies it supports. Windows Server 2008 is the current focus of the class. This course leads to the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications.

CIS 214  Implementing Microsoft Windows Active Directory Infrastructure  F&S  3 credits
This course provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory services. The course also focuses on implementing Group Policy and performing the Group Policy-related tasks that are required to centrally manage users and computers. Windows Server 2008 is the current focus of the class. This course leads to the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications. Prerequisite: CIS 216.

CIS 215  Implementing Microsoft Windows Server Environment  F&S  3 credits
This course introduces the learner to Microsoft Windows Server and the networking technologies it supports. The learner will become familiar with networking and operating system concepts and the common tasks required to administer and support the Microsoft Windows operating system in a network environment. Windows Server 2008 is the current focus of the class. This course leads to the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications. Prerequisite: CIS 216.

CIS 216  Implementing a Microsoft Windows Network Infrastructure  F&S  3 credits
This course is for professionals who will be responsible for configuring, managing, and troubleshooting a network infrastructure that uses the Microsoft Windows Server products. These tasks include implementing routing; implementing, managing, and maintaining Dynamic Host Configuration Protocol (DHCP), and Domain Name System (DNS); and implementing a network access infrastructure by configuring the connections for remote access clients. Windows Server 2008 is the current focus of the class. This course leads to the Microsoft Certified Technology Specialist (MCTS) and Microsoft Certified IT Professional (MCITP) certifications.
CIS 221  Networking Essentials  Fall  3 credits
This course introduces students to the concepts and terminology of data communications, local area and wide area networks, communications hardware, standards, media, signaling concepts, data communication, error prevention, detection and correction. Course prepares students to write the Network Technology Associate exam. This CIW exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certification.

CIS 223  Linux System Administration  F&S  3 credits
This course covers command line and graphical administration of Linux computer systems. Topics covered include installation, user management, process management, software management, network configuration, and other system configuration tasks. This course prepares students for numerous industry-standard Linux certifications. Prerequisite: CIS 107 or instructor approval.

CIS 226  Linux Network and Security Administration  F&S  3 credits
This course covers common Linux networking services, installation, and configuration. Students will learn to configure and administer a Linux system to support common network services and discuss methods to alleviate security problems on a Linux system. Students will learn to configure and administer Linux systems with security in mind. This course prepares students for numerous industry-standard Linux certifications. Prerequisite: CIS 223.

CIS 230  Electronic Publishing  Fall  3 credits
Students will use Adobe Dreamweaver, Flash and Fireworks in this course. Dreamweaver concepts include working with text, images, graphics, links, tables, and publication of websites. Flash concepts include creating objects, working with symbols and interactivity and creating animations and special effects. Fireworks concepts include working with objects and importing, selecting and modifying graphics. Students enrolled in this course must have access to the required software listed in the syllabus for the duration of the course. Required software MAY NOT BE included with the textbook; required software may be a separate purchase. Required software is available in selected BSC computer labs for student use.

CIS 231  Search Engine Optimization (SEO)  Fall  3 credits
Students will learn the basic principles of optimizing websites for improved performance in search engine results, ultimately enhancing the marketability of their website products and/or services. Students will further develop a basic understanding of the history of search engines, differences in search engine and directory results, and applied practices in structuring HTML and page content to increase the website’s visibility to the consumer. Prerequisite: CIS 154 or CIS 230, and ENGL 110 or instructor’s consent.

CIS 233  Vector Graphics and Web Animation  Spring  3 credits
Students will learn how to create websites using Adobe Flash. Concepts covered include animation, tweening, layers, guides, masks, symbols, publishing movies, and ActionScript. Students enrolled in this course must have access to the required software listed in the syllabus for the duration of the course. Required software MAY NOT BE included with the textbook; required software may be a separate purchase. Required software is available in selected BSC computer labs for student use.

CIS 235  CIW Database Design Methodology  Fall  3 credits
CIW Database Design Methodology teaches students how to plan and design relational databases. Students will learn about the theory behind relational databases, relational database nomenclature, and relational algebra. This course includes sections on Structured Query Language (SQL) and optimizing databases through normalization. Students will apply their knowledge with hands-on labs designed to teach the intricacies of database design methodology. Course prepares students to write the CIW Database Design Specialist Exam. This CIW exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certification.

CIS 250  Advanced Web Design  Fall  3 credits
Students will learn how to add JavaScript to their Web pages. Concepts covered include variables, expressions, functions, methods, objects, events, control structures, windows, forms, frames and cookies. Prerequisite: CIS 154 and CSCI 122 or instructor’s consent.

CIS 251  Site Design  Spring  3 credits
This course focuses on theory, design and Web construction, along with information architecture concepts, Web project management, scenario development and performance evaluations. Students will further learn how to create and manage Web sites with tools such as Microsoft Expression Web, Adobe Dreamweaver, Fireworks and Flash, Dynamic HTML, and various multimedia and CSS standards. Students will also implement the latest strategies to develop third-generation Web sites, evaluate design tools, discuss future technology standards, and explore the incompatibility issues surrounding current browsers. This course provides a balance of training in theory, technology, project management, and hands-on development. Course prepares students to write the CIW Web Design Specialist Exam. This CIW exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certification. Prerequisite: CIS 151, CIS 154 and CIS 230.

CIS 252  XML  Spring  3 credits
This course will introduce students to Extensible Markup Language (XML). Concepts covered include document type definitions (DTDs), schemas, and namespaces. Other topics covered include the use of XML in application software, such as Microsoft Office suite. Prerequisite: CIS 154 and CIS 104, or CIS 235 or instructor’s consent.

CIS 253  PHP  Spring  3 credits
Students will learn how to design dynamic, data-driven Web pages using server-side scripting. Prerequisite: CIS 154 and CIS 250 or instructor’s consent.

CIS 254  CIW E-Commerce Strategies and Practices  Spring  3 credits
During this course, students will be taught the concepts of e-commerce and doing business online, including technical concerns and differences from traditional commerce. Course prepares students to write the CIW E-commerce Specialist exam. This CIW exam is required and students will be assessed an exam fee. Final grade is not based on whether student passes or fails certification. Prerequisite: CIS 251.

CIS 255  Computer and Network Security  F&S  3 credits
This course introduces students to computer and network security topics, including cryptography, authentication, VPNs, and other aspects of enterprise security. Networking and operating system knowledge recommended before taking this course.

CIS 256  Web Portfolio  Spring  3 credits
This course provides an opportunity for a student to receive unique work experience in Web design and development through creating websites for non-profit organizations or businesses. Prerequisites: CIS 152, CIS 154, CIS 231 and CIS 251.
CIS 267 Intermediate Networking I F&S 4 credits
This course teaches the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model. Students also learn to implement VLANs, VTP, STP, and Inter-VLAN routing. The third of four courses leading to the Cisco Certified Network Associate (CCNA) certification. Prerequisite: CIS 164 or instructor approval.

CIS 268 Intermediate Networking II F&S 4 credits
This course focuses on WAN technologies and services required by converged applications in enterprise networks. Students learn to implement and configure common data link protocols and to apply WAN security concepts, traffic principles, access control, and addressing services. The fourth of four courses leading to the Cisco Certified Network Associate (CCNA) certification. Prerequisite: CIS 165 and CIS 267, or instructor approval.

CIS 269 Network Architecture and Design F&S 3 credits
A capstone course for the Computer Support Specialist program, this class teaches network and security design principles as they apply to Information Technology projects. Significant hands-on work with an IT project is required for this class. It is recommended that students take this course during their last semester in the Computer Support Specialist program.

CIS 270 Implementing IP Routing BD 4 credits
This course teaches students to implement, monitor, and maintain routing services in an enterprise network. Students will learn to plan, configure, and verify the implementation of complex enterprise LAN and WAN routing solutions, using a range of routing protocols in IPv4 and IPv6 environments. The course also covers the configuration of secure routing solutions to support branch offices and mobile workers. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills. The first of three courses leading to the Cisco Certified Professional (CCNP) certification. Prerequisite: CIS 268, CCNA certification, or instructor approval.

CIS 272 Implementing IP Switching BD 4 credits
This course teaches students to implement, monitor, and maintain switching in converged enterprise campus networks. Students will learn to plan, configure, and verify the implementation of complex enterprise switching solutions. The course also covers the secure integration of VLANs, WLANs, voice, and video into campus networks. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills. The second of three courses leading to the Cisco Certified Professional (CCNP) certification. Prerequisite: CIS 268, CCNA certification, or instructor approval.

CIS 273 Maintaining and Troubleshooting IP Networks BD 4 credits
This course teaches students to monitor and maintain complex, enterprise routed and switched IP networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices, based on systematic and industry recognized approaches. Extensive labs emphasize hands-on learning and practice to reinforce troubleshooting techniques. The third of three courses leading to the Cisco Certified Professional (CCNP) certification. Prerequisites: CIS 270 and 272, or instructor approval.

CIS 294 Independent Study F&S 1-3 credits
Independent or directed study of topics in computer information systems. Department chairperson approval is required.

CIS 195-295 Service Learning BD 1-3 credits
Repeatable up to six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

CIS 197-297 Cooperative Education/Internship F&S 1-3 credits
Repeatable up to six semester hours. Students get on-the-job experience under qualified supervision in computer applications, office technology, and network administration occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/ or problems. All co-op/internship experiences are graded on a satisfactory/ unsatisfactory basis. Department chairperson approval is required.

CIS 299 Special Topics in Computer Information Systems BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in computer information systems.

COMPUTER SCIENCE (CSCI)

CSCI 101 Introduction to Computers F&S 3 credits
Introduces students to general computer topics such as input and output devices, the computer’s impact on society, programming languages and software. Includes hands-on experience in word processing, spreadsheets, data management and presentations.

CSCI 122 Beginning Visual Basic F&S 3 credits
A course in writing programs using the Visual Basic language for students with no previous experience with a programming language, but some experience with a computer.

CSCI 124 Beginning C++ F&S 3 credits
Introduction to programming in the C++ language for students with some programming experience in another language. Prerequisite: Computer Science 160. Co-requisite: Computer Science 161.

CSCI 125 Beginning Cobol 3 credits
An introduction to computer programming and computer applications. Prerequisite: CSCI 122.

CSCI 127 Beginning Java 3 credits
An introduction to the Java programming language for students with some programming experience in another language. Covers Java syntax, applets, and applications.

CSCI 160 Computer Science I F&S 4 credits
Systematic development of algorithms and programming structure with an emphasis on problem solving and design. The use of good programming style to aid in designing, coding, and debugging programs. Includes use of a structured high level language. Primarily for those who plan to major or minor in Computer Science or Computer Support Specialist. Prerequisite: CSCI 122 or equivalent.

CSCI 161 Computer Science II Spring 4 credits
Advanced concepts in computer science, including the Software Life Cycle, data structures, thread processing, hashing, and Graphical User Interfaces. Prerequisite: Computer Science 160.
How and why employee theft occurs in its many forms, and its impact on business. Internal theft controls, including pre-employment screening, honesty testing, management’s role in preventing internal theft, cash and merchandise controls.

**CJ 172 Business and Retail Security** BD 3 credits  
Differentiation within the entire security system. Trends of business and retail security systems and methodology for providing retail security needs. Detection and control of loss and prevention techniques.

**CJ 201 Introduction to Criminal Justice** F&S SM 3 credits  
Introduction to Criminal Justice involves the survey of law enforcement: the role, history, development and constitutional aspects of law enforcement and public safety. The course also includes a review of the agencies: police, courts, corrections and others involved in the process and administration of criminal justice.

**CJ 210 Introduction to Policing** Fall 3 credits  
An introduction to the specific field of law enforcement and its responsibilities; including patrol, traffic, investigation, juvenile and special operational units. Federal, State and Local agencies will be reviewed to distinguish their separate roles and coordinating efforts for maximizing the necessary efficiency of law enforcement, as we know it.

**CJ 212 Business and Retail Security** BD 3 credits  
Differentiation within the entire security system. Trends of business and retail security systems and methodology for providing retail security needs. Detection and control of loss and prevention techniques.

**CJ 230 Internship** Fall 3 credits  
A continuation of CJ 125. Students will work with the advanced features of the COBOL language, including creating, sorting and maintaining indexed files, writing sub-programs and work hexadecimal file dumps. Each student will design, code, test, and document a system consisting of several programs and files with complex formatted output. Prerequisite: CSCI 122 and 125.

**CJ 231 Criminal Law** Fall 3 credits  
Survey of substantive criminal law as a means of attaining certain socially desirable ends like the preservation and protection of life and property; emphasis on historical and philosophical concepts.

**F&S SM 3 credits**

**CJ 232 Administration of Justice** BD 3 credits  
Administration of police line operations; Review principles of various administrative styles for organization and administration of staff functions and activities; including policy, personnel distribution and analysis of operations.

**CJ 233 Police Administration** BD 3 credits  
Administration of police line operations; Review principles of various administrative styles for organization and administration of staff functions and activities; including policy, personnel distribution and analysis of operations.

**CJ 236 Criminal Investigation** Spring 3 credits  
Introduction to criminal investigation procedures including theory of an investigation, conduct at crime scenes, collection and preservation of physical evidence; methods used in police science laboratory, fingerprints, ballistics, documents, serology, photography, and related forensic sciences.

**CJ 237 Criminal Investigation** Spring 3 credits  
Introduction to criminal investigation procedures including theory of an investigation, conduct at crime scenes, collection and preservation of physical evidence; methods used in police science laboratory, fingerprints, ballistics, documents, serology, photography, and related forensic sciences.

**CJ 238 Criminal Evidence and Procedure** Spring 3 credits  
Deals with rules of evidence of particular import at the operational level in law enforcement and with criminal procedure in important areas such as arrest, force, and search and seizure.

**CJ 239 Criminal Evidence and Procedure** Spring 3 credits  
Deals with rules of evidence of particular import at the operational level in law enforcement and with criminal procedure in important areas such as arrest, force, and search and seizure.

**CJ 240 Advanced Cobol** 3 credits  
A continuation of CSCI 125. Students will work with the advanced features of the COBOL language, including creating, sorting and maintaining indexed files, writing sub-programs and work hexadecimal file dumps. Each student will design, code, test, and document a system consisting of several programs and files with complex formatted output. Prerequisite: CSCI 122 and 125.

**CJ 241 Criminal Law** Fall 3 credits  
Survey of substantive criminal law as a means of attaining certain socially desirable ends like the preservation and protection of life and property; emphasis on historical and philosophical concepts.

**F&S SM 3 credits**

**CJ 242 Administration of Justice** BD 3 credits  
For criminal justice students or laymen; designed to broaden the understanding of the student concerning the various agencies involved in the administration of criminal law. Emphasis is placed upon the more important law enforcement functions and interrelationships from arrest to executive pardon.

**CJ 243 Introduction to Homeland Security** F&S SM 3 credits  
This course discusses the historic overview of the events of terrorism that lead to the establishment of the Department of Homeland Security, statutory authority, the organization and reorganization of agencies, weapons of mass destruction, and safety and security to provide for a safe America. Introduction to Homeland Security provides important
and up-to-date information about terrorism, terrorist behavior, homeland security policies and dilemmas, and how to deal effectively with threats and the consequences of attacks.

**CJ 254 Juvenile Justice System** Spring 3 credits
Special legal status of the juvenile, protective services, the juvenile and family, court movement, and child labor laws. Emphasis on noncriminal aspects of administration of juvenile justice, guardianship, dependency, neglect, child support, paternity and adoption.

**CJ 270 Introduction to Corrections** Fall 3 credits
Survey of current correctional thought and practices in the United States. Evolution of modern correctional practices in the United States. Overview of correctional treatment in different types of institutions and in the community.

**CJ 271 Community Based Corrections** Spring 3 credits
Basic concepts, history, legislation and practices used in work with juveniles and adults who have been placed on probation or parole; criteria of selection, methods of supervision, and elements of case reporting.

**CJ 294 Independent Study** 1-3 credits
Independent or directed study of special topics in criminal justice. Department chairperson approval is required.

**CJ 299 Special Topics in Criminal Justice** BD 1-3 credits
Repeatable to six semester hours. An examination of special topics in criminal justice.

**CJ 195-295 Service Learning** 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

**CJ 197-297 Cooperative Education/Internship** F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

**ECON 202 Principles of Macroeconomics** F&S SM 3 credits
Open to freshmen. Prerequisite: Econ 201. Analysis of economic growth and development, aggregate levels of income and employment, inflation, fiscal and monetary policy, and international trade.

**ECON 294 Independent Study** 1-3 credits
Independent or directed study of special topics in economics. Department chairperson approval is required.

**ECON 299 Special Topics** BD 1-3 credits
Repeatable to six semester hours. An examination of special topics in economics.

**ECON 195-295 Service Learning** 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

**ECON 197-297 Cooperative Education/Internship** F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

**EDUCATION (EDUC)**

**EDUC 250 Introduction to Education** F&S 2 credits
A study of teaching as a profession, including historical, philosophical, social and psychological foundations of education. This course also contains a 30 hour preprofessional observational experience in a K-12 classroom. Corequisite: EDUC 298.

**EDUC 294 Independent Study** 1-3 credits
Independent or directed study of special topics in education. Department chairperson approval is required.

**EDUC 298 Pre-Professional Experience** F&S 1 credit
Students will be placed with teachers in actual K-12 classes. Students will spend thirty hours observing the teachers in action and will keep journals recording their observations. Students must be enrolled in Education 250 at the same time from the same instructor.

**EDUC 299 Special Topics in Education** BD 1-3 credits
Repeatable to six semester hours. An examination of special topics in education.

**EDUC 195-295 Service Learning** 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

**EDUC 197-297 Cooperative Education/Internship** F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to
submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

**ELECTRIC POWER TECHNOLOGY (ELPW) (ENRT)**

**ENRT 103  Applied Math  3 credits**
This course will teach basic math skills and apply those to energy industry situations. Students will learn the metric system, basic volume and area calculations as well as algebra and trigonometry and how they apply to industry specific situations.

**ENRT 106  DC Fundamentals  2 credits**
(Recommended prerequisite: ENRT 103) This course covers basic direct current theories and applies those theories to the electrical system and related equipment. Students will study methods of producing a voltage, such as batteries, magnetic fields, basic series and parallel circuits. Students will also study DC circuit calculations.

**ENRT 108  AC Fundamentals  3 credits**
(Recommended prerequisite: ENRT 103, 106) This course covers basic alternating current theories and applies those theories to electrical systems and related equipment. Students will also study basic generator and motor design, construction and operation principles.

**ENRT 115  Industrial Composition  2 credits**
In this course, students will learn some of the common terminology used in the industry and the proper writing techniques necessary to work within the industry. Students will participate in practical industrial writing scenarios, such as filling out work request orders, electrical switching orders and inter-company memos.

**ELPW 101  Basic Computer Skills  3 credits**
This course is designed to give students a general understanding of computers, both hardware and software. Students will learn to access the Internet and navigate through their online courses and utilize the system tools. This course will also include a basic study of MS Word, MS Excel and MS Power Point. Students must have access to current software applications.

**ELPW 105  Electrical System Fundamentals  3 credits**
This course will begin with a look at several types of power generation stations, such as large fossil fired power plants, hydroelectric power plants, gas turbine and combined cycle generating stations and finally a brief look at wind generation. After the introduction to power generation, students will study how the power is delivered from the power station to the consumer. This course will cover transmission lines and related components within a typical transmission system, such as step-up and step-down transformers, circuit breakers, disconnects and protective relaying.

**ELPW 109  Electrical Industry Safety  3 credits**
This course covers the general safety practices and information employees need while working in any segment of the electrical industry, and the Federal Agencies responsible for insuring a safe working environment. Students will also gain an understanding of the Workers Right to Know regulations and gain an awareness of Public Safety issues.

**ELPW 110  Basic Print Reading  3 credits**
This course gives students an introduction to the different schematics used in power plant operations and electrical transmission and distribution systems. Students will gain an understanding of the standard symbols used in the various systems schematics and how to read them. Students learn how to read basic piping and instrumentation diagrams and how to interpret single line electrical diagrams. Students finish the course by studying electrical system diagrams beginning at the generator and following through to the distribution system.

**ELPW 111  Introduction to the Electrical Industry and the Power Grid  F&S SM  3 credits**
This course will begin with a basic introduction to the systems and components that make up a basic electrical system, including generation, transmission and distribution. You will then study the history behind electrical utility industry. Students will study how the electrical system in the United States was established and how Thomas Edison and George Westinghouse influenced the development of electrical systems. You will also learn how the electrical industry was first regulated and how regulation of the industry has changed. Students will also gain knowledge of how the electrical industry is currently being “re-regulated” to encourage competition. Students will also gain knowledge of the system operations and marketing of electricity. Finally, you will learn how the electrical industry is segmented into utility sectors, such as investor-owned, federally owned, publicly owned and cooperatively owned utilities.

**ELPW 112  Electrical System Components  2 credits**
This course takes an in-depth look into the components used in the transmission of electricity. Students begin with a study of switchyards and substations and then learn the operation of transformers, circuit breakers, regulators, capacitor banks, tap changers, disconnects, current and potential transformers and lightning arrestors. Students also study the various types of electrical conductors, structures and insulators used in the transmission of electricity. Finally, students learn the components, which make up a typical substation and how it feeds a distribution network that supplies customers with electricity.

**ELPW 118  Industrial Communication  2 credits**
This course defines the interpersonal skills needed to communicate with co-workers and customers to effectively work within the electrical industry. Students learn the proper methods used to resolve on-the-job conflicts and how to establish positive working relationships with co-workers. Students will evaluate and learn techniques for handling different workplace scenarios. They also will learn what is considered acceptable behavior in the workplace, and how to recognize discrimination and sexual harassment and understand that these behaviors are unacceptable in the industry.

**ELPW 200  Advanced Print Reading  3 credits**
This course covers advanced electrical prints used to navigate complex electrical systems and feeder maps. Students also study schematics that are used when working with electronic systems and system instrumentation that is used to control and monitor the flow of electricity through the electrical system. Students also learn to use the diagrams to troubleshoot system problems and to safely isolate sections of the electrical system.

**ELPW 202  Advanced Industrial Safety  3 credits**
This course focuses on specific safety practices used within the industry. Students begin by studying general practices, such as confined space entry, lock-out tag out procedures, fall protection, fire safety and working with hazardous materials. Students also learn some specific safety procedures used by linemen, such as proper bucket truck operation and some techniques used when working with electrical conductors. Finally, students learn some of the specific considerations that must be adhered to as an electrical system dispatcher to ensure the safety of line crews and technicians working on the electrical system.

**ELPW 204  Advanced Electrical Systems  3 credits**
This course provides students with a complete understanding of the design and operation of an electrical system. Students begin by understanding switchyard construction and the different configurations and also how different sections of the transmission and distribution system can be
safely isolated. Students also learn how storms and conditions can affect the electrical system. In addition, students learn some of the procedures used by system operators and line crews to maintain safe and effective delivery of power during adverse conditions and some of the steps necessary to restore power after outages.

**ELPW 206 Electrical System Protection 3 credits**
This course covers protection fundamentals, philosophies and principles used to protect the electrical system, beginning with the generator itself. Various types of relays, input sources and system grounding are also covered.

**ELPW FOURTH SEMESTER SPECIALIZATION COURSES**

**LINE CONSTRUCTION SPECIALIZATION**

**ELPW 250 Transformers 4 credits**
This course begins by reviewing basic transformer design and operation. The course also covers 3-phase transformers, single-phase loads for 3-phase transformers, and the connections used in such transformers. The course introduces students to installation procedures and maintenance procedures.

**ELPW 230 Underground Line Construction 4 credits**
This course covers the two basic categories of underground line construction, such as direct burial and those found in vaults and ducts. Students learn the design, conductors and the transformers used in residential direct burial and the factors that affect it. The course includes underground line construction design and the factors that affect this type of installation.

**ELPW 210 Overhead Transmission & Distribution Line Construction 4 credits**
This course covers the design and construction of transmission and distribution overhead lines. This includes structures, conductors, insulators and the factors that influence particular use for both transmission and distribution systems. The course covers guidelines for working safely with poles, conductors, switchgear, transformers, rigging, grounds and more. Students will be introduced to high and low voltage troubleshooting procedures, stringing procedures and guidelines for live line work. Maintaining good voltage to the customer and street lightning issues also will be discussed.

**SUBSTATION SPECIALIZATION**

**ELPW 251 Substation Construction & Maintenance 4 credits**
This course begins with a review of hand and power tools used during the construction and maintenance of substations and continues with safety procedures and equipment put in place to protect workers within a substation. Students learn the basic construction of a substation, including electrical equipment rigging and installation, cable tray and conduit installation, cable controls and panel wiring, as well as a wide variety of installation procedures for electrical components and protection equipment.

**ELPW 211 Substation Relays 4 credits**
This course focuses on testing and calibrating substation equipment, including voltage testing on equipment feeder relays, and circuit breaker relays. Students also learn the various tests that need to be conducted on protective relays, such as overcurrent and voltage relays, directional and line relays, as well as ground and test device testing.

**SYSTEM DESIGN SPECIALIZATION**

**ELPW 208 Advanced Math 4 credits**
This course will cover algebra, geometry and trigonometry needed for energy technicians working in the electrical system design and metering specialization areas. The course will cover the fundamental concepts of algebra, equations, functions and graphs. The course also will cover trigonometric functions, laws of sines and cosines, and vectors. Lastly the course will discuss analytic geometry.

**ELPW 212 System Design Basics 3 credits**
This course covers the basic principles and applications of electric distribution design and application. It includes design layout, electric distribution components, and apparatuses that are used to provide service to a wide variety of customers requesting electric distribution power from single phase to three-phase voltages that are classified as electrical distribution service. It includes basic principles such as tariffs, permitting for new construction, and distribution projects that may be classified as overhead or underground service routing.

**ELPW 232 System Design Analysis 3 credits**
This course covers the process calculations involved with distribution system design.

**ELPW 252 Civil Design 2 credits**
This course covers the basic principles of civil design in application to electrical distribution systems, including drafting and surveying techniques and computer-aided design systems.

**METERING SPECIALIZATION**

**ELPW 208 Advanced Math 4 credits**
This course will cover algebra, geometry and trigonometry needed for energy technicians working in the electrical system design and metering specialization areas. The course will cover the fundamental concepts of algebra, equations, functions and graphs. The course also will cover trigonometric functions, laws of sines and cosines, and vectors. Lastly the course will discuss analytic geometry.

**ELPW 213 Fundamentals of Metering 3 credits**
This course introduces students to the fundamentals of metering, such as terminology and basic principles of meters. Students learn basic math needed in metering, and review basic electricity and magnetism principles. They are introduced to meter testing equipment, meter diagrams and standards, and learn technical data and how to read watt hour and demand meters.

**ELPW 233 Single-Phase & Polyphase Metering 3 credits**
In this course students learn about single-phase metering and polyphase metering, including meter design, adjustments and compensations, and applications. They also learn about power factor analyzers, high amperage CT cabinets, meter demand theory, demand registers, and testing and maintenance of thermal demands.
ETST 253 Advanced Metering Technology 2 credits
In this course, the student will study various metering system designs and application options. The course opens with a comprehensive review of instrument transformers in the many forms they take to serve a wide array of specialized applications. Subsequent topics will include ratio, burden and correction factor calculations; functional testing and calibration procedures. Also included are troubleshooting and maintenance procedures as well as safe installation procedures.

ETST 254 System Elements I-Substations 3 credits
This course covers the basic equipment found in switchyards and substations. Also included are the functions and types of substations, related transmission and distribution systems and how each system is tied to one another.

ETST 256 System Elements II-Transformers 3 credits
This course builds upon System Elements I by introducing basic diagrams, transformers, switching and basic substation safety and inspection. Topics covered in this course will include interpreting one-line diagrams, exploring power and specialty transformers, the six basic steps of switching and lock-out/tag-out (LOTO) procedures.

ETST 258 System Elements III-Protective Relaying 3 credits
As the last of the System Elements courses, this course will focus on protective relaying of substation equipment and transmission lines. Details found in this course include practical understanding and identification of protective and control equipment, zones of protection, protection schemes, and relay communication systems.

ETST 260 Electrical Diagram Interpretation 2 credits
This course will cover electrical diagrams including single line diagrams, schematic diagrams and logic diagrams. This course will focus on the system operator’s perspective and the role diagram comprehension plays in an operator’s job performance.

ETST 262 Power System Operations 3 credits
This course will cover the basic roles and responsibilities of system operators including transmission operations, market operations, reliability, balance and interchange and scheduling. The goal of this course is to introduce the multitude of positions found in a typical transmission control center.

ETST 266 Interconnected System Operations 3 credits
This course will cover the operation of power pools, regional reliability organizations and independent system operators and the role of each. In addition, this course covers interconnected switching procedures between utilities.

ETST 268 Power Flow 3 credits
In this course, students will study the control of power flow through interconnected systems and the operation of parallel power systems. The topics will include generator synchronization, phase angle, VAR control and line voltage regulation. Procedures for controlling electrical power flows to maintain steady state conditions across the power grid will also be a focus of this course.

ETST 270 System Operator Work Practices 3 credits
In this course students will learn the role a system operator plays in the delivery of power and the operation and maintenance of the transmission system. Students will learn what is expected of a system operator including desired personal characteristics, working environment, employer’s expectations/qualifications, educational and training requirements, certification requirements, role in performing reliability functions, tasks and duties and behavior required under code of conduct and other regulatory and legislative orders.

ETST 272 Power System Safety 3 credits
This course will cover the safe operating practices, system isolation procedures, and accident prevention procedures used in the transmission and distribution of power. Emphasis will be placed on electrical system lock out and safety procedures.
The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

**ELEC 118 Solid State Devices Fall** 4 credits
The study of semiconductor physics, fundamentals of semiconductors, power supplies, transistors, characteristics of biasing circuits, amplifier properties, and FET characteristics and applications. Concurrent registration in, or previous successful completion of, the associated lab is required.

**ELEC 118L Solid State Devices Lab Fall** 1 credit
The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

**ELEC 120 AC Analysis Spring** 4 credits
Prerequisites: ELEC 100, 100L, 114, 114L, 118, and 118L or equivalent and approval of instructor. The study of dB, complex numbers, RC, RI, and RLC circuits, resonance, and passive and active filters. Concurrent registration in, or previous successful completion of, the associated lab is required.

**ELEC 120L AC Analysis Lab Spring** 1 credit
The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory, presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

**ELEC 130 Active Devices Spring** 4 credits
Prerequisites: ELEC 100, 100L, 114, 114L, 118, and 118L or equivalent and approval of instructor. The study of various electronic devices and circuitry including; Thyristors, Operational Amplifiers, and Regulated Power supplies. Concurrent registration in, or previous successful completion of, the associated lab is required.

**ELEC 130L Active Devices Lab Spring** 1 credit
The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory, presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

**ELEC 216 Digital Electronics III Fall** 4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology program, or equivalent and instructors approval. An extension of Digital II ELEC 115, a study of advanced integrated circuits. Topics covered are registers, processors, memory and a study of microcontrollers. Each student will have a laptop and a BASIC STAMP microcontroller which will be used as a training tool for interfacing devices in a digital world. Concurrent registration in, or previous successful completion of, the associated lab is required.

**ELEC 216L Digital Electronics III Lab Fall** 1 credit
Prerequisite: Completion of first year Electronics/Telecommunications Technology or instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

**ELEC 218 Digital Electronics IV Spring** 3 credits
Prerequisite: ELEC 216 and ELEC 216L or equivalent and instructor’s approval. A continuation of Digital III ELEC 216. Students will become familiar with the architecture, programming, application and troubleshooting of microcontroller circuits. A to D and D to A converters are covered. Basic data acquisition theory and practices are also discussed. The BASIC STAMP will be used to interface with mechanical and optical switches, remote radio control and DC motor monitor/control circuits. Concurrent registration in, or previous successful completion of, the associated lab is required.
ELEC 218L  Digital Electronics IV Lab  Spring  1 credit
Prerequisite: ELEC 216 and ELEC 216L or equivalent and instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

ELEC 222L  Electronic Communications I Lab  Fall  1 credit
Corequisite: ELEC 222 or equivalent and instructors approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lab is required.

ELEC 222  Electronic Communications I  Fall  4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology program, or equivalent and instructors approval. Review of reactive and resonant circuits. Circuits used to generate and detect amplitude modulation. Power, current and voltage relationships in an AM wave. Phase relationship between carrier and sidebands. Circuits used to generate and detect frequency modulation. Power, current and voltage relationships in an FM wave. Phase relationship between carrier and sidebands. Concurrent registration in, or previous successful completion of the course is required.

ELEC 224L  Electronic Communications II Lab  Spring  1 credit
Corequisite: ELEC 224 or instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required.

ELEC 224  Electronic Communications II  Spring  4 credits
Prerequisite: ELEC 222 and ELEC 222L or equivalent and instructors approval. Topics covered are digital communications, basic local area networks, cellular telephone, transmission lines, antennas and fiber optics. Concurrent registration in, or previous successful completion of the course is required.

ELEC 224L  Electronic Communications II Lab  Spring  1 credit
Prerequisite: ELEC 222 and ELEC 222L. Corequisite: ELEC 224 or instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. Concurrent registration in, or previous successful completion of the associated lecture is required or instructors approval.

ELEC 232  Telecommunications I  Fall  4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology or instructor’s approval. This course is involved with the introductory study of newer technologies other that the plain old telephone service. Topics covered are signal system 7, T carrier, packet switching, FTTx, PON, VOIP, LAN topologies, IPv4, IPv6 and Ethernet. Concurrent registration in or previous successful completion of the course is required or instructor’s approval.

ELEC 232L  Telecommunications Lab I  Fall  1 credit
Prerequisite: Completion of first year Electronics/Telecommunications Technology program, or equivalent and instructor’s approval. The lab portion of the course is a lecture/lab that provides hands-on verification of the theory and concepts presented in the lecture class. Activities include underground cable location, cable ground fault location, determining the length of a line using a subscriber loop test set using the capacitance method and using a time domain reflectometer. Line and cable color code are also covered. Concurrent registration in or previous successful completion of the associate lecture is required or instructor’s approval.

ELEC 234  Telecommunications II  Spring  4 credit
Prerequisite: ELEC 232 and ELEC 232L or instructor’s approval. This course is involved with the introductory study of newer technologies other that the plain old telephone service. Topics covered are signal system 7, T carrier, packet switching, FTTx, PON, VOIP, LAN topologies, IPv4, IPv6 and Ethernet. Concurrent registration in or previous successful completion of the course is required or instructor’s approval.

ELEC 234L  Telecommunications Lab II  Spring  1 credit
Prerequisite: ELEC 232 and ELEC 232L or instructor’s approval. The lab portion of the course is a lecture/lab that provides hands-on practice opportunities for the students in the following areas. Connectorizing and testing of Ethernet copper cable. Connectorizing and testing of adhesive, crimp-on and fuse-on fiber optic connectors. Mechanical splicing, fusion splicing and testing of fiber optic cable. Students will become familiar with the operation and use of the following test equipment. Subscriber loop analyzer including a time domain reflectometer, cable locator and fault finder for copper cable. OTDR, visual fault locator, calibrated light source/power meter, fusion splicer and connector microscope for fiber cable. The students will work on a simulated telephone system that is comprised of two PBXs’ with both analog and VOIP capabilities. The students will also work on a FTTx system that transports data through a PON to each lab bench. Students will perform systems checks and troubleshooting on both systems. Concurrent registration in or previous successful completion of the course is required or instructor’s approval.

ELEC 294  Independent Study  1-3 credits
Independent or directed study of special topics in electronics telecommunication technology. Department chairperson approval is required.

ELEC 299  Special Topics  1-3 credits
Variable instructional topics in the field of electronics/telecommunications technology. Repeatable as long as content varies. Consent of department chairperson.

ELEC 195-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

ELEC 197-297  Cooperative Education/Internship  1-3 credits
Repeatable up to six semester hours. Students get on-the job experience under qualified supervision in electronics/telecommunications technology occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.

EMERGENCY MEDICAL TECHNICIAN
PARAMEDIC (EMT-P)
SEE PARAMEDIC TECHNOLOGY
ENERGY MANAGEMENT (ENRG)

ENRG 302 Ethical Issues in the Energy Industry 3 credits

Since its inception, the energy industry has faced ethical challenges. From the Edison-Westinghouse feuds to the events leading up to PUHCA in 1935, and from Enron to the failed deregulation attempts in California; there have been numerous instances of ethical dilemmas and governmental response to these issues. This class will look at these issues, what safeguards have been put in place to prevent recurrence, and conclude with several case studies to challenge the students.

ENRG 310 Energy Production and the Environment 3 credits

This class will provide an in-depth look at current environmental issues facing the energy industry as a whole. Included will be a detailed look at the greatest environmental challenge the industry currently faces, climate change.

ENRG 315 Energy Management Communications 3 credits

With the evolution of the smart grid and other advanced technologies across the energy industry more information is readily available on a system wide basis for employees, supervisors and managers. In today’s energy field effective communication goes beyond the written and verbal by encompassing the understanding of the specific energy industry nomenclature used in a very technical and hazardous industry. Effectively communicating and precisely managing this information is essential for the energy industry in order to compete in an ever changing global environment. Development, dissemination and compliance of written communication plans are essential in everyday business, interpersonal communications, in crisis situations and in dealing with conflicts in the workplace. Organizational communications, climate, culture and our ethical obligation to society will be discussed in steady state, crisis and hazardous situations. Maintaining environmental compliance and ensuring efficient, reliable and clean energy for the nation are imperative for an industry that will remain under close scrutiny in the foreseeable future.

ENRG 320 Workforce Safety 3 credits

This course presents advanced safety policies and regulations that impact occupational safety and health issues in the workplace. Students will study processes and procedures that protect both the workers and the organizations. Written safety programs, training, workers compensation, the value of safety, and means to build a safety culture in an organization will be studied in the course.

ENRG 330 Government Regulations in the Energy Industry 3 credits

Students will study the legal and regulatory framework in which energy is developed and the business structure of energy producers. Students will learn about the evolution of energy policy in the United States, including the laws and regulations related to particular types of energy sources. Finally, students will study the policy and regulatory structure promoting the development of alternative energy sources and other green initiatives.

ENRG 404 New and Emerging Energy Technologies 3 credits

Students in this course will explore the latest in energy technologies and how they are designed to increase efficiencies, protect the environment and streamline processes. Students will discover how some of the “new technologies” have been around for quite some time and the reasons they are capturing new attention.

ENRG 412 Energy Economics and Finance 3 credits

Students will study the global economics and financial issues that impact the energy industry. They will learn how these impacts affect what strategies energy companies use to secure reliable sources of operating funds and capital investment to improve existing facilities or develop new ones, including but not limited to generating plants, transmission and distribution systems, coal, petroleum, etc. Students will explore how fluctuations in regional, national, and world energy markets directly impact day to day operations.

ENRG 420 Energy Markets and Structures 3 credits

This course provides a comprehensive overview of energy markets, pricing, structures, and economics specifically relating to the energy industry. Students will study the structure of various energy markets and learn to quantify the influence of market structure on energy prices. The course will cover new and emerging markets and teach how modern energy markets are being transformed from regulated monopolies into market-driven suppliers of competitively-priced energy and related services.

ENRG 430 Project Management in the Energy Industry 3 credits

This course introduces the student to project management as it pertains to the energy industry. Students will study the planning, scheduling, and controlling of projects, both large and small, as it pertains to the energy industry. The students will be introduced and study the following subjects:

• The “triangle” of project control consisting of the relationship of scope, duration and costs, and how they interact
• How to read and understand bar charts
• The five stages of a project - initiation, planning, execution, monitoring/control and closure
• Work breakdown structures and how they pertain to project management
• Project organizational structures and staffing
• Project reporting methodologies
• Project estimation (budget vs. forecasts vs. actuals) and cost controls
• Different types of project risks and methods of mitigation

The course will cover these subjects and how they contribute to the success of a project. The course will use theoretical and case studies of actual projects that will be encountered in the energy industry.

ENRG 435 Managing Energy Facilities 3 credits

This course provides a comprehensive overview of facilities management specifically related to the energy industry. Students will study the theories and principles associated with managing large energy production facilities. Major areas analyzed are facilities operations, maintenance, staff management, budgeting, scheduling, managing capital projects, and relationships with contractors and vendors. Students explore current issues related to facilities management and its relationship to various organizational units including human resources, operations, occupational health and safety, labor relations and unions, finance, purchasing and executive management.

ENGINEERING (CAD, CT, EE, ENGR, ME)

AUTOCAD (CAD)

CAD 211 Computer Aided Design I F&S 3 credits

An introduction to computer-aided graphics, with an emphasis on 2-D drawings. Isometric drawings and 3-D models are also introduced. Drafting is done with the aid of microcomputers using AutoCAD computer-aided drafting and modeling software. Prerequisite or corequisite: ENGR 101 or instructor approval.
CIVIL ENGINEERING AND SURVEYING TECHNOLOGY (CT)

CT 232 Water Management Technology Spring 4 credits
This course covers the fundamentals of water supply and distribution, water treatment processes, sanitary sewage and collection methods, sewage treatment and the environmental effects caused by improper water and sewage handling. Included in the course are topics on hydraulics, chemical and biological testing, water distribution and collection systems and water and sewage treatment facilities. Prerequisite: MATH 105 or MATH 107.

CT 251 Materials Testing Spring 3 credits
Introduction to the physical and chemical properties of materials used in civil engineering projects including asphalt, Portland cement, aggregates and soils along with the proper sampling, testing and reporting procedures of these materials. Corequisite: CT 251L. Prerequisite or Corequisite: ENGL 125.

CT 251L Materials Testing Lab Spring 1 credit
Field and office exercises in the sampling and testing of civil engineering materials. Labs are held at the ND Dept. of Transportation Materials and Research Lab. Corequisite: CT 251.

CT 252 Construction Project Management Spring 3 credits
An introduction to inspection procedures, management of quality controls of construction projects, estimating, print reading, and procedures used to administer construction specifications and contracts.

CIVIL ENGINEERING AND SURVEYING TECHNOLOGY (CT)

CT 232 Water Management Technology Spring 4 credits
This course covers the fundamentals of water supply and distribution, water treatment processes, sanitary sewage and collection methods, sewage treatment and the environmental effects caused by improper water and sewage handling. Included in the course are topics on hydraulics, chemical and biological testing, water distribution and collection systems and water and sewage treatment facilities. Prerequisite: MATH 105 or MATH 107.

CT 251 Materials Testing Spring 3 credits
Introduction to the physical and chemical properties of materials used in civil engineering projects including asphalt, Portland cement, aggregates and soils along with the proper sampling, testing and reporting procedures of these materials. Corequisite: CT 251L. Prerequisite or Corequisite: ENGL 125.

CT 251L Materials Testing Lab Spring 1 credit
Field and office exercises in the sampling and testing of civil engineering materials. Labs are held at the ND Dept. of Transportation Materials and Research Lab. Corequisite: CT 251.

CT 252 Construction Project Management Spring 3 credits
An introduction to inspection procedures, management of quality controls of construction projects, estimating, print reading, and procedures used to administer construction specifications and contracts.

ELECTRICAL ENGINEERING (EE)

EE 206 Circuit Analysis Spring 3 credits

EE 206L Circuit Analysis Lab Spring 1 credit
One hour of lab per week. Concurrent registration in EE 206 is required.

ENGINEERING (ENGR)

ENGR 201 Statics F&S 3 credits
Elementary space visualization of points, lines, planes, and solids on orthogonal projection; graphical expression of technical sketching; geometry; pictorial representation, and size specification; reproduction methods. Computer-aided drafting is introduced. Prerequisite or Corequisite: Math 105 or 107.

ENGR 202 Dynamics F&S 3 credits
Vector approach to principles of dynamics. Resultants of force systems, equilibrium of force systems, analysis of structures, centroids, moments of inertia. Prerequisite or co-requisite: ENGR 201.

ENGR 203 Mechanics of Materials Spring 3 credits
Simple stress and strain, torsion, shear and bending moment, flexural and shearing stresses in beams, combined stresses, deflection of beams, statically indeterminate members and columns. Prerequisite: ENGR 201.

ENGR 204 Surveying I Spring 3 credits
Measurements and errors, measurements of distances and angles, differential leveling, traverse surveys, construction surveys, simple horizontal and vertical curves, and earthwork calculations. Prerequisites: MATH 105 or MATH 107 and CAD 211. Corequisite: ENGR 204L.

ENGR 204L Surveying I Lab Spring 1 credit
Three hours of lab per week. Field and office exercises including data collection and computational techniques of surveying data. Corequisite: ENGR 204.

ENGR 205 Surveying II Fall 3 credits
Compound and spiral curves horizontal curves, state plane coordinate system, U.S. public land surveys, boundary surveys an introduction to geodetic surveying, electronic data collection and reduction and GPS surveying. Prerequisite: ENGR 204. Corequisite: ENGR 205L.

ENGR 205L Surveying II Lab Fall 1 credit
Three hours of lab per week. Field and office exercises including data collection, computations and data reduction. Corequisite: ENGR 205.

ENGR 206 Fluid Mechanics BD 3 credits
This course covers fluid properties, fluid statics, fluid dynamics, transport theory and transport analogies, conservation of mass, energy and momentum, dimensional analysis, boundary layer concepts, pipe flows, compressible flow, and open channel flow. Prerequisite: ENGR 201.

ENGR 241 Thermodynamics I Spring 3 credits
Fundamental concepts of thermal energy relationships, processes and cycles are introduced, including: first and second law of thermodynamics, entropy, and availability. Prerequisite: ENGR 201.

ENGR 242 Thermodynamics II Spring 3 credits

ENGR 294 Independent Study 1-3 credits
Independent or directed study of special topics in engineering. Department chairperson approval is required.

ENGR 299 Special Topics in Engineering BD 1-3 credits
Repeatable up to six semester hours. An examination on special topics in engineering.
ENGR 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

ENGR 197-297 Cooperative Education/Internship F&S SM 1-3 credit hours each
Repeatable up to a maximum of six semester hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

MECHANICAL ENGINEERING (ME)
ME 213 Modeling of Engineering Systems BD 3 credits
Introduction to engineering systems, modeling, and computations; computer methods; analytical methods; verification tasks; case studies. Prerequisite: Calculus 165.

ENGLISH (ASC, ENGL)
ACADEMIC SKILLS COURSES
The following Academic Skills Courses (ASC) are precollege courses that will prepare students for college level work. The credits awarded are not college credits.

ASC 082 Effective Reading F&S SM 2 credits
This course provides strategies to help students increase reading efficiency, comprehension, and vocabulary in order to meet the demands of college level reading. Students will select, read, write, and critically evaluate a variety of written material to improve their reading skills and increase their enjoyment of reading. Students with ACT reading scores of 0-14 or COMPASS reading scores of 0-67 should take this course.

ASC 087 College Writing Preparation F&S SM 3 credits
To succeed in college and beyond, today’s students must be able to read, think critically, interpret, react to what they have read, and express their ideas clearly and correctly in written form. This course helps students gain confidence in their writing and brings their writing efficiency up to an acceptable college level. Elements of effective writing are covered to include strategy, organization, style, sentence structure, grammar and usage, and punctuation. Students with ACT English scores of 0-14 or COMPASS 0-42 are required to take this course before taking English 110.

ASC 088 Composition Lab F&S SM 1 credit
Composition Lab is designed as a co-requisite with English 110 for students who demonstrate a need for support instruction in grammar and punctuation based on their placement scores. Students will gain confidence in their editing skills, reduce mechanical errors in their writing, and be able to focus more attention on the craft of thoughtful writing. The course is offered on-campus or online. Students who are required to take ASC 088 must pass the lab in order to pass English 110. Placement is based on the following:

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<tr>
<th>ACT</th>
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<th>Course</th>
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<td>0-14</td>
<td>0-42</td>
<td>ASC 087 College Writing Prep</td>
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<td>15-17</td>
<td>43-67</td>
<td>ENGL 110 +ASC 088 (Composition Lab on-campus or online)</td>
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<tr>
<td>18-36</td>
<td>68-100</td>
<td>ENGL 110 (no Composition Lab required)</td>
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COLLEGE LEVEL COURSES

ENGL 110 College Composition I F&S SM 3 credits
This first course for developing writing skills offers students guided practice in a variety of descriptive-narrative and expository forms, related reviews of grammar and standard usage, and reading and discussion related to these activities. Library research is incorporated into this course. Prerequisite: Students must have ACT English scores of 15 or above or COMPASS English scores of 43 or above or have successfully taken ASC 087. For required composition lab, see the above description of ASC 088.

ENGL 120 College Composition II F&S SM 3 credits
This second course in the composition sequence continues and reinforces the writing skills practiced in English 110, emphasizing library research and the writing of analytical and argumentative papers making use of the thesis-support format and MLA style used in a variety of academic disciplines. Students focus on language through literature and/or film by writing, reading, responding, viewing, and discussing. During spring semester, several sections of English 120 focus on Film as Literature. Prerequisite: English 110.

ENGL 121 Honors Composition II Spring 3 credits
This course is the same as ENGL 120 but limited to people who have special aptitude or interest in reading and writing. In depth discussion of literature will increase students’ ability to express a deepening understanding of the world and the people in it through both written and oral communication. Prerequisite: English 110.

ENGL 125 Introduction to Professional Writing F&S SM 3 credits
In English 125, students continue the writing process and research skills practiced in English 110, concentrating on the style, content, and format of business and technical writing. Students analyze and complete a variety of writing projects typical of a professional setting. Prerequisite: English 110.

ENGL 205 English Usage I Fall 2 credits
This first course for developing editing skills offers students guided practice in college level grammar. This study leads to sophisticated understanding of how sentence structure creates meaning. English Usage I is beneficial for a writer in any profession. Suggested co-requisite with journalism courses.

ENGL 206 English Usage II Spring 2 credits
The second course in grammar study continues and reinforces the skills learned in English Usage I. In addition, students will gain a more effective and eloquent writing style by practicing connotation, clarity, specificity, sound, sentence variety and figures of speech. How ideas are coordinated and subordinated is also crucial to this course. Suggested co-requisite with journalism courses.
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ENGL 211</td>
<td>Introduction to Creative Writing (Fiction)</td>
<td>F&amp;S</td>
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<td>ENGL 213</td>
<td>Literary Publications</td>
<td>F&amp;S</td>
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<tr>
<td>ENGL 221</td>
<td>Introduction to Drama</td>
<td>Spring</td>
<td>3</td>
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<td>ENGL 222</td>
<td>Introduction to Poetry</td>
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<td>ENGL 233</td>
<td>Fantasy and Science Fiction</td>
<td>Fall</td>
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<td>ENGL 236</td>
<td>Women and Literature</td>
<td>Spring</td>
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<td>ENGL 238</td>
<td>Children's Literature</td>
<td>F&amp;S</td>
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<td>ENGL 251</td>
<td>British Literature I</td>
<td>Fall</td>
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<td>ENGL 252</td>
<td>British Literature II</td>
<td>Spring</td>
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<td>ENGL 261</td>
<td>American Literature I</td>
<td>Fall</td>
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<td>ENGL 262</td>
<td>American Literature II</td>
<td>Spring</td>
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<td>ENGL 278</td>
<td>Alternative Literature</td>
<td>Fall</td>
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<td>ENGL 279</td>
<td>World Autobiography</td>
<td>Spring</td>
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<td>ENGL 280</td>
<td>Great Books of the Western World</td>
<td>Fall</td>
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<td>ENGL 294</td>
<td>Independent Study</td>
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<td>ENGL 296</td>
<td>Study Tour</td>
<td>Spring</td>
<td>3</td>
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<tr>
<td>ENGL 299</td>
<td>Special Topics in English</td>
<td>F&amp;S</td>
<td>1-3</td>
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This course concentrates on the techniques valuable to writers of fiction by providing master literary works to read and respond to. As students practice their own craft, they will reflect on and interpret the human cultural tradition. Students will benefit from both individual and group feedback. Prerequisite: ENGL 110.

This course will provide the expertise to produce *Figments of Imagination*, the campus literary and arts journal. Students will learn how to solicit manuscript and visual art entries; screen, select and edit pieces; design, layout and publish the literary and arts publication. Literary Publications is a two-semester class. The fall semester focuses on planning, grant writing, establishing a campus and web presence and organizing an open mic night. The spring semester focuses on call for entries, judging and selection of work, design and production of the publication and organizing an open mic night, public reading and collaborative musical performances.

A survey of the world’s greatest dramatic literature from Greek times to present. The history of playhouses and stagecraft and other related arts of the theatre are observed in connection with the study of world masterpieces. Prerequisite: English 110 or permission of instructor.

Students will read, write, and discuss poetry to gain an appreciation and understanding of the elements of poetry. Prerequisite: English 110.

Study of science fiction and fantasy literature, with an emphasis on those works that have influenced conventional themes within the genre and the manner in which these themes have continued to evolve to incorporate and address contemporary implications and anxieties concerning the impact of science and technology. Prerequisite: ENGL 110.

This course provides an opportunity for the study of fiction and nonfiction by such well known writers as Kate Chopin, Virginia Woolf, Flannery O’Connor, Zora Neale Hurston, Eudora Welty, Margaret Atwood, and others. Through the readings of short stories, novels, plays, essays, and diaries, students will explore the literary achievements of these and other writers and the social conditions that influenced their lives and works. Authors and selections will vary from semester to semester. Prerequisite: English 110.

This is an introductory survey of literature for children from infancy through puberty. Through the readings of picture books, poetry, folklore, fantasy, realistic fiction, biography, and informational books, students will gain an awareness of the history, genre, and theme in children’s literature and develop an enjoyment and appreciation of children’s literature. In their reading, students will also develop a familiarity with important authors and illustrators as they confront such issues as racism, sexism, multiculturalism, and censorship. Prerequisite: English 110.

Exploring selected works from *Beowulf* through the 18th century, this lecture/discussion course provides students with an introduction to British literature and a background useful in the study of other literature and cultural history. Students will read a variety of works and authors including Chaucer, Marlowe, Donne, Milton, and Swift. Prerequisite: ENGL 110.

Exploring selected works from the Romantic period into the 20th century, this lecture/discussion course provides students with an introduction to British literature and a background useful in the study of other literature and cultural history. Students will read a variety of writers including Blake, Wordsworth, Austen, Keats, Tennyson, the Brontes, Browning, Wilde, and Hardy. Prerequisite: ENGL 110.

This course charts the historical, cultural, and literary evolution of the American nation. Beginning with the verbal and written art of America’s first inhabitants, American Indians, the records of European explorers and the writings of colonial settlers, students will explore additional representative works such as slave narratives and the masterful works of writers such as Hawthorne, Melville, Whitman, and Dickinson. Prerequisite: English 110.

Students study representative works of major American writers from the Civil War to the present. Every age in every culture grapples with the essential questions of who we are and what our nature is. The ideas posed by these authors allow learning about history, culture, and life in America. Prerequisite: ENGL 110. ENGL 261 is not a prerequisite for this course.

This course will look at literary works such as detective stories, fantasies, science fiction, ethnic and beat literature that have, at times, been judged as lesser works than classical literature. Using a multidisciplinary approach, this course will isolate 20th century works in separate genres and analyze them through the elements they share with “high” literature.

A survey of world autobiography from the seventh century to the present with emphasis on the diversity of experience, thought, behavior and culture to be found in a global sampling of key works that also succeed as literature.

A survey of key texts from Homer to Hemingway with emphasis on the diversity of experience, behavior, styles, thought and culture to be found in a sampling of titles selected from Mortimer Adler’s *Great Books of the Western World*. Discussions and presentations of texts from other disciplines such as history, philosophy and religion will be considered.

Independent or directed study of special topics in English. Department chairperson approval is required.

Students earn credits by participating in BSC’s annual trip to a foreign destination. Students will be required to keep an evaluative journal, read a book that deals with the destination, write a book report, and write another paper that deals with some aspect of the trip.

Repeatable up to six semester hours. An examination of special topics in English, such as writing fiction and non-fiction, including short stories, plays, journals, letters, reviews, interviews and lyrics. Activities might include writing, group editing, readings in theory, self publication and readers’ theatre presentations. Consent of instructor required.
ENGL 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

ENGL 197-297 Cooperative Education/Internship F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

FIRE TECHNOLOGY (FIRE)

FIRE 101 Fundamentals of Fire Protection F&S 3 credits
Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; and introduction to fire strategy and tactics.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS 105 Fundamentals of Geographic Information Systems F&S 3 credits
The course provides an introduction to Geographic Information Systems, including how GIS is used for integrating and analyzing spatial data to visualize relationships, seek explanations, and develop solutions to problems. Emphasis is placed on the nature of geographic information, and the ways in which digital methods support geographic analysis. The course is divided between lecture and lab sessions. Introduction to Computers (CSCI 101) or a working knowledge of Microsoft Windows is required.

GIS 107 GIS Applications F&S 3 credits
The course will provide hands-on opportunities to experience the hardware and software used in GIS. The course applies fundamental GIS concepts to creating, editing, and querying spatial data and spatial relationships. Students will manipulate data and make decisions from the presented information through various geoprocessing techniques. Prerequisite: GIS 105.

GIS 201 Advanced GIS Application F&S 3 credits
An advanced hands-on application course designed to extend GIS knowledge and experience and to prepare students in becoming self-sufficient GIS technicians. The course follows a hands-on, problem-solving approach that integrates the interests and analytical needs of participating students. The course will be divided between lecture and lab sessions. Pre-requisites: GIS 105 and 107.

GIS 206 GIS in Science, Agriculture, and Business Fall 3 credits
The course integrates the fields of business, agriculture, and science through GIS and Global Positioning Systems (GPS). The course will be divided between lecture, guest speakers who are experts in their fields, and lab sessions that apply fundamental concepts associated with how GIS can complement business, agricultural, and science applications.

GIS 215 GPS, Photogrammetry, and Remote Sensing Fall 3 credits
The course integrates the disciplines of GPS, photogrammetry, and remote sensing. Hands-on opportunities to manipulate GPS, DOQs, DLGs, TIFs and JPEG images to track environmental changes over time are presented through raster analysis. Students will work together to solve environmental problems through group projects. Electromagnetic radiation in relation to environmental remote sensing will also be covered.

GIS 225 GIS Project Development and Management Spring 3 credits
GIS 225 focuses on developing GIS project skills. Students will gain experience in the definition, planning, execution, and completion of a geographic information systems project for one of several clients. Students will also exercise technical skills, develop the ability to work in a team environment, and develop negotiating and project management skills. Prerequisite: GIS 105.

GIS 235 Cartographic Design and Analysis Spring 3 credits
The course incorporates the historical foundations of cartographic design and analysis with the digital age (GIS). Topics covered include the rapid changes in cartographic design driven by industry, data classification, advanced map design, generalization, multivariate mapping, and advanced thematic cartography through hands-on applications and case studies. Prerequisite: GIS 105.

GIS 197-297 Cooperative Education / Internship F&S SM 1-3 credits
Students get on-the-job experience under qualified supervision in computer applications, office technology, and network administration occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op/internship experiences are graded on a satisfactory/unsatisfactory basis. Department chairperson approval is required.

GEOGRAPHY (GEOG)

GEOG 121 Physical Geography Spring 3 credits
A survey of the interaction of earth climatic and geologic processes that contribute to the distribution of regional and global environments. Topics include: atmospheric and climate characteristics, crustal movements and processes, the use of selected mapping techniques, and soil and natural vegetation distribution. Concurrent registration in GEOG 121L is required.

GEOG 121L Physical Geography Lab Spring 1 credit
Two hours of lab per week. Laboratory exercises describe the Earth-Sun-Moon system and the determination of time; the principles of meteorology and the classification of climates; agents of erosion and deposition and the geomorphic cycle as it applies in various climates; map projections and the use of topographic maps; groundwater characteristics and karst topography, an others. Concurrent registration in GEOG 121 is required.
GEOL 102  Historical Geology  BD  3 credits
Three hours of lecture and recitation per week. A study of the deposits laid down during the past geological ages and their fossil contents. Prerequisite: Physical Geology 105 & 105L. Concurrent registration in GEOL 102L is required.

GEOL 102L  Historical Geology Lab  BD  1 credit
Two hours of lab per week. Laboratory exercises investigate the evolution of the Earth’s crust through geologic time. Topics include: plate tectonics, statistical analysis of sediments, strata chronology and the influence of structural forces, relative and radiometric dating, sorting and correlation techniques, geomagnetism, geologic implications in the fossil record, and others. Concurrent registration with GEOL 102 is required. Prerequisite: GEOL 105 & 105L.

GEOL 105  Physical Geology  Fall  3 credits
Three hours of lecture and recitation per week. A study of rocks, minerals and the geological processes such as erosion, earthquakes, mountain building and origin of land forms. Concurrent registration in GEOL 105L is required.

GEOL 105L  Physical Geology Lab  Fall  1 credit
Two hours of lab per week. Laboratory topics include identification of minerals and rocks with emphasis on traditional diagnostic techniques; interpretation of topographic and geologic maps, folding and faulting of the crust; analysis of stream drainage patterns and groundwater resources; location of earthquake foci; and the development of topographic surfaces through the processes of erosion and deposition. Concurrent registration in GEOL 105 is required.

GEOL 294  Independent Study  1-3 credits
Independent or directed study of special topics in geology. Department chairperson approval required.

GEOL 299  Special Topics in Geology  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics in geology.

GRAPHIC DESIGN AND COMMUNICATIONS (GDES)

GDES 103  Introduction to Electronic Imaging  Fall  3 credits
A solid foundation in the use of Adobe Photoshop techniques will be covered. Digital photography, scanning, stock photography use and digital manipulation will be covered. Other topics to be discussed are basic composition, photographic illustration, and the relationship of digital photography to the commercial industry. Concurrent registration in or previous successful completion of GDES 103L is required.

GDES 103L  Introduction to Electronic Imaging Lab  Fall  1 credit
 Concurrent registration in or previous successful completion of GDES 103 is required.

GDES 104  Basics of Studio Skills  BD  2 credits
Introduction to the use of basic tools and materials used by the commercial artist. Instruction focuses on studio safety, organization and procedures. Concurrent registration in or previous successful completion of GDES 104L is required.

GDES 104L  Basic of Studio Skills Lab BD  1 credit
 Concurrent registration in or previous successful completion of GDES 104 is required.

GDES 107  Design and Desktop Publishing  Fall  3 credits
This course will introduce you to basic graphic design and fluency toward using Macintosh computers and desktop publishing software (Adobe InDesign). The focus of this class will be in using InDesign for commercial use and how it is integrated with other Adobe programs such as Photoshop and Illustrator. You will receive project-based instruction needed to build and design documents and other design assignments related to desktop publishing. Concurrent registration in or previous successful completion of GDES 107L is required.

GDES 107L  Design and Desktop Publishing Lab  Fall  1 credit
 Concurrent registration in or previous successful completion of GDES 107 is required.

GDES 111  Electronic Imaging II  Spring  3 credits
Emphasis is on digital camera use starting with the history of cameras and photography. Students will learn how photography is used in the field of graphic design. Camera handling techniques and studio work as it relates to commercial photography will be highlighted. Prerequisite: GDES 103 and 103L, concurrent registration in or previous successful completion of GDES 111L is required.

GDES 111L  Electronic Imaging II Lab  Spring  1 credit
 Concurrent registration in or previous successful completion of GDES 111 is required.

GDES 113  Design and Layout I  Spring  3 credits
An introduction to the principles and elements of design and layout as used in advertising, various publications and interactive media. A comprehensive look at the design theories used to successfully communicate in a competitive global market. Emphasis will be placed on working with clients and offering solutions to design problems. Concurrent registration in or previous successful completion of GDES 113L is required.

GDES 113L  Design and Layout I Lab  Spring  1 credit
 Concurrent registration in or previous successful completion of GDES 113 is required.

GDES 115  Typography  Spring  3 credits
Prerequisite: Instructor approval. An in-depth study of the art and technique of the printed word – an essential element of virtually all graphic design. An overview of the history of type and the ability to identify and create excellent typography are major outcomes of this course. Creative and technical typographic skills will be discussed and put into practice by means of in-class exercises and homework assignments. Concurrent registration in or previous successful completion of GDES 115L is required.

GDES 115L  Typography Lab  Spring  1 credit
 Concurrent registration in or previous successful completion of GDES 115 is required.

GDES 117  Digital Illustration  Fall  3 credits
An introduction to the fundamentals of traditional and computer-generated illustration. Includes a familiarity with illustration style, techniques and software. Development of basic layout and design skills while working on numerous projects on Macintosh computers meant to enhance and broaden a participant’s illustration and design skills. Software: Adobe Illustrator. (Additional programs introduced as necessary.) Basic computer skills, keyboarding and printing are vital aspects of the course. Concurrent registration in or previous successful completion of GDES 117L is required.
GDES 117L Digital Illustration Lab Fall 1 credit
Concurrent registration in or previous successful completion of GDES 117 is required.

GDES 201 Current Imaging Fall 3 credits
Prerequisite GDES 111 or instructor approval. Exploration of how images are used in today’s graphic design market. Emphasis is placed on digital imaging and how to use advanced techniques to produce professional-grade photo-illustrations. Concurrent registration in or previous successful completion of GDES 201L is required.

GDES 201L Current Imaging Lab Fall 1 credit
Concurrent registration in or previous successful completion of GDES 201 is required.

GDES 202 Current Imaging II Spring 3 credits
Prerequisite: GDES 111 or instructor approval. Emphasis placed on a photojournalistic and commercial approach to photography. Review of photographic fundamentals and continued practice in digital photography. Introduction to equipment, soft goods and techniques that are used in a variety of professional applications. Practice in basic studio lighting techniques and advanced photography. Concurrent registration in or previous successful completion of GDES 202L is required.

GDES 202L Current Imaging II Lab Spring 1 credit
Concurrent registration in or previous successful completion of GDES 202 is required.

GDES 203 Commercial Illustration BD 3 credits
Prerequisite: GDES 111. A study in advanced illustration through the application of sound chronological procedure. Developing the picture idea through research and reference. Additional emphasis placed on composition and color applications. Additional course work will include sketchbook assignments. Concurrent registration in or previous successful completion of GDES 203L is required.

GDES 203L Commercial Illustration Lab BD 1 credit
Concurrent registration in or previous successful completion of GDES 203 is required.

GDES 204 Print Production Spring 3 credits
An in-depth primer on off-set printing for the graphic designer including the pitfalls and solutions for preparing electronic files for various printing methods. Students will learn about putting ink to paper in an electronic age. Some of the subjects to be covered: history of printing, life cycle of a print job, ink, paper, bindery, prepress, preflighting files, managing fonts, vector and raster images, file management, production tips for Adobe Illustrator, Photoshop, InDesign and Acrobat. An intro to packaging design will also be part of this class. Various projects and assignments related to printing will be assigned. Tours of print shops and speakers may be part of this class. Concurrent registration in or previous successful completion of GDES 204L is required.

GDES 204L Print Production Lab Spring 1 credit
Concurrent registration in or previous successful completion of GDES 204 is required.

GDES 207 Introduction to Multimedia Fall 3 credits
Prerequisite: Instructor approval. An in-depth look at the fundamentals of web design and animation. Students will learn how to optimize images for the web as well as create interactive elements such as gif animations and rollovers. Students will also develop a basic working knowledge of vector animation and its role in web design. Software: Photoshop, Dreamweaver, Flash (other programs introduced as necessary).

GDES 207L Introduction to Multimedia Lab Fall 1 credit
Concurrent registration in or previous successful completion of GDES 207 is required.

GDES 209 Design and Layout II Fall 3 credits
Review, demonstrate and build on design skills learned to date. More complex design principles will be explored. This course concentrates on the design and production of portfolio quality projects, specifically selected to demonstrate the capabilities and talents of the design student. Emphasis will be on designing brand experiences. Concurrent registration in or previous successful completion of GDES 209L is required.

GDES 209L Design and Layout II Lab Fall 1 credit
Concurrent registration in or previous successful completion of GDES 209 is required.

GDES 213 Portfolio Presentation Spring 3 credits
Prerequisite: Instructor approval. Portfolio planning and preparation, including selection, organization and professional presentation. Resume development, interview techniques and job application procedures are emphasized to prepare students for the work force. Concurrent registration in or previous successful completion of GDES 213L is required.

GDES 213L Portfolio Presentation Lab Spring 1 credit
Concurrent registration in or previous successful completion of GDES 213 is required.

GDES 294 Independent Study 1-3 credits
Independent or directed study of special topics in graphic design and Communications. Department chairperson approval is required.

GDES 299 Special Topics 1-3 credits
Variable instructional topics in the field of graphic design. Repeatable as long as content varies. Consent of department chairperson.

GDES 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

GDES 197-297 Cooperative Education/Internship 1-3 credits
On a “when available” basis - not required for graduation. Repeatable up to six semester hours. Students get on-the-job experience under qualified supervision in graphic design occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson. Must be a full time graphic design student.

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC, REFG, SMTL)
HVAC 100 Introduction to Heating, Ventilation and Air Conditioning Spring 3 credits
This course is an introduction to the heating, ventilation and air conditioning trades and covers safety, tools, test equipment and basic electricity.
### HVAC (HVAC)

**HVAC 102  Gas Operations and Safety Procedure**  
Fall  5 credits  
This course concentrates on understanding gas operations, gas distribution networks, safety procedures, and complies with the DOT's operator qualification rules.

**HVAC 103  Air Conditioning Theory and Components**  
Spring  5 credits  
This lecture and discussion course covers the theory of residential cooling. This class will include different types of compressors, evaporators, condensers, metering devices, refrigerants and electrical components.

**HVAC 104  Heating Theory and Components**  
Spring  4 credits  
This lecture and discussion course covers residential heating systems. This class will include the operation and maintenance of gas, oil and electric furnaces as well as electronic air cleaners and humidifiers.

**HVAC 105  Heating Systems Troubleshooting**  
Fall  5 credits  
This lecture, discussion, and lab class covers the wiring and troubleshooting of residential gas, oil and electric furnaces through the use of trainers and live equipment.

**HVAC 106  Heating Systems Troubleshooting**  
Summer  5 credits  
Prerequisites: Must have successfully completed the spring semester or have departmental approval. This lecture, discussion and lab course covers residential cooling systems. This will include electrical components, wiring, electrical troubleshooting and mechanical troubleshooting using trainers and live equipment.

**HVAC 195-295 Service Learning**  
1-3 credits  
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

**HVAC 197-297 Cooperative Education/Internship**  
1-3 credits, repeatable up to 6 semester hours  
Students get on-the-job experience under qualified supervision in air conditioning, heating, and refrigeration occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson is required.

**HVAC 204  Independent Study**  
1-3 credits  
An independent or directed study of special topics in air conditioning, heating and refrigeration. Department chairperson approval required.

**HVAC 294  Special Topics**  
1-3 credits  
Variable instructional topics in the field of air conditioning, heating, and refrigeration. Repeatable as long as content varies. Consent of department chairperson.

### REFRIGERATION (REFG)

**REFG 215  Light Commercial Refrigeration**  
Summer  2 credits  
Prerequisite: Must have successfully completed the spring semester or have departmental approval. This lecture, discussion, and lab course covers some smaller commercial systems, ice machines, system accessories and troubleshooting of this equipment.

**REFG 216  Domestic Refrigeration**  
Summer  3 credits  
Prerequisites: Must have successfully completed the spring semester or have departmental approval. The operation, components, wiring and troubleshooting of residential refrigerators and freezers are covered in this course. This class consists of lecture, discussion and lab.

### SHEET METAL (SMTL)

**SMTL 105  Sheet Metal**  
Fall  3 credits  
This course is a lecture and drafting class providing an introduction to the sheet metal industry. Covered in this course are tools of the sheet metal industry, trade math I, and parallel line pattern development.

**SMTL 106  Sheet Metal II**  
Fall  6 credits  
This course is a lecture, drafting and lab class covering trade math II, basic piping practices, sheet metal duct fabrication standards, soldering, insulation, and radial line pattern development.

**SMTL 107  Sheet Metal III**  
Fall  4 credits  
This discussion, lecture and lab class covers the following aspects of the sheet metal industry: principles of airflow; associated equipment; fiberglass duct; field measuring and fitting and triangulation.

**SMTL 115  Practical Applications of Sheet Metal I**  
Fall  4 credits  
This lecture and lab course applies theory to actual shop practices including: principles of layout; parallel line pattern development; fasteners, hangers, and supports.

**SMTL 118  Technical Aspects of Sheet Metal Retrofit Applications**  
Fall  5 credits  
This course is a lecture, drafting, and lab class covering parallel line development and triangulation, focusing on duct fittings needed for replacing old furnaces with new equipment.

### HISTORY (HIST)

**HIST 101  Western Civilization I**  
F&S  3 credits  
European History. A survey of Western Civilization coordinating the study of the factors of economics, politics, society and religion into national strengths. Among the topics covered are: Introductory Historiography, the Origins of Man, Mesopotamian-Egyptian Culture, the Greco-Roman World, the Roots of Christianity, the Medieval Experience, etc.

**HIST 102  Western Civilization II**  
Spring  3 credits  
European History. A survey of Western Civilization coordinating the study of the factors of economics, politics, society and religion through modern times. Among the topics covered are: the “Rebirth” of the Renaissance, Reformation, Counter-Reformation Conflict, The Commercial Revolution and the New Society, Absolutism and the Sun King, etc.

**HIST 103  United States to 1877**  
Fall  3 credits  
A survey of American History—political, social, economic, cultural—from the Colonial Period to the Civil War, with emphasis on the English Colonial Experience, the American Revolution, the establishment of the Union, early reform movements, slavery, and the coming of the Civil War.

**HIST 104  United States Since 1877**  
Spring  3 credits  
A survey of American History—political, social, economic, cultural—from the close of the Civil War to the contemporary period, with emphasis on the transformation of the United States into a modern industrial nation, the concerns of progressive America, and the emergence of the United States from economic disaster to become a powerful and prosperous country.
HIST 208 United States: 1932 to Present BD 3 credits
A survey of historical, political and social dynamics of the United States during the 20th century since 1932, emphasis on domestic changes along with the growing importance of foreign policy.

HIST 220 North Dakota History BD 3 credits
A survey of North Dakota history from the period of early settlement up to the present time with an emphasis on the development and influence of cultural, economic and political factors.

HIST 222 History of the Western Frontier Spring 3 credits
The Trans-Mississippi West with emphasis on the post Civil-War Frontier. Forces and factors in the settlement and development of the Western Frontier. Among the topics covered are: Western Frontier Historiography, the Fur Trappers, the Spanish-Texan Frontier, Brigham Young and the Mormon Frontier, the Mining Frontier, the Cow-town Frontier, Frontier Violence, Fact and Fancy, the Meaning of the Frontier in American History, etc.

HIST 224-225 American Studies I-II BD 3 credits
Interdepartmental seminar class in the culture of the United States. Subjects vary from year to year and will be topical, such as “American History through Film and Documentaries.” Sophomore standing.

HIST 239 The US and the Vietnam War BD 3 credits
A survey of the impact and consequences of the Vietnam war on the people, politics and social life of the United States.

HIST 243 Historical Investigations BD 1-3 credits
Inquiries into historical phenomena—personages, places, institutions, events, ideas—anything that has to do with the life of man in the past. Repeatable so long as content varies—up to six credit hours. If repeated, consent of instructor or department chair required.

HIST 294 Independent Study 1-3 credits
Independent or directed study of special topics in history. Department chairperson approval is required.

HIST 299 Special Topics in History BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in history.

HIST 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

HIST 197-297 Cooperative Education/Internship F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

HUMAN SERVICES (HMSV)

HMSV 130 Introduction to Human Services F&S 3 credits
This course provides an introduction to the helping and non-profit professions, including the various roles, functions, values, and personal attributes needed to function effectively in these careers. Included will be the history, practice setting, career opportunities, and philosophical concepts related to working with vulnerable populations.

HMSV 140 TANF: Temporary Assistance for Needy Families Fall 3 credits
The purpose of this course is to introduce students to the Temporary Assistance of Needy Families Program, examine the laws and policies that drive the program, and develop case management skills in administering the program.

HMSV 141 Supplemental Nutrient Assistance Program Fall 3 credits
The purpose of this course is to introduce students to the Supplemental Nutrient Assistance Program, examine the laws and policies that drive the program, and develop case management skills in administering the program.

HMSV 142 Medicaid Spring 3 credits
The purpose of this course is to introduce students to the Medicaid Program, examine the laws and policies that drive the program, and develop case management skills in administering the program.

HMSV 143 Child Care Assistance Spring 3 credits
The purpose of this course is to introduce students to the Child Care Assistance Program and to examine the laws and policies that drive the program in North Dakota.

HMSV 201 Introduction to Addictions F&S 3 credits
This course is designed to provide current and researched information about abused substances as well as the people who abuse those substances. Topics include theoretical perspectives on abuse, pharmacological characteristics of commonly abused substances, and stages of dependence and addiction. The following topics relating to various areas of human services will also be covered: working with dually diagnosed clients, chemical abuse by children and adolescents, codependency, and enabling.

HMSV 230 Introduction to Helping Skills F&S 3 credits
This course provides the basic knowledge and skills associated with the helping process, the problem solving process, and interaction skills. Focus will be on the dynamics of the helping relationship, interviewing skills, referral skills, and ethical behavior.

HMSV 197 Human Services Internship F&S, SM 3 credits
Required for Human Services AAS degree. Students get on-the -job experience under qualified supervision in a human service agency. Work hours are arranged by employer, advisor, and student and a total of 96 contact hours are required for 3 credits. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. Experience is graded on a satisfactory/unsatisfactory basis. Department approval required.
HUMANITIES (HUMS)

HUMS 210 Integrated Cultural Studies 3 credits
Studies into the cultural life of foreign peoples. This course allows students to experience the rich and complex civilization of foreign nations, exploring their geography, history, arts, literature, language, life style and cuisine.

HUMS 211 Integrated Cultural Excursion 1-4 credits
Inquiries into cultural phenomena experienced while traveling. This course allows students, who participate in BSC sponsored tours, to earn college credit while exploring places, institutions or events during their travels. Students will need to make arrangements with the tour coordinator or the chairman of the Humanities department.

HUMS 212 Integrated Cultural Enrichment 2 credits
This course provides cultural enrichment for students by providing them with experiences in the humanities, particularly in the arts, but also in history. Students will participate in the course by attending a minimum of 15 hours of performances, lectures, cultural events, visits to art exhibits and/or museums, and completing supplemental reading.

INSTRUMENTATION AND CONTROL TECHNOLOGY (ICTL)

ICTL 205 Mechanical Practices Fall 4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program or instructor’s approval. This course covers the types of bolts and their ratings, properties of materials, pipe sizes and threads, types of tubing/application, hoses and their fittings, tubing bending, gaskets and O rings. Other topics include instrument installation, compression fittings, introduction to conduit bending and proper use of conduit fittings and flex conduit.

ICTL 205L Mechanical Practices Lab Fall 1 credit
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program or instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ICTL 215 Instrument Drawings and Documentation Fall 4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program or instructor’s approval. Topics covers in this course include plant terminology, piping and industrial diagrams (P&ID), electrical and wiring diagrams, graphs, charts, documentation of settings and record keeping, calibration practices and standards, flow, pressure, position, level, temperature and analytical measurements. The use and care of test equipment is also covered.

ICTL 215L Instrument Drawings and Documentation Lab Fall 1 credit
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program or instructor’s approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ICTL 225 Input and Output Devices Fall 4 credits
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program or instructor’s approval. In this course students will study measurement sensors such as proximity sensors and switches, motion detectors, analog and smart transmitters, and temperature devices. Other topics include valves and their types, valve positioners, current to pneumatic (I/P) converters, electric drives and motor starters, dampers and linkages.

ICTL 225L Input and Output Devices Lab Fall 1 credit
Prerequisite: Completion of first year Electronics/Telecommunications Technology Program. Co-requisite: ICTL 225 or equivalent and instructors approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ICTL 235 Motors and Controllers Spring 4 credits
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. Topics of study include types of AC and DC motors, stepper motors, motor theory, and types of motor controls, three phase power, Y and delta configurations, variable speed drives (variable frequency and variable DC), motor and other electrical equipment protection (breakers and overloads).

ICTL 235L Motors and Controllers Lab Spring 1 credit
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. Co-requisite: ICTL 235 or equivalent and instructors approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ICTL 245 Controls Spring 4 credits
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. The student will gain a basic understanding of major components of the following types of controllers: programmable logic controllers (PLC), personal computers (PC), distributive control system (DCS). Programming ladder logic, relay logic, function block control logic, relay logic, digital communications, networking, common and typical controller I/O types will be studied.

ICTL 245L Controls Lab Spring 1 credit
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. Co-requisite: ICTL 245 or equivalent and instructors approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ICTL 255 Automation Overview Spring 4 credits
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. Students will learn to demonstrate a process control loop by building, commissioning, troubleshooting and operating a simulated control loop using interlocking logic and control processor algorithms including proportion, integral and derivative (PID) and loop tuning. Students will participate in tours of different facilities such as power plants, refineries, manufacturing facilities, coal gasification plant and food processing plants.

ICTL 255L Automation Overview Lab Spring 4 credits
Prerequisite: Completion of the third semester of the I&C program or instructor’s approval. Co-requisite: ICTL 255 or equivalent and instructors approval. The lab portion of the course is a lab/lecture, which provides hands-on verification of the theory presented in class. This lab is only available on campus.

ELEC 197-297 Cooperative Education/Internship 1-3 credits
Repeatable up to six semester hours. Students get on-the job experience under qualified supervision in electronics/telecommunications technology occupations. Work hours are arranged by the employer, advisor, and
student. Student progress is checked by oral and written reports from the employer. Student advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.

**JOURNALISM (COMM)**

**COMM 112  Understanding Media and Social Change**  
F&S  3 credits

Students in this course explore the purpose, function and impact of media on society.

**COMM 200  Introduction to Media Writing**  
Fall  3 credits

This course is an introduction to writing in the styles and forms required in journalism, broadcast, online media, public relations and advertising. Students gather, organize, and write news stories using Associated Press style and learn about the media process through the applied process of publication.

**COMM 201  Interpretive and Opinion Writing**  
F&S  3 credits

Following the tenets of professional journalism organizations and using the work of contemporary columnists and editorial writers as a guide, students will learn the importance of opinion writing. Through discussion and analysis, students will develop their own opinion column as well as write in-depth interpretive stories and editorials. Their writing will be submitted to the editors of the student campus newspaper to be considered for publication.

**COMM 233  Media Ethics**  
F&S  3 credits

This course uses real-life and hypothetical cases in ethical decision-making situations in the media areas of general information (truth), advertising, loyalties, public relations, privacy, a democratic society, visuals, cyberspace and arts and entertainment.

**COMM 240  Introduction to News Photography**  
F&S  3 credits

Basic principles of the digital photographic process are explored. Major areas covered are equipment selection and handling, light, composition, exposure, and accessories such as filters and proper flash techniques. Good picture taking methods are explained including image transfer, digital file types, and basic Photoshop tools.

**COMM 242  Advanced News Photography**  
F&S  3 credits

This course is further exploration of photography in all phases of news and general use. Equipment selection and handling, exposure, and accessories are further explained. Students will be required to shoot assignments for student print and online publications. Prerequisite: COMM 240 or consent of instructor.

**COMM 244  Reporting and Feature Writing**  
Spring  3 credits

In this course students discuss current practices, problems and ethics of news reporting. Students are introduced to the differences between hard news and soft news with continued practice in gathering, organizing and writing stories using Associated Press style as well as continued practice in the process of publication. Prerequisite: COMM 200 or consent of instructor.

**COMM 270  Basic TV and Video**  
Fall  3 credits

This course teaches the principles of video production. Students learn basic picture and sound generation, recording, editing and scripting and the fundamentals of lighting and equipment setup. Repeatable.

**COMM 272  Advanced Video Production**  
Spring  3 credits

This course is designed to help students learn to use video as an effective form of communication. Students will study and apply the technical and aesthetic principles of broadcast production. Emphasis will be on the theory and practice of studio productions and explore electronic news gathering/interview techniques, so students can effectively communicate audio/visual messages through the generally accepted production norms associated with media production. Students will learn to operate equipment in a television studio, work as a member of a production team and serve as a crewmember of the student video production Mysticast.

**COMM 281  Reporting and Editing**  
F&S  1 credit

Students in this laboratory course become staff members of the student campus newspaper the *Mystic*. Options for involvement include editors, writers, photographers, graphic design artists and advertising personnel. Repeatable.

**COMM 282  Yearbook Editing**  
F&S  1 credit

Students in this laboratory course are members of the yearbook staff, who develop, design and create the yearly publication of the *Prairie Mystic*. Repeatable.

**COMM 294  Independent Study**  
BD  1-3 credits

Students may opt for independent or directed study of special topics in journalism. This form of study requires approval of the department chair.

**COMM 299  Special Topics in Journalism**  
BD  1-3 credits

This course offers an examination of special topics in journalism. Repeatable to six semester hours.

**COMM 195-295  Service Learning**  
BD  1-3 credits

Service learning may be accomplished by one of three methods: joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum. Repeatable to six semester hours.

**COMM 197-297  Cooperative Education/Internship**  
F&S SM 1-3 credits

Employer, advisor and student arrange work hours. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Approval of the department chair is required. Repeatable to six semester hours.

**ENGL 205  English Usage I**  
Fall  2 credits

This first course for developing editing skills offers students guided practice in college level grammar. This study leads to sophisticated understanding of how sentence structure creates meaning. English Usage I is beneficial for a writer in any profession. Suggested co-requisite with journalism courses.

**ENGL 206  English Usage II**  
Spring  2 credits

The second course in grammar study continues and reinforces the skills learned in English Usage I. In addition, students will gain a more effective and eloquent writing style by practicing connotation, clarity, specificity, sound, sentence variety and figures of speech. How ideas are coordinated and subordinated is also crucial to this course. Suggested co-requisite with journalism courses.
ENGL 213  Literary Publications  Spring  3 credits
This course will provide the expertise to produce *Figments of Imagination*, the campus literary and arts journal. Students will learn how to solicit manuscript and visual art entries; screen, select and edit pieces; design, layout and publish the literary and arts publication. Literary Publications is a two-semester class. The fall semester focuses on planning, grant writing, establishing a campus and web presence and organizing an open mic night. The spring semester focuses on call for entries, judging and selection of work, design and production of the publication and organizing an open mic night, public reading and collaborative musical performances.

LINEWORKER (ELECTRICAL) (LNWK)

LNWK 100  Introduction to Climbing Techniques  SM  3 credits
The course is designed for students to learn basic climbing techniques required to be a lineworker.

LNWK 101  Applied Electrical Distribution  Fall  5 credits
This is a lab course in which students will learn to climb and work on poles, dig holes, set and frame poles, string, armor rod, tie and sag conductors, and build single-phase circuits.

LNWK 103  Electrical Distribution  Fall  4 credits
The course includes the principles to function as a lineworker. Course includes climbing equipment, poles, pole guying, conductors, insulators, proper grounding of equipment, personal protective grounding, and proper use of equipment and tools as well as related safety to accomplish the above.

LNWK 105  Basic Electricity D.C. and A.C.  Fall  3 credits
Study of the fundamentals of basic electricity. Subjects include DC and AC theory, Ohm’s law and circuit calculations, reactance and power factor, and related math skills.

LNWK 107  Equipment Operations  Fall  2 credits
A mix of classroom training and outdoor lab work studying the safe and efficient operation of digger derricks, skid steer loaders, backhoes, and trenchers.

LNWK 111  Safety I  Fall  2 credits
Study and practice of accident prevention and job safety.

LNWK 112  Fundamentals of Electrical Distribution  Spring  5 credits
This is a lab course in which students will learn to construct multiphase overhead and underground distribution circuits Prerequisite: LNWK 101 and 103.

LNWK 114  Electrical Distribution  Spring  4 credits
Prerequisite: LNWK 103 and 101. The course includes the principles to function as a lineworker. Course includes URD cable procedures, distribution transformer installation, work procedures for overhead and underground construction, and related safety to accomplish the above.

LNWK 116  Electrical Apparatus and Transformers  Spring  4 credits
Study of the fundamentals of power line apparatus. Subjects include transformer theory and connections, substation and switchyard functions, single circuit meter installation, basic understanding of current and potential transformers when used in metering applications. Also included is the basic understanding of voltage regulators, line fuses, line switches and oil circuit reclosers. Prerequisite: LNWK 105.

LNWK 118  Safety II  Spring  2 credits
Safety 1. Continuation of the study and practice of accident prevention and job safety. Prerequisite: LNWK 111.

LNWK 120  Rope and Rigging  Spring  2 credits
Students learn and practice knot tying and splicing. Also included are the study of rope characteristics, different uses of rope, and basic rigging techniques.

LNWK 294  Independent Study  1-3 credits
Independent or directed study of special topics in the lineworker field. Department chairperson approval is required.

LNWK 299  Special Topics  1-3 credits
Variable instructional topics in the lineworker field. Repeatable as long as content varies. Consent of department chairperson.

LNWK 195-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

LNWK 197-297  Cooperative Education/Internship  1-3 credits
Repeatable up to a maximum of six hours. Students get on-the-job experience under qualified supervision in lineworker occupations. Work hours are arranged by the employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.

MASS COMMUNICATIONS - SEE JOURNALISM

MATHEMATICS (MATH)

ASC 092  Beginning Algebra  F&S  3 credits
Fundamental skills in mathematics beginning with basic arithmetic and concluding with elementary algebra. Topics designed for those students with little or no mathematics background who wish to prepare for future study in mathematics. Will not satisfy the mathematics/science/technology requirements at BSC and will not be accepted for credit at transfer institutions.

MATH 102  Intermediate Algebra  Fall  3 credits
Effective Fall 2011, this course is a developmental, pre-college course. Find the course description with Academic Skills Courses on page ____. Department chairperson approval is required.

MATH 103  College Algebra  F&S SM  4 credits
Prerequisite: Qualifying ACT or COMPASS score. Solutions of linear and quadratic equations and inequalities, graphing functions and relations, polynomial and rational functions, systems of equations and inequalities, exponential and logarithmic functions.

MATH 104  Finite Mathematics  F&S  3 credits
Prerequisite: Qualifying ACT or COMPASS score. Topics include functions, matrices, modeling, linear systems, linear programming, the simplex method, probability and statistics, and mathematics of finance.
MATH 105  Trigonometry  F&S  2 credits
Prerequisites: Math 103. Functions of the general angle, graphs of the
trigonometric functions, inverse functions, identities, trigonometric
equations, and applications.

MATH 107  Pre-Calculus  F&S  5 credits
Prerequisite: Qualifying ACT or COMPASS score. Selected topics from
algebra and trigonometry with special emphasis on how they apply to
the study of calculus. Topics covered include solutions of equations
and inequalities, exponential, logarithmic, trigonometric and circular
functions and their graphs.

MATH 137  Applied Algebra  F&S SM  3 credits
Prerequisite: ASC 092, or qualifying ACT or COMPASS score. (Refer to
the online catalog for updated placement information.) An intermediate
algebra course for students enrolled in technology programs. Topics
include properties of real numbers, algebraic expressions, factoring,
formula manipulation, graphing, linear equations, quadratic equations,
solving systems of equations, simultaneous equations, exponents,
radiical and logarithmic equations. NOTE: This course satisfies general
education requirements for the AAS, diploma and certificate.

MATH 146  Applied Calculus I  F&S  3 credits
Prerequisite: Math 103. Limits, continuity, differentiation, integration
differential equations are included with many examples drawn from
business, economics, management, life and social sciences.

MATH 165  Calculus I  F&S SM  4 credits
Prerequisites: Math 107, MATH 103 and MATH 105 or qualifying ACT
or COMPASS score. Review of analytic geometry, limits and continuity,
derivatives of functions of one variable with applications, L’Hopital’s
rule, antidifferentiation, the Fundamental Theorem of Calculus, numerical
integration, trigonometric, exponential and logarithmic functions.

MATH 166  Calculus II  F&S SM  4 credits
Prerequisites: Math 165. Applications of the definite integral including
areas, volumes of solids of revolution, surface areas and centroids;
techniques of integration, parametric equations, polar equations,
improper integrals, and tests of convergence for sequences and series.

MATH 208  Discrete Mathematics  Spring  3 credits
Prerequisite: Math 165. Study of sets, relations, functions, graph theory,
Boolean algebra, combinatorics, logic and induction with particular
emphasis on their application to computer science.

MATH 210  Elementary Statistics  F&S SM  3 credits
Prerequisite: Qualifying ACT or COMPASS score. An introduction to
statistical methods of gathering, presenting and analyzing data. Topics
include probability and probability distributions, confidence intervals,
hypothesis testing, and linear regression and correlation.

MATH 220  Probability and Statistics  Spring  3 credits
Prerequisite: MATH 166 or concurrent enrollment in MATH 166. Study
of basic probability theory including probability functions for both
discrete and continuous data. Sampling distributions, point and interval
estimations, hypothesis testing and regression and correlation theory are
also explored with emphasis placed on applications of each method.

MATH 227  Applied Linear Algebra  Fall  3 credits
Prerequisite: MATH 166 or concurrent enrollment in MATH 166. Vectors
and matrices, systems of linear equations and inequalities, mappings,
determinants, linear programming and the simplex method.

MATH 265  Calculus III  F&S  4 credits
Prerequisites: Math 166. Vectors and the geometry of space, functions
of several variables with applications, lines and planes in space,
gradient vectors and directional derivatives, multiple integration with
applications, divergence and curl, line and surface integrals.

MATH 266  Introduction to Differential Equations  Spring  3 credits
Prerequisite: MATH 265 or department approval. Study of first and
second order differential equations, linear differential equations, Laplace
transforms, systems of equations, approximate solutions by numerical
methods, eigenvalues and eigenvectors. Special emphasis is given to
applications in a variety of fields.

MATH 277  Mathematics for Elementary Teachers I  F&S  4 credits
Prerequisite: Math 103 or consent of instructor. Sets, divisibility, primes,
number systems, number bases other than ten, number theory and problem
solving. This class is designed specifically for elementary education
majors. Three hours of class and one two-hour lab per week.

MATH 294  Independent Study  1-3 credits
Independent or directed study of special topics in mathematics. Department
chair approval is required.

MATH 299  Special Topics in Mathematics  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics
in mathematics.

MATH 195-295 Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished
by one of three methods: Joining a club that has a public service
component, doing volunteer work at a non-profit organization, or taking
a course that links public service with its curriculum.

MATH 197-297 Cooperative Education/Internship  F&S SM  1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by
employer, advisor and student. Progress is checked by oral and written
reports from the employer. Periodic student-advisor conferences are
required to discuss progress or problems. Students are required to
submit an accounting of their experiences to their instructor. All co-op
experiences are based on a satisfactory/unsatisfactory basis. Department
chair approval is required.

MECHANICAL ENGINEERING (ME)
SEE ENGINEERING

MECHANICAL MAINTENANCE TECHNOLOGY (MMAT) (WELD)

MMAT 101  Introduction to Industrial Operations  F&S  1 credit
Covers the basic steam generation and gas conversion systems, how
thermal energy is converted into electrical energy, components of the
system, and design features for gaining thermal efficiency. Includes
handling of water, fuel, and wastes, and the operating features of a
industrial plant.

MMAT 103  Safety and Health  F&S  3 credits
This course covers all aspects of maintaining a safe work environment;
Including OSHA/Regulatory Compliance and Laboratory Safety. This
course meets the needs of industrial safety, health, and regulatory train-
ing.
MMAT 105  Hand and Portable Tools F&S  2 credits
This course covers the most important hand tools used on the job. Examines the various kinds of wrenches and screwdrivers, their uses and handling techniques, pipefitting tools, plumbing tools, electrician’s tools, sheet metalworking tools, machinists’ metal-working tools. Explains the uses, selection, safety, and care of industrial power tools: electric drills, electric hammers, pneumatic drills and hammers, screwdrivers, nut runners, wrenches, linear-motion and circular saws, routers and planes, electric sanders, grinders, and shears. Covers tool sharpening techniques for selected tools.

MMAT 107  Basic Mechanics F&S  2 credits
This course covers force and motion, work and energy and fluid mechanics as applied in industrial maintenance. Explains principles of operation for simple machines, such as the lever, inclined plane, wheel and axle, pulley, and screw. Studies the basic elements of industrial machines, as well as common measurement tools used to monitor and adjust equipment.

MMAT 109  Measurements F&S  2 credits
This course covers units of measurement used in commercial and industrial applications. Examines all aspects of basic measurement concepts and procedures, including accuracy and tolerance. Covers techniques and devices for comparison measurements (dial indicators and gauge blocks).

MMAT 111  Schematics Symbols and Blueprints F&S  2 credits
Covers all types of schematics and symbols used in commercial and industrial settings. Examines symbols on schematics, electrical symbols and diagrams, piping symbols and diagrams, hydraulic and pneumatic diagrams and symbols. Studies air conditioning and refrigeration systems, including explanations of electrical/electronic control schematics. Covers welding and joining symbols.

MMAT 113  Industrial Rigging F&S  1 credit
This course covers techniques and safeguards in the use of rope, chain, hoists, and scaffolding when moving heavy plant equipment and maintaining plant utilities.

MMAT 115  Lubrication, Bearings and Seals F&S  2 credits
Covers a complete lubrication training program, including functions and characteristics of lubricants, factors in selection of lubricants, and effects of additives. Oils, greases, and other compounds used for lubrication are described, as well as their applications. Covers plain bearings, their parts, dimensions, functions, and relining techniques. Continues with installation and replacement of anti-friction bearings. Also covers linear motion bearings and shaft seals.

MMAT 117  Material Handling Systems F&S  1 credit
Covers belt conveyors that carry coal, sand, gravel, grain and other loose materials. Acquaints the student with the terminology, basic structure, and operation of material handling systems. Includes detailed coverage of belts, belt cleaners, idlers, and feed/discharge devices, as well as an explanation of how to install, maintain, replace, and troubleshoot these components.

MMAT 119  Troubleshooting Skills F&S  1 credit
Explores the subject of troubleshooting and the importance of proper maintenance procedures. Covers working with others, aids in communication, and trade responsibilities. Outlines troubleshooting techniques and aids, using schematics and symbols. Focuses on specific maintenance tasks, breakdown maintenance, and planned maintenance.

MMAT 150  Mechanical and Fluid Drive Systems  2 credits
Covers belt drives, chain drives, gears and gear drives, adjustable-speed drives, shaft alignment, shaft coupling devices, and clutches and brakes.

MMAT 155  Hydraulics and Pneumatics  2 credits
Covers hydraulic and pneumatic principles, types of hydraulic fluids and their characteristics. Describes components of hydraulic and pneumatic systems and their functions, including filters and strainers, reservoirs and accumulators, pumps, piping, tubing and hoses, control valves, relief valves, and actuating devices.

MMAT 160  Valves and Steam Traps  3 credits
Covers maintenance and operation of gate, globe, ball, plug, check, special-purpose valves and steam traps. Details actuators and various accessories. Explains valve selection based on application. Explores methods of protecting piping systems.

MMAT 165  Piping and Tubing Systems  3 credits

MMAT 170  Equipment Installation  3 credits
Covers installation procedures for large plant equipment. Considers factors affecting proper installation in detail from preparatory relocation of underground piping and wiring through equipment anchoring, aligning, and test running.

MMAT 175  Pumps, Compressors, and Turbines  4 credits
Covers typical applications of various types of pumps, compressors and turbines. Explores factors affecting equipment selection. Defines operating principles of centrifugal, propeller, and turbine, rotary, reciprocating, and metering equipment. Includes special-purpose pumps, diaphragm pumps, and others designed to handle corrosive and abrasive substances.

MMAT 200  Maintenance Pipefitting  1 credit
Covers piping and tubing systems used for fluid transport in the plant: hydraulic fluids, steam, liquified product, refrigerant, and water. Explores typical metallic and nonmetallic piping systems, pipe-joining methods, and how tubing and hoses differ from piping. Covers valves, pipe fittings, hangers, supports, and insulation, and covers how tubing is sized, fitted, bent, and joined. Studies uses of traps, filters, and strainers.

MMAT 205  Basic Electricity and Electronics  2 credits

MMAT 210  Metals in the Plant  2 credits
Introduces metals, metallurgy, and metalworking. Covers the properties of metals, including their mechanical properties. Examines several industrial manufacturing processes. Covers iron and standard steels. Studies the different kinds of heat treatment and their usage. Introduces techniques of working with copper, aluminum, magnesium, titanium, lead, nickel, tin, and zinc.
MMAT 215  Nonmetals in the Plant  2 credits
Introduces major nonmetal materials and how they are most frequently used. Illustrates properties, characteristics, and classifications of each material. Covers synthetic and natural materials. Examines various paints and coatings, their proper use, preparation, and application. Surveys industrial chemicals. Chemical safety precautions are covered, along with the proper use of protective equipment.

WELD 110  Oxyfuel Operations  2 credits
Introduces welding of ferrous and nonferrous metals. Covers oxygen cutting as well as brazing and soldering. Explores surfacing techniques.

WELD 118  Testing OA in Welding, Brazing, Cutting  F&S  2 credits
This course provides the lab to develop the manual skills necessary to produce high quality welding using the oxyacetylene welding, brazing, and cutting processes on mild steel.

WELD 135  Welding Principles  2 credits
Introduces metals, metallurgy, and metalworking. Discusses the properties of metals, including their mechanical properties. Examines several industrial manufacturing processes. Covers iron and standard steels. Defines the different kinds of heat treatment and their usage. Covers some techniques of working with copper, aluminum, magnesium, titanium, lead, nickel, tin, and zinc.

WELD 140  Methods in GMA & FCA Welding  F&S  2 credits
This course provides the lab to develop the manual skills necessary to produce high quality welds using the gas metal and flux cored arc welding process in all positions.

WELD 170  Arc Welding Operations  2 credits
Covers shielded metal arc welding, selecting electrodes for SMAW, gas metal and tungsten arc welding, preheating, reheating, welding ferrous and nonferrous metals, pipe welding, hard facing, and rebuilding.

WELD 180  Shielded Metal Arc Welding  Spring  2 credits
This course provides the training to develop the manual skills necessary to produce high quality welds using the shielded metal arc welding process on thin and medium thickness mild steel plates in all positions using the E70 series electrodes.

MMAT 197-297  Cooperative Education/Internship 1-3 credits
Repeatable up to six semester hours. Students get on-the-job experience under qualified supervision in mechanical maintenance technical occupations. Work hours arranged by employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student-advisor conferences are held to discuss progress and/or problems. All co-op experiences are graded on a satisfactory/unsatisfactory basis. Consent of department chairperson.

MEDICAL LABORATORY SCIENCES (MLS)

MLS 100  Human Structure and Function  F&S  4 credits
Includes lecture and laboratory. Designed for students enrolled in the Medical Laboratory Technician and Phlebotomy Technician programs. Does not fulfill the requirements for nursing, surgical technician, massage therapy. Not GERTA approved. Fundamental concepts of the structure and function of the cells, tissues, organs and organ systems of the human body. Special emphasis is placed on those systems most closely related to diagnostic procedures performed in the clinical laboratory, including the following: skeletal, muscular, nervous, cardiovascular, lymphatic, immune, endocrine, digestive, respiratory and renal. Open to all students.

MLS 101  Introduction to Medical Laboratory Science  Fall  1 credit
An introduction to the medical laboratory and the profession of medical laboratory science. Professional ethics, medical terminology, laboratory safety, the use and care of basic laboratory equipment. Open to all students.

MLS 103  Phlebotomy  F&S EO  3 credits
Phlebotomy is the “art of drawing blood.” The course consists of a knowledge component to include: anatomy of hand, arm, foot and blood vessels; blood composition, specimen types, and coagulation factors. The motor skills component will include instruction in manual phlebotomy techniques, and drawing and handling specimens. The attitude component discusses the public relations aspect of the job and job applications. Open to all students.

MLS 104  Phlebotomy Internship  F&S, SM  8 credits
The internship provides a supervised rotation of no less than 160 hours in the phlebotomy section of the affiliated clinical laboratory. Prerequisites: acceptance into the Phlebotomy Technician program, MLS 103, ENGL 110, CSCI 101, MLS 100, BOTE 171.

MLS 113  Urinalysis  Fall  1 credit
Review of renal anatomy and physiology; urinalysis theory and techniques, with emphasis on microscopic analysis of urine sediment. Includes lab. Prerequisites: Acceptance into MLT program. Corequisite: MLS 101.

MLS 115  Clinical Parasitology  Fall  1 credit
Study of parasites and their relationship to the human host. Includes lab. Prerequisite: Acceptance into MLT program. MLS 101.

MLS 201  Immunology  Spring EO  4 credits
The foundations of diagnostic serology, immunohematology, histocompatibility and hematology as well as new technology such as monoclonal antibodies and molecular biology are covered in order for students to become better prepared for a career in laboratory medicine. Prerequisites: General Biology 150-151 or equivalent, CHEM 115,116 or 121,122 strongly recommended. Open to all students.

MLS 205  Clinical Internship I  SM  1 credit

MLS 215  Clinical Internship II  SM  2 credits
Supervised experience in the hematology, chemistry, microbiology and blood banking departments of the affiliated clinical laboratory. Prerequisites: MLS 205.

MLS 225  Hematology  Spring  3 credits
MLS 235  Clinical Chemistry I  SM  3 credits
Principles of instrumentation and the theory and application of the biochemical tests performed in the clinical laboratory. The student will receive instruction in the basic techniques required for performing routine manual determinations. Prerequisite: MLS 101, 113, CHEM 115,116, 115L, 116L, BIOL 220, 221, 220L, 221L or MLS 100. Corequisite: MLS 205.

MLS 236  Clinical Chemistry II  Fall  1 credit
Continuation of the lectures given during the summer session. Prerequisite: MLS 235.

MLS 240  Immunohematology  Fall  3 credits
Lecture and laboratory. Fundamental principles of immunology are presented and applied to serology and blood banking. Donor selection, blood collection and processing, blood components and compatibility testing. Preparation and administration of blood and genetics of blood inheritance. Theory of blood coagulation and procedures. Prerequisites: MLS 101, 201, 225.

MLS 245  Clinical Microbiology I  SM  3 credits
The morphology, culture characteristics and identification of bacteria pathogenic to man and their role in infectious disease are discussed, as well as antibiotics susceptibility testing and rapid identification systems. Prerequisite: MICR 202, MLS 101, 115, 225. Corequisite: MLS 205.

MLS 246  Clinical Microbiology II  Fall  1 credit
Continuation of the lectures given during the summer session and Mycology. Prerequisites: MLS 245.

MLS 255  Clinical Internship III  BD  12 credits
Supervised experience in the hematology, chemistry, microbiology, and blood banking departments of the affiliated clinical laboratory. Prerequisites: All MLS courses.

MLS 294  Independent Study  1-3 credits
Independent or directed study of special topics in medical laboratory. Department chairperson approval is required.

MLS 295-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

MLS 297-297  Cooperative Education/Internship  F&S SM  1-3 credit hours each
Repeatable up to a maximum of six semester hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

MLS 299  Special Topics in Medical Laboratory  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics in medical laboratory technology.

MICROBIOLOGY (MICR)
SEE BIOLOGY

MILITARY SCIENCE (MS)

MS 101  Military Science I  Fall  2 credits
MS 101 introduces the student to the personal challenges and competencies that are critical for effective leadership. The student will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officercies, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program its purpose in the Army, and its advantages for the student.

MS 101L  Leadership Lab  Fall  1 credit
MS 101L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 101.

MS 102  Military Science II  Spring  2 credits
MS 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Students will explore dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercises.

MS 102L  Leadership Lab  Spring  1 credit
MS 102L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 102.

MS 201  Military Science II  Fall  2 credits
MS 201 explores the dimensions of creative and tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced by planning, executing and assessing team exercises. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier’s Creed and Warrior Ethos as they apply in the contemporary operating environment.

MS 201L  Leadership Lab  Fall  1 credit
MS 201L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 201.

MS 202  Military Science II  Spring  2 credits
MS 202 examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. This course is designed to provide a smooth transition into the ROTC upper division courses offered at the university level. Students develop greater self awareness as they assess their own leadership styles and practice communication and team-building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios.

MS 202L  Leadership Lab  Spring  1 credit
MS 202L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 202.
MILITARY SCIENCE (MS)

MS 101 Military Science I 2 credits
MS 101 introduces the student to the personal challenges and competencies that are critical for effective leadership. The student will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

MS 101L Leadership Lab 1 credit
MS 101L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 101.

MS 102 Military Science II 2 credits
MS 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Students will explore dimensions of leadership attributes and core leaders competencies in the context of practical, hands-on, and interactive exercises.

MS 201 Military Science II 2 credits
MS 201 explores the dimensions of creative and tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced planning, executing and assessing team exercises. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier’s Creed and Warrior Ethos as they apply in the contemporary operating environment.

MS 201L Leadership Lab 1 credit
MS 201L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 201.

MS 202 Military Science II 2 credits
MS 202 examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. This course is designed to provide a smooth transition into the ROTC upper division courses offered at the university level. Students develop greater self-awareness as they assess their own leadership styles and practice communication and team-building skills. COE case studies give insight into the importance and practice of team work and tactics in real-world scenarios.

MS 202L Leadership Lab 1 credit
MS 202L provides students with the opportunity to apply the knowledge, tools and techniques they learn in MS 202.

MUSIC (MUSC)

MUSC 100 Music Appreciation F&S 3 credits
Covers musical styles and forms of classical music as well as historical background from the Medieval to the Contemporary. A study of periods, composers, and compositions. A background in music is not required. No prerequisites.

MUSC 117 Concert Choir F&S 1 credit
Performing ensemble open to all BSC students. Activities include Choir Fest, tours and concerts on campus. Students in their first semester of choir at BSC also enroll in Applied Music 145 or Class Voice.

MUSC 118 Chamber Choir F&S 1 credit
An auditioned select ensemble of 12-16 voices. Music covers a variety of styles from madrigal to classical, jazz to popular. Concurrent registration in Concert Choir required. Students in their first year of choir at BSC also enroll in Applied Music 145 or Class Voice.

MUSC 121 String Ensemble F&S 1 credit
Open to all BSC students with a background in stringed instruments.

MUSC 122 Music Theory I Fall 3 credits
Notation, rhythm, scales, intervals, transposition, harmony, cadences and nonharmonic tones. Concurrent registration in Music 123 and Music 151 or Applied Piano (MUSC 145) required for majors or students interested in continuing with Music Theory II.

MUSC 123 Aural Skills I Fall 2 credits
Emphasis on developing vocal production, aural/reading skills in scales, intervals and rhythms, and basic melodic and rhythmic dictation.

MUSC 124 Music Theory II Spring 3 credits
Prerequisite: Music 122. Partwriting, seventh chords, secondary dominants, modulation, composition. Concurrent registration in Music 125 and Music 151 or Applied Piano (MUSC 145) required.

MUSC 125 Aural Skills II Spring 2 credits
Continuation of Music 123. Prerequisite: Music 123.

MUSC 130-131, 230-231 Class Voice F&S 1 credit
Music 130-131 is for men and Music 230-231 is for women. Students concentrate on a group approach to singing technique and solo singing of literature for male voices and female voices.

MUSC 132 Wind Ensemble (Band) F&S 1 credit
A performing ensemble for those students who enjoy expression through instrumental playing. Open to all BSC students.

MUSC 133/134 Woodwind Ensemble I&II F&S 1 credit
Open to all students, these groups perform chamber music for community functions as well as campus recitals.

MUSC 135/136 Brass Ensemble I&II F&S 1 credit
Open to all students, these groups perform chamber music for community functions as well as campus recitals. Concurrent registration in Wind Ensemble required.

MUSC 137 Jazz Ensemble F&S 1 credit
Open to all students. Jazz literature from all 20th century styles, improvisation, concerts throughout the year.

MUSC 138 Percussion Ensemble F&S 1 credit
Open to percussionists and non-percussionists by audition, this group performs a variety of percussion/mallet music for community events and campus recitals.
MUSC 140 Orchestra F&S 1 credit
The Bismarck-Mandan Symphony Orchestra offers dual credit to interested students in pursuing performance opportunities in orchestral literature. Students will rehearse according to the Bismarck-Mandan Symphony Orchestra schedule and at their rehearsal locations as published by the symphony office. The Bismarck-Mandan Symphony Orchestra is a community organization open to qualified students upon audition and approval of the director, Dr. Beverly Everett. Repeatable for credit.

MUSC 145 Applied Music F&S 1 credit
For students not enrolled as music majors. Private lessons in voice, piano, strings, wind instruments, percussion, organ, guitar; the name of the instrument becomes the name of the course. Open to all BSC students. Lessons are half hour weekly for ten weeks. Lab fee.

MUSC 146 Applied Music-Major F&S 1 credit
For students declared as music majors. Private lessons in voice, piano, strings, wind instruments, percussion, or guitar for music majors, music minors or other students with approval of instructor. Lessons are one hour weekly for ten weeks. Lab fee.

MUSC 151-152/251-252 Class Piano I-IV 1 credit
Study of the basic elements of piano proficiency including intervals, scales, chords, transposition and harmonization of melodies. Begins with elementary piano skills and advances to intermediate piano skills. Students interested in starting above Level 1 need permission of instructor.

MUSC 153 Class Guitar-Beginner 1 credit
Group instruction for students with no prior experience on guitar. Emphasis on chord and fretboard knowledge, music reading skills and learning popular songs. A steel or nylon string guitar is required.

MUSC 154 Class Guitar II 1 credit
A continuation of material studied in Class Guitar I. Class Guitar II focuses on the study of chords, scales, reading music, and music of contemporary guitar styles. Prerequisite: MUSC 153 or instructor’s approval.

MUSC 155 Guitar Ensemble 1 credit
Guitar Ensemble is a select performance group that showcases the guitar in an ensemble setting. Students need to know how to read music, chord charts and tablature. Classical, jazz, and rock literature will be studied. Students are required to be in Applied Music-Guitar (MUSC 145 or 146).

MUSC 160 Mini-Music BD 1 credit
Selected music topics offered upon demand in five-week segments in the evening division.

MUSC 207 Music for Teachers Fall 3 credits
A survey of elementary school music. Development of teaching skills and knowledge, including use of autoharp, tonette, and rhythm instruments.

MUSC 222 Music Theory III Fall 3 credits
Chromatic harmony, study of musical forms, composition, and musical analysis. Concurrent registration in Music 223 and 251 or Applied Piano (MUSC 145) required. Prerequisite: Music 124.

MUSC 223 Aural Skills III Fall 2 credits
Emphasis on continued development of aural skills in interval and chord identification, rhythmic and melodic dictation, error detection and sight singing. Prerequisite: Music 125.
NUCLEAR POWER TECHNOLOGY (NUPT)

NUPT 101 Overview of Nuclear Energy 2 credits
In this course the student will study the history of nuclear power, the basic principles of reactor design and operation at commercial nuclear electrical generating facilities. It includes an examination of nuclear waste issues, a study of important events which occurred at commercial nuclear plants, and a look towards the future of the electrical generating industry.

NUPT 103 Nuclear Mathematical Fundamentals 3 credits
This course will review basic math, including basic arithmetic functions, fractions and decimals. The course will continue by covering scientific notation, dimensional analysis, algebra, basic geometry and trigonometry. Control charts and graphs, logarithms and exponential functions, and rate concepts will also be covered.

NUPT 105 Classical Physics 4 credits
Recommended prerequisite NUPT 103. This course is designed to introduce students to classical physics. Topics covered include: units of measurement, kinetics, force, energy, momentum, work, fluids, and mechanical principles.

NUPT 107 Engineering Drawings, Diagrams, and Schematics 3 credits
This course will introduce students to engineering drawings, diagrams, and schematics that are used in nuclear operations. Students will learn how to read and decipher the various nuclear symbols, components, systems, and legends found on diagrams, drawings, and schematics.

NUPT 109 Electrical Science 4 credits
Recommended prerequisite NUPT 103. This course begins with the study of basic electrical fundamentals, theory, laws, and magnetism. Direct current and alternating current electrical circuits, generators, motors, and other components along with their applications will be covered. Single-phase AC circuits and three-phase AC circuits will be discussed. Inductance, capacitance, impedance, and resonance will be covered along with construction of conductors, insulators, and relays.

NUPT 111 Instrumentation and Control 4 credits
Recommended prerequisites NUPT 109 and NUPT 217. This course will cover the construction, operation, and failure modes of basic sensors and detectors used in nuclear generation. Included in this are gamma and neutron core power detector construction, operation and effects. Various control systems will be covered including failure symptoms and troubleshooting techniques from an operational perspective.

NUPT 113 Mechanical Science Spring 3 credits
This course will cover the basic function, design, and operation of mechanical components and equipment which are an integral part of nuclear facilities. Pumps, heat exchangers, valves, diesel engines, compressors, and filters will be included as well as some mechanical systems such as cooling towers and refrigeration.

NUPT 213 Nuclear Physics 3 credits
Recommended prerequisite NUPT 105. This course will tour the topics that comprise the fundamentals of nuclear science, giving the students an appreciation of theory and principles that govern nuclear processes involved in an operating reactor. This course covers the fundamental atomic structures, nuclear nomenclature, binding energy and nuclear decay reactions. Other topics such as the famous E=mc² equation, neutron interaction with matter, the fission process and decay heat will be related to the everyday operation of a nuclear power plant.

NUPT 215 Nuclear Plant Chemistry 3 credits
Recommended prerequisite NUPT 103. This course covers basic chemistry fundamentals relating to maintaining water purity in primary and secondary systems. This course also covers chemistry concepts for both pressurized water reactors and boiling water reactors. Principles of water treatment, hazards and safety requirements will also be contained in the course.

NUPT 217 Heat Transfer, Fluid Flow & Thermodynamics 4 credits
Recommended prerequisite NUPT 105. This course covers heat transfer, fluid flow fundamentals, and the basics of thermodynamics. It begins with a discussion of temperature and heat, and progresses into heat capacities, sensible and latent heats. The laws of thermodynamics and related terms are introduced. The student will learn to perform energy balances, and understand thermodynamic processes and cycles. Properties of fluids and descriptions of their behavior are discussed. Topics covered include density, static head, hydraulics, buoyancy, and fluid flow. Centrifugal pumps are studied as well as closed system operation.

NUPT 219 Material Science 3 credits
This course provides the student with a basic understanding of the structure of metals and how those structures are affected by various processes. The properties of metals and their applications are also covered along with thermal stress and shock. Ductile and brittle fractures will also be covered along with selecting materials for specific use in the industry. Lastly, students will discuss how important pressure and temperature curves are and why they are used when heating up and cooling down plant equipment.

NUPT 220 Reactor Theory 2 credits
Recommended prerequisite NUPT 213. This course will tour the topics that comprise the fundamentals of how reactors are built and operated, giving the student understanding and appreciation of the theory and principles that govern control room operation and activities outside the control room and how they could affect the reactor. This course starts with classification of the types of neutrons, and the neutron life cycle. Other topics include reactivity which provides an understanding of what criticality means in terms of reactor operation. Lastly, a discussion of reactor shutdown operation and decay heat removal and significant reactor events.

NUPT 221 Science of Radiological Protection 3 credits
This course will provide the student with a broad, in-depth knowledge of radiological protection principles.

NUPT 223 Reactor Safety Design 3 credits
This course will provide the student with a broad, in-depth knowledge of reactor safety design and protection principles.

NUPT 225 Nuclear Plant System Component Design and Function 4 credits
Recommended prerequisites NUPT 219, 220 and 223. This course will provide the student with a broad, in-depth knowledge of nuclear plant Reactor, Reactor Auxiliaries, Secondary Plant and Electrical Systems.
NURSING (NURS) (PHRM)

NURS 100 Nurse Assistant Training F&S SM 1-2 credits
Nursing Assistant Training provides classroom instruction and clinical practice to those preparing for employment as a certified nursing assistant in a skilled nursing facility, acute care, or home health care. Included in the three-week, 88 hour program is classroom instruction, supervised practical training and clinical practice. This course can be taken for credit as NURS 100 or non-credit by contacting the Continuing Education, Training and Innovation Department at (701) 224-5600. Special fees attached based on how the course is delivered.

NURS 120 Foundations of Nursing Fall 3 credits
This course introduces concepts related to the practical nurse’s roles and responsibilities in today’s society. Emphasis is placed on effective communication, microbiology concepts, basic human needs and nursing concepts, critical thinking, research, and ethical-legal and professional issues. Health promotion and disease prevention concepts are introduced. Upon completion the student will be able to understand the nursing process as it relates to the socially and culturally diverse clients along the health-illness continuum. Prerequisites: ENGL 110, CHEM 115/115L. Corequisites: NURS 121 and 122.

NURS 121 Practical Nursing I Fall 3 credits
This course introduces students to core concepts of pharmacology, nutrition, and health assessment as they relate to the nursing profession. Students will learn basic pharmacological principles, safe administration of medications, health promotion and disease prevention related to nutrition, and the data collection processes of health assessment. Prerequisites: ENGL 110, CHEM 115/115L. Corequisites: NURS 120 and 122.

NURS 122 Clinical Practice I Fall 3 credits
This course takes place in the nursing laboratory and in health care facilities. The student will apply social, biological, behavioral and nursing science principles as they are acquired in the Foundations of Nursing and Practical Nursing I courses. Basic nursing skills and procedures are demonstrated and applied in a supervised laboratory/clinical setting. Beginning Practical Nursing students will begin to participate in the nursing process for clients across the lifespan. Prerequisites: ENGL 110, CHEM 115/115L. Corequisites: NURS 120 and 121.

NURS 124 Clinical Practice II Spring 3 credits
This course takes place in the nursing laboratory and in health care facilities. Complex nursing skills are introduced in the laboratory and applied in the clinical setting utilizing current technology. Clinical experiences will include nursing interventions, pain management, nutrition and drug therapy for disease and infectious processes of culturally diverse clients across the lifespan. Health promotion activities and disease prevention techniques will be incorporated into nursing care of the culturally diverse client. Mental health and therapeutic communication concepts are applied in caring for clients along the health illness continuum. Evidence-based practice is applied in the holistic care of clients across the lifespan. Upon completion the student will assist in the nursing process as a member of the interdisciplinary health care team. Prerequisites: NURS 120, 121, and 122. Corequisite: NURS 123.

NURS 126 Clinical Practice III SM 3 credits
This course will provide the student with a broad-brush knowledge of the Conduct of Operations as set forth by the Department of Energy (DOE Order 5480.19, Conduct of Operations). This document contains best operating practices found in the commercial nuclear fleet, and as such can be looked at as a summary document for candidate utility workers.

NURS 127 Practical Nursing II: Introduction to Medical/Surgical Nursing Spring 2 credits
This didactic course expands on prior learning to increase evidenced based knowledge of nursing interventions, pain management, surgery, cancer, trauma and drug therapy for disease and infectious processes of the biopsychosocial individual along the health-illness continuum. This course will integrate teaching and learning activities that enhance critical thinking skills, involvement of clients in decision-making, self-care, health promotion, disease prevention and intervention to responses to illness. Upon completion the student will describe the application of the nursing process in caring for culturally unique clients across the life-span in an ethical and legal manner.

NURS 129 Practical Nursing III SM 4 credits
This course will continue the study of evidence-based nursing interventions, nursing process, nutrition and drug therapy for disease processes of the culturally diverse client across the lifespan along the health-illness continuum. Additional course information will include accountability, roles, responsibilities and ethical, legal and professional issues of the entry level Practical Nurse. The principles of therapeutic communication are expanded and the impact of technology on nursing care is addressed. Prerequisites: NURS 123 and 124. Corequisite: NURS 126.

NURS 145 Introduction to Maternal/Child Nursing Spring 2 credits
This didactic course focuses on nursing care of the culturally diverse woman, infant, and child. Emphasis is placed on health maintenance and selected study of diseases and disorders affecting women, infants, children, and families. Growth and development of the infant and child, and common childhood illnesses are presented. The importance of family centered care and therapeutic communication is addressed. This course will integrate teaching and learning activities that enhance involvement of clients in decision-making, self-care, health promotion and disease prevention.

NURS 224 Professional Role Development Fall 2 credits
This course is designed to assist the licensed practical nurse in transition to the role of the associate degree nurse. Emphasis is placed on the role of the registered nurse; evidence-based practice, nursing process, and therapeutic communication. Historical trends of nursing will be discussed and management concepts will be introduced. Upon completion, students should be able to articulate professional aspects of the practice of nursing. Prerequisite: Admission to the ADN program. Corequisites: NURS 225, 226, and 227.
NURS 225  Alterations in Health I  Fall  3 credits
This course introduces concepts related to the nursing care of individuals experiencing acute and chronic alterations in health that build on knowledge and skills introduced in practical nursing programs and the supporting sciences. Emphasis is placed on utilizing scientific principles and the nursing process as a framework for providing and managing nursing care to individuals along the health-illness continuum. Upon completion, students will incorporate basic decision-making skills and therapeutic communication to meet basic human needs for individuals experiencing acute and chronic alterations in health across the lifespan including end-of-life issues. Prerequisite: Admission to the ADN program. Corequisites: NURS 224, 226, and 227.

NURS 226  Maternal Child Nursing  Fall  3 credits
This course integrates prior learning to provide expanded knowledge of the neonate, developing child, women’s health, and childbearing family. Maintenance and study of diseases and disorders affecting diverse neonates, children, women, and families along the health-illness continuum, including end-of-life issues, are examined. Emphasis is placed on therapeutic communication, the role of the registered nurse, ethical/legal issues and health promotion and maintenance during life stages of growth and development for the neonates, children, and women. As a member of the interdisciplinary health care team, the student will explore the human needs of diverse neonates, children and women, utilizing the nursing process as a framework. Prerequisite: Admission to the ADN program. Corequisites: NURS 224, 225, and 227.

NURS 227  Clinical Application I  Fall  4 credits
Utilizing the nursing process, the associate degree nursing student will administer care to meet the needs of individuals across the lifespan. The student will demonstrate assessment skills and apply scientific principles and aseptic technique in caring for individuals across the lifespan along the health-illness continuum. The student will apply therapeutic communication in the management of patient care and as a member of the interdisciplinary health care team. Prerequisite: Admission to the ADN program. Corequisites: NURS 224, 225, and 226.

NURS 228  Alterations in Health II  Spring  4 credits
This course continues the study of acute and chronic alterations in health. Nursing care of individuals experiencing complex alterations in health is discussed. Emphasis is placed on the nurse’s role as a member of an interdisciplinary team and as a manager of care for individuals across the lifespan. The student will analyze personal and professional values, leadership and management, and quality improvement processes. Upon completion, students will be able to provide comprehensive nursing care for individuals with acute, chronic, and complex alterations in health. Prerequisites: NURS 224, 225, 226, and 227. Corequisites: NURS 229 and 237.

NURS 229  Health Promotion and Psychosocial Nursing  Spring  2 credits
This course includes concepts related to the nursing care of individuals experiencing alterations in social and psychological functioning. Utilizing the nursing process, the students will explore human needs of individuals with mental health alterations. Utilization of therapeutic communication techniques, use of self and cultural awareness is stressed. Emphasis is also placed on health promotion, health maintenance, and accident/illness prevention for diverse individuals across the lifespan. Prerequisites: NURS 224, 225, 226, and 227. Corequisites: NURS 228 and 237.

NURS 237  Clinical Application II  Spring  5 credits
Utilizing the nursing process, the associate degree nursing student will meet the needs of individuals experiencing complex alterations in health as well as psychiatric/mental health issues across the lifespan along the health-illness continuum. Critical thinking, nursing process, group dynamics, and management of nursing care are incorporated into the clinical experience. Students will apply evidence-based nursing knowledge and skills in the implementation of health promotion activities. The student will utilize therapeutic communication and effective management skills in providing nursing care according to legal/ethical and professional standards. Prerequisites: NURS 224, 225, 226, and 227. Corequisites: NURS 228 and 229.

NURS 259  Role Transition  Spring  1 credits
This course assists the AD nursing student to prepare for the NCLEX RN® examination and to become a member of the RN workforce. The theoretical component of this course will reinforce and complement prior knowledge gained in the nursing curriculum. Students will utilize the nursing process and critical thinking skills to review previously learned nursing concepts. The course will also provide the student with opportunities to apply basic interview techniques and resume preparation and develop skills for successful employment as a health care professional. It assists the student in making decisions concerning job choices and educational growth. The course stresses the requirement of ongoing education for the RN as a member of the health care team and benefits of professional organizations. Completion of the course will assist students to further prepare for NCLEX. Corequisites: NURS 228, NURS 229, NURS 327.

NURS 294  Independent Study  BD  1-3 credits
Independent or directed study of special topics in Practical Nursing. Department chairperson approval is required.

NURS 299  Special Topics  BD  1-3 credits
An examination of special topics in nursing.

PHRM 215  Introduction to Pharmacology  F&S SM  3 credits
A fundamental discussion of the scope of pharmacology, including terminology used. Drug laws, dosage forms, and patient variabilities that affect drug usage will be covered. Important drugs used in practice will be studied, including basic principles, therapeutic uses, and adverse effects. Prerequisites: BIOL 220/220L and CHEM 115/115L.

NUTRITION (NUTR)

NUTR 240  Principles of Nutrition  F&S SM  3 credits
A survey of nutrition through the life cycle. The course will include aspects of digestion, metabolism and clinical applications of nutrition in disease.

PARAMEDIC (EMT-P) TECHNOLOGY (EMS)

EMS 197a  Field Internship I  BD  1 credit
This course is designed to introduce the Paramedic student to BLS and ALS prehospital operations. The student will become familiar with operations at the dispatch center and the role of quick response units with the sheriff’s department. The student will also become familiar with procedures and care provided by paramedics in the field. The student will function under the direction of a preceptor. The student will input patient contact information into the FISDAP Internet data collection system.

EMS 197b  Field Internship II  BD  1 credit
This course allows the Paramedic student to apply learned classroom skills and knowledge under the direction of a preceptor in a pre-hospital setting. The student will be stationed with a license ALS ambulance service. The student will input patient contact information into the FISDAP data collection system.
This course prepares the Paramedic student to identify, assess, manage,
treat age-related emergencies and other special challenges. The
student will also be introduced to the concept of assessment based
management. Topics include Neonatology, Pediatrics, Geriatrics, Abuse
and Assault, Patients with Special Challenges, Acute Interventions for the
Chronic Care Patient, Assessment-Based Management, and associated
pharmacological interventions.

EMS 226 Operations
This course introduces the Paramedic student to the concepts of medical
incident command, ambulance and rescue operations, hazardous
materials incidents, and crime scene awareness. This course will also result
in the awarding of certification in Emergency Vehicle Operations and Extrication.

EMS 227 CPR-Instructor
This course prepares the Paramedic student to become a CPR/BLS Instructor through
the American Heart Association. The student will learn various teaching
strategies, course organization, and safety issues. The student must carry
an AHA healthcare provider card as a prerequisite.

EMS 240 Hospital Clinical I
This course allows the Paramedic student to apply learned classroom
skills and knowledge in clinical settings such as laboratory, preoperative
holding, emergency department, anesthesia department, and triage. The
student will function under the direction of a preceptor. The student
will input patient contact information into the FISDAP Internet data
collection system.

EMS 250 Hospital Clinical II
This course allows the Paramedic student to apply learned classroom
skills and knowledge in clinical settings such as anesthesia, emergency
department, same-day surgery, operating room, and respiratory care.
The student will function under the direction of a preceptor. The student
will input patient contact information into the FISDAP Internet data
collection system.

EMS 201 Anatomy & Physiology
This course prepares the student to understand basic medical terminology,
and gross human anatomy and physiology. The course is designed
to go beyond that covered in the anatomy and physiology review of
each section in the curriculum. The course is a prerequisite to all other
paramedic courses.

EMS 208 Introduction to Advanced Pre-Hospital Care
This is an introductory course for the Paramedic student. It will build
on the knowledge gained during the student’s EMT-Basic education and
experiences as well as introducing the student to the expanded role of
the Paramedic. Topics include roles and responsibilities, EMS systems,
the well-being of the paramedic, illness and injury prevention, medical/
legal issues, ethics, general principles of pathophysiology, therapeutic
communications, and life span development.

EMS 210 Emergency Pharmacology / Fluid Therapy
This course introduces the Paramedic student to venous access, IV therapy, basic pharmacological effects on the body, medication
administration, and drug calculations.

EMS 212 Airway Management and Ventilation
This course introduces the Paramedic student to basic and advanced
airway management concepts. Skills include, but are not limited to,
assessments, airway adjuncts, bag-valve-mask, Combitube, EOA,
tubation, and associated pharmacological interventions.

EMS 214 Comprehensive Patient Assessment
This course introduces the Paramedic student to a comprehensive
physical examination and assessment, which includes history taking,
clinical decision making, communications, and documentation.

EMS 216 Trauma Management
This course prepares the student to identify, assess, manage, and
treat various types of trauma emergencies. Topics include Trauma
Systems, Mechanism of Injury, Soft-Tissue Trauma, Burns, Head and
Face Trauma, Spinal Trauma, Thoracic Trauma, Abdominal Trauma,
and Musculoskeletal Trauma. Skills include, but are not limited to,
assessment, splinting, bandaging, spinal immobilization, IV therapy,
chest decompression, and associated pharmacological interventions.

EMS 218 Respiratory Emergencies
This course prepares the Paramedic student to identify, assess, manage,
and treat respiratory emergencies. Skills include, but are not limited to,
assessment, nebulizer therapy, and associated pharmacological interventions.

EMS 220 Cardiac Emergencies I
This course prepares the student to identify single and multi-lead cardiac
rhythms and treat those rhythms considered to be life threatening with
electrical therapy. Skills include, but are not limited to, assessment,
defibrillation, cardioversion, and cardiac rhythm interpretation.

EMS 221 Cardiac Emergencies II
This course prepares the student to assess, manage, and treat various
cardiovascular emergencies. These emergencies include, but are not
limited to, ventricular fibrillation, bradycardia, tachycardia, myocardial
infarction, cardiogenic shock, pulmonary edema, angina pectoris,
congestive heart failure, hypertension, PEA, and asystole.
This course allows the Paramedic student to apply learned classroom skills and knowledge in clinical settings such as telemetry, intensive care unit, psychiatric unit, emergency department, and labor and delivery. The student will function under the direction of a preceptor. The student will input patient contact information into the FISDAP Internet data collection system.

This course allows the Paramedic student to apply learned classroom skills and knowledge under the direction of a preceptor in a pre-hospital setting. The student will also function as a team leader on selected BLS calls. The student will be stationed with a licensed ALS ambulance service. The student will input patient contact information into the FISDAP Internet data collection system.

This course allows the Paramedic student to apply learned classroom skills and knowledge under the direction of a preceptor in a pre-hospital setting. The student will function under the direction of a preceptor. The student will input patient contact information into the FISDAP Internet data collection system.

PETROLEUM ENGINEERING TECHNOLOGY (PET)

For updated course descriptions please check Petroleum Engineering Technology pages at bismarckstate.edu/academics.

ENRT 101 Introduction to Energy Technology 4 credits
An introduction to the expanding industry known as “Energy.” Students will learn about a variety of energy facilities from traditional to renewable, including but not limited to fossil fuel power plants, petroleum refineries, ethanol and biodiesel facilities, gasification plants, wind farms, geothermal and hydro power production facilities, natural gas processing facilities, petroleum production, water and wastewater treatment and others. The role of the technician in these facilities will be a focus, as well as the expectations and culture of the industry.

ENRT 105 Safety, Health and Environment 3 credits
This course covers the personal protective equipment and proper safe work practices and procedures commonly used in the energy industry. Students will also gain a working knowledge of standard safety, health and environmental practices and regulations set by various government entities.

PET 115 Petroleum Geology 4 credits
Students will be introduced to the field of geology and its application to the discovery and recovery of oil and natural gas. Rocks, minerals and geological processes (i.e., continental drift, mountain building, basin formation, weathering and erosion, etc.) will be studied. Theories of oil and natural gas formation will be discussed, and land forms, geologic patterns and structures associated with hydrocarbon deposits will be described.

PET 115L Petroleum Geology Laboratory 1 credit
Students will gain hands on experience with identifying rocks and minerals as well as recognizing and interpreting topographic and geologic maps; folding and faulting of the crust; analyzing drainage patterns of surface and ground water; earthquake loci; and the development of topographic surfaces through erosion and deposition.

PET 121 Petroleum Data Management I 3 credits
This course offers an overview and introduction to the common computer applications used by the petroleum industry, especially in the areas of exploration, discovery and development of major oil deposits. Students will be using documents, spreadsheets, PowerPoint, AutoCAD and other appropriate software.

PET 221 Petroleum Data Management II 3 credits
Continuation of Petroleum Data Management I; focus is on computer applications required for drilling, production, transportation and storage of oil and natural gas. Significant attention is paid to databases and database management, SQL, GIS applications and industry appropriate software.

PET 131 Petroleum Exploration and Production I 3 credits
Overview of the procedures involved in land and deep-water exploration and development of hydrocarbon deposits. Topics will include drilling and completing wells and development of production systems.

PET 131L Petroleum Exploration and Production I Laboratory 1 credit
Students will be exposed to drilling rigs, drilling rig safety, equipment used in drilling and supporting drilling and well completion activities.

PET 132 Networking for industry 2 credits
Students will study the theory and practice of networking computer systems necessary to extract data during the drilling, extraction and well completion activities. Troubleshooting and development of problem solving skills will be emphasized.

PET 231 Petroleum Exploration and Production II 3 credits
Continuation of PET 131 focusing on geological classifications, beam pumpers, drilling rigs, giant oil and gas fields, fracturing and other high tech, recently developed processes.

PET 231L Petroleum Exploration and Production II Laboratory 1 credit
Students will be exposed to drilling and recovery processes and the engineering technician’s role in these activities. Emphasis will be on practical application of relevant computer software, and operation of equipment and instrumentation used by technicians.

PET 241 Principles of Reservoir Engineering 3 credits
Students will study the engineering techniques and calculations used in the development, operation and management of hydrocarbon reservoirs.

PET 251 Well Completions 3 credits
Analysis of drilling and wellbore data needed to develop well completion plan.

PET 255 Petroleum Operations 3 credits
Students will explore the principles and practical applications of onshore and offshore operations leading to hydrocarbon recovery.
Students will explore the recovery, transport, storage and treatment of natural gas.

Students will engage in hands on application of the principles, equipment and instrumentation used in natural gas production.

Exploration of the factors that determine the profitability of oil fields and the development of data needed to make these determinations.

The course gives a basic overview of the petroleum industry operations and how they are interrelated. The course will start with the nature of gas and oil, where we find it (geology), geophysics (seismic exploration), land and leasing (drilling preliminaries), the mechanics, problems, techniques of (drilling), testing and completing of a (well), surface equipment, separation, storage, measurement, and sales, (production).

Open to all students. Concepts of Fitness and Wellness is designed for the student to receive instruction and participation in the cognitive, affective, and psychomotor domains of personal wellness.

Meeting two hours per week. May be repeated once. This is an activity class with stress on sports activities. Students who enroll in bowling are charged a fee of $30.

Open to all students. Concepts of Fitness and Wellness is designed for the student to receive instruction and participation in the cognitive, affective, and psychomotor domains of personal wellness.

Students will be encouraged to look for reasons for belief, to think through issues and clearly express why they agree with or differ from others.

An introduction to the problems of moral choice, the meaning of value and the process of making a value judgment. Application of the ethical theory to moral issues and the role of action versus theorizing is discussed.

An introduction to reasoning and argumentation. Students will consider general patterns of arguments, including deduction and induction; fallacies; elementary symbolic logic; and reasoning in different fields such as law, science, the arts, business, and ethics.

A study of Western political thought from Socrates to the age of ideology. A basic theme is the changing relationship of ethics and politics. Philosophers/political thinkers include: Plato, Aristotle, St. Augustine, Machiavelli, Locke, and Marx.

This course is a qualitative survey of movies and the ways in which they impact and shape our lives, cultures and institutions. Mixing reality and fiction, films offer an invaluable source for innovative ideas and new approaches for viewing the world around us.

Independent or directed study of special topics in philosophy. Department chairperson approval is required.

Repeatable up to six semester hours. An examination of special topics in philosophy.

Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

Open to all students. Concepts of Fitness and Wellness is designed for the student to receive instruction and participation in the cognitive, affective, and psychomotor domains of personal wellness.

Meets two hours per week. May be repeated once. This is an activity class with stress on sports activities. Students who enroll in bowling are charged a fee of $30.

Required for majors and minors in physical education. Additional laboratory hours in officiating required. Rules and techniques of basketball and wrestling officiating.

Required for majors and minors in physical education. Rules and techniques of football, baseball, and track officiating.

Fundamentals, elementary and advanced skills, conditioning, and strategies.

Activity class meets two hours per week.

Fundamentals of standard dance forms covering a broad repertoire of steps and rhythms; encompasses skills in leading, following, style, various dance couple positions and dance etiquette.
### HPER 207  Prevention and Care of Injuries
- **Spring**  2 credits

Instruction in the prevention and care of all types of athletic injuries including two hours classroom and one hour training room laboratory. Required of all majors and minors in physical education.

### HPER 208  Introduction to Physical Education
- **Fall**  2 credits

Required class for minors and majors in physical education. It is the beginning preparation for those students who are planning careers in physical education, health education and recreation.

### HPER 210  First Aid, CPR and AED
- **F&S**  1 credit

Open to all students. Responding to emergencies and general directions for giving first aid, artificial resuscitation and defibrillation (AED), and other emergency situations will be covered. American Heart Association Healthcare Provider CPR card and American Heart Association First Aid cards will be issued upon successful completion.

### HPER 212  Introduction to Self Defense
- **F&S**  1 credit

A comprehensive course in self-defense and personal safety. Students will learn basic awareness, stranger danger tips and techniques to avoid life threatening situations. Specialized skills in escape moves, pressure point tactics and close quarters maneuvers will be taught.

### HPER 217  Personal and Community Health
- **Spring**  3 credits

Principles of health and basic understanding of hygiene. Special emphasis on health facts, habits, and attitudes as they relate to home, school, and community. Recommended for all students.

### HPER 250  Varsity Athletics
- **Fall**  2 credit

Fundamentals of individual and team offense and defense of basketball.

### HPER 251  Varsity Athletics
- **Spring**  2 credit

Fundamental skills, conditioning, and strategy of tennis and badminton.

### HPER 294  Independent Study
-  1-3 credits

Independent or directed study of special topics in physical education. Department chairperson approval is required.

### HPER 299  Special Topics in Physical Education
-  1-3 credits

Repeatable up to six semester hours. An examination of special topics in physical education and recreation.

### HPER 195-295 Service Learning
-  1-3 credits

Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

### HPER 197-297 Cooperative Education/Internship
- **F&S SM**  1-3 credit hours each

Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

### PHYSICS (PHYS)

#### PHYS 100  Concepts of Physics
- **Spring BD**  3 credits

Concurrent registration in PHYS 100L is required. An introduction to physics with applications in everyday life. Material is presented from a conceptual rather than mathematical viewpoint. A few fundamental physical laws are studied and applied to explain a wide range of everyday phenomena. The course is designed for students who have a limited mathematical background. Prerequisites: None.

#### PHYS 100L  Concepts of Physics Lab
- **Spring BD**  1 credit

Concurrent registration in PHYS 100 is required. Two hours of lab per week. Laboratory to accompany PHYS 100.

#### PHYS 110  Introductory Astronomy
- **Fall**  3 credits

Concurrent registration in PHYS 110L is required. Brief history of ancient astronomy; the Copernican revolution and the beginning of modern astronomy (Copernicus, Kepler, Galileo, Newton); the appearance of the night sky, revolution and rotation of the Earth, celestial coordinate systems, the calendar and seasons; the nature of light and telescopes; structure and origin of the solar system; the Earth, atmospheric phenomena (rainbows, haloes, aurora, etc.) the Moon; the planets and their satellites; comets and solar system debris (asteroids and meteorites); distances and motions of the stars; formation of stellar spectra; the Sun; evolution of ordinary stars; evolution of massive stars and supernovae; neutron stars, pulsars and black holes; the Milky Way and other galaxies; the expanding universe, quasars and cosmology.

#### PHYS 110L  Introductory Astronomy Lab
- **Fall**  1 credit

The lab will include topics that support the lecture (PHYS 110). Labs meet two hours per week. (Concurrent registration in PHYS 100 is required.

#### PHYS 200  Selected Topics in Physics
-  1-3 credits

This course will be offered on demand to qualified students. Topics dependent upon individual student interest. A documented report is expected from the students. A maximum of four (4) credits may be earned in this manner.

#### PHYS 211-212 College Physics I-II
- **211 Fall  212 Spring**  3 credits each

PHYS 211 is a prerequisite for 212. Concurrent registration in PHYS 211L for 211; PHYS 212L for 212 is required. Recommended course sequence for pre-medical students. Topics include: Kinematics, mechanics, thermodynamics, waves, electricity and magnetism, and optics. Prerequisites: College algebra or equivalent, trigonometry recommended.

#### PHYS 211L-212L College Physics I-II Lab
- **211 Fall  212L Spring**  1 credit each

Concurrent registration in PHYS 211 for PHYS 211L; PHYS 212 for PHYS 212L is required. Three hours of lab per week. Laboratories to accompany PHYS 211 and 212.

#### PHYS 251-252 University Physics I-II
- **251 Fall  252 Spring**  4 credits each

Concurrent registration in PHYS 251L for 251; PHYS 252L for 252 is required. Classical physics using calculus for majors in mathematics, physical sciences and engineering. Topics may include: kinematics, mechanics, thermodynamics, waves, electricity and magnetism, and optics. Prerequisites: MATH 165 for 251, MATH 166 for 252. 251 is prerequisite for 252.
PHYS 251L-252L University Physics I-II Lab
251L Fall   252L Spring   1 credit each
Concurrent registration in PHYS 251 for PHYS 251L; PHYS 252 for
PHYS 252L is required. Three hours of lab per week. Laboratories to
accompany PHYS 251 and 252.

PHYS 294 Independent Study   1-3 credits
Independent or directed study of special topics in physics. Department
chairperson approval is required.

PHYS 299 Special Topics in Physics   BD   1-3 credits
Repeatable up to six semester hours. An examination of special topics
in physics.

PHYS 195-295 Service Learning   1-3 credits
Maximum of six semester hours. Service learning may be accomplished
by one of three methods: Joining a club that has a public service
component, doing volunteer work at a non-profit organization, or taking
a course that links public service with its curriculum.

PHYS 197-297 Cooperative Education/Internship
F&S SM   1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by
employer, advisor and student. Progress is checked by oral and written
reports from the employer. Periodic student-advisor conferences are
required to discuss progress or problems. Students are required to
submit an accounting of their experiences to their instructor. All co-op
experiences are based on a satisfactory/unsatisfactory basis. Department
chair approval is required.

PLANT SCIENCE (PLSC)
SEE AGRICULTURE

POLITICAL SCIENCE (POLS)

POLS 115 American Government   F&S SM   3 credits
National government is emphasized. Topics include: political
personalities, power, political socialization, current political and social
issues, public opinion, the mass media, voting, campaigning, the
Presidency, the Congress, the courts, the bureaucracy, and domestic
and foreign policies.

POLS 116 State and Local Government
F&S   3 credits
State and community government is emphasized. Topics include: state
and community politics and participation, federalism, state legislators
and councilmen, governors and mayors, the courts, metropolitics, the
issues of crime, education, transportation, poverty, welfare, budgeting
and taxation.

POLS 195 Student Government   F&S   1-3 credits
An exploration of principles of leadership, and the application of these
principles, to the planning and implementation of club and institutional
activities.

POLS 220 International Politics
Spring   3 credits
The U.S. role in world politics is emphasized. Topics include: the
national interest, international morality, diplomacy, the world’s resources,
elements of national power, the limits of power, resolution of conflict
and the 1970s and beyond.

POLS 240 Political Ideologies   BD   3 credits
This is a four hundred year study of American ideas and ideologies. This
includes: the American dream, revolutionary thought, the individual in
democratic society, abolitionism, liberalism and conservatism. SS.

POLS 294 Independent Study   1-3 credits
Independent or directed study of special topics in political science.
Department chairperson approval is required.

POLS 299 Special Topics in Political Science   BD   1-3 credits
Repeatable up to six semester hours. An examination of the special
topics in political science.

PHYS 195-295 Service Learning   1-3 credits
Maximum of six semester hours. Service learning may be accomplished
by one of three methods: Joining a club that has a public service
component, doing volunteer work at a non-profit organization, or taking
a course that links public service with its curriculum.

PHYS 197-297 Cooperative Education/Internship
F&S SM   1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by
employer, advisor and student. Progress is checked by oral and written
reports from the employer. Periodic student-advisor conferences are
required to discuss progress or problems. Students are required to
submit an accounting of their experiences to their instructor. All co-op
experiences are based on a satisfactory/unsatisfactory basis. Department
chair approval is required.

POWER PLANT TECHNOLOGY (ENRT, PWRP)

Check BSC’s Energy Education website, bismarckstate.edu/energy,
or contact your advisor for the most up-to-date list of course offer-
ings and schedule.

ENRT 101 Introduction to Energy Technology   4 credits
An introduction to the expanding industry known as “Energy.” Students
will learn about a variety of energy facilities from traditional to renew-
able, including but not limited to fossil fuel power plants, petroleum
refineries, ethanol and biodiesel facilities, gasification plants, wind farms,
geothermal and hydro power production facilities, natural gas processing
facilities, petroleum production, water and wastewater treatment and
others. The role of the technician in these facilities will be a focus, as
will be the expectations and culture of the industry.

ENRT 103 Applied Math   3 credits
This course includes math skills and how they apply to the energy
industry. Students will learn volume and area calculations as well as
conversions of temperature, pressure, level and flow through the use of
algebra, trigonometry, and other math applications.

ENRT 104 Electrical Fundamentals   3 credits
This course covers basic direct current theories and applies those to the
electrical system and related equipment. Students will also study basic
DC circuit calculations. This course will also cover basic alternating
current theories and apply those theories to electrical systems and related
equipment. Students will study various methods of producing a voltage.
Students will also study essential generator and motor design, construc-
tion and operating principles.
**ENRT 105 Safety, Health and Environment 3 credits**
This course covers the personal protective equipment and proper safe work practices and procedures commonly used in the energy industry. Students will also gain a working knowledge of standard safety, health and environmental practices and regulations set by various government entities.

**ENRT 107 Mechanical Fundamentals Fall 2 credits**
This course introduces mechanical concepts commonly found in a plant setting. This course provides students with an overview of piping systems including dimensions, connections, blindings and more. Students will become familiar with common hand tools and terminology found in many plants. Students will learn about steam traps, strainers and their applications. Students are introduced to common pumps and drivers, compressors and fans and heat exchangers.

**ENRT 108 AC Fundamentals 3 credits**
This course covers basic alternating current theories and applies those theories to electrical systems and related equipment. Students will also study basic generator and motor design, construction and operating principles.

**ENRT 110 Plant Equipment and Systems F&S 4 credits**
This course provides the student extensive information on equipment. This course provides an introduction to equipment used in power, process and renewable industry. Valves, piping, pumps, compressors, generators, turbines, motors, lubrication systems, heat exchangers, furnaces, boilers, cooling towers, separators, reactors, and distillation columns are covered. The utilization of this equipment within systems will be covered.

**ENRT 112 Print Reading 3 credits**
This course covers schematics, prints, and piping and instrument diagrams used in the energy industry. Students will learn how to read and interpret block and single-line diagrams, which will prepare them for the logic and electrical schematics included in this course.

**ENRT 116 Instrumentation & Control 4 credits**
This course provides a comprehensive look and study of instrumentation components, control theory, control systems and typical controllers associated with the operation of energy facilities.

**ENRT 118 Heat Transfer, Fluid Flow & Thermodynamics 3 credits**
Students enrolled in this course will study heat transfer, fluid flow and the conservation of energy. Specific equipment design considerations based on thermodynamic principles will be covered.

**ENRT 120 Water Purification and Treatment 3 credits**
This course covers industrial water treatment processes. Students will study boiler water treatment, raw water treatment and the design and operation of ion exchangers. The course also covers cooling water treatment equipment and waste water treatment equipment and systems.

**ENRT 205 Steam Generation 3 credits**
In this course the various types of boilers, systems, components and auxiliary systems associated with steam generators are covered. Different designs of boilers will be covered including low/high pressure, fire tube/water tube, negative/positive draft, drum type, supercritical and fluidized bed boilers. Boiler operation, combustion, safety and emission control equipment will be covered along with efficiency measures.

**ENRT 215 Operations, Troubleshooting & Communications 3 credits**
Students will gain the knowledge necessary to comprehend overall plant operations and respond to abnormal operating conditions. Students will also participate in root cause analysis exercises while troubleshooting different operating scenarios. This course is designed to provide instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Students will use existing knowledge of equipment, systems and instrumentation to understand the operation of an entire unit in a facility. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the process technician’s individual and team role in performing tasks associated with these concepts within an operating unit.

**ENRT 220 Practical Applications 2 credits**
Students will participate in hands-on lab activities, internships or industry job shadowing to gain entry-level job competencies.

**PWRP 203 Energy Sources and Conversions 2 credits**
Students enrolled in this course will study the various forms of energy and the processes used to convert chemical and potential energy into thermal, mechanical and in some instances electrical energy. Energy sources that will be studied include fossil fuels (coal, oil and natural gas), hydro, wind, fuel cells, solar, derived fuel, geothermal and nuclear. Combustion and reaction will be discussed in detail for those energy sources that require combustion to convert from one energy form to another.

**PWRP 207 Boilers & Environmental Protection 3 credits**
In this course, students will gain a more thorough understanding of the various types of boilers, systems, components and auxiliary systems associated with steam generation. Topics covered include low/high pressure, fire tube/water tube, negative/positive draft, drum type, supercritical and fluidized bed boilers. Boiler operation, combustion, safety and emission control equipment will be covered along with efficiency measures.

**PWRP 210 Turbines & Combined Cycle Operations 3 credits**
Students enrolled in this course will study all the elements that make up a gas turbine and a combined cycle unit. This course also covers the safe and efficient operation of gas turbines and heat recovery steam generators and their different applications as used in combine cycle and cogeneration configurations. Coal gasification is also studied. This course covers basic steam turbine construction and design and associated auxiliary systems. Students will learn how thermal energy is converted to mechanical energy as the steam passes through a typical industry steam turbine. Students will also study the auxiliary systems associated with steam turbine operation, including extraction steam systems, gland steam sealing systems, turbine lube oil systems, seal oil systems, instrumentation and control devices and protective schemes used during abnormal operating conditions. Steam turbine start-up and shut-down procedures will also be studied.

**PWRP 214 Power Generation, Components & Protection 2 credits**
Students enrolled in this course will study the design and construction of large industrial generators used in the production of electricity. Students will study the various exciter designs and operation and the various auxiliary equipment that supports generator operation. Students enrolled in this course will study the electrical systems from the main generator through the switchyard including the various relay and protection schemes and zones. Safety aspects and operational checks in regards to placing electrical systems and components in and out of service will also be covered.
PRIOR LEARNING ASSESSMENT (PLA)
PLA 201 Prior Learning Assessment: Portfolio  BD  2 credits
This is a course to help students prepare a portfolio describing and documenting their learning from experience. Upon completion, the portfolio may be evaluated and college credit is awarded to the extent the learning is college-equivalent.

PROCESS PLANT TECHNOLOGY (ENRT, PROP)
Check BSC’s Energy Education website, bismarckstate.edu/energy, or contact your advisor for the most up-to-date list of course offerings and schedule.

ENRT 101 Introduction to Energy Technology  4 credits
An introduction to the expanding industry known as "Energy." Students will learn about a variety of energy facilities from traditional to renewable, including but not limited to fossil fuel power plants, petroleum refineries, ethanol and biodiesel facilities, gasification plants, wind farms, geothermal and hydro power production facilities, natural gas processing facilities, petroleum production, water and wastewater treatment and others. The role of the technician in these facilities will be a focus, as will be the expectations and culture of the industry.

ENRT 103 Applied Math  3 credits
This course includes math skills and how they apply to the energy industry. Students will learn volume and area calculations as well as conversions of temperature, pressure, level and flow through the use of algebra, trigonometry, and other math applications.

ENRT 104 Electrical Fundamentals  3 credits
This course covers basic direct current theories and applies those to the electrical system and related equipment. Students will also study basic DC circuit calculations. This course will also cover basic alternating current theories and apply those theories to electrical systems and related equipment. Students will study various methods of producing a voltage. Students will also study essential generator and motor design, construction and operating principles.

ENRT 105 Safety, Health and Environment  3 credits
This course covers the personal protective equipment and proper safe work practices and procedures commonly used in the energy industry. Students will also gain a working knowledge of standard safety, health and environmental practices and regulations set by various government entities.

ENRT 107 Mechanical Fundamentals  2 credits
This course introduces mechanical concepts commonly found in a plant setting. This course provides students with an overview of piping systems including dimensions, connections, bending and more. Students will become familiar with common hand tools and terminology found in many plants. Students will learn about steam traps, strainers and their applications. Students are introduced to common pumps and drivers, compressors and fans and heat exchangers.

ENRT 110 Plant Equipment and Systems  4 credits
This course provides an introduction to equipment used in power, process and renewable industries. Valves, piping, pumps, compressors, generators, turbines, motors, lubrication systems, heat exchangers, furnaces, boilers, cooling towers, separators, reactors, and distillation columns are covered. The utilization of this equipment within systems will be covered.

ENRT 112 Print Reading  3 credits
This course covers schematics, prints, and piping and instrument diagrams used in the energy industry. Students will learn how to read and interpret block and single-line diagrams, which will prepare them for the logic and electrical schematics included in this course.

ENRT 116 Instrumentation & Control  4 credits
This course provides a comprehensive look and study of instrumentation components, control theory, control systems and typical controllers associated with the operation of energy facilities.

ENRT 118 Heat Transfer, Fluid Flow & Thermodynamics  3 credits
Students enrolled in this course will study heat transfer, fluid flow and the conservation of energy. Specific equipment design considerations based on thermodynamic principles will be covered.

ENRT 120 Water Purification and Treatment  2 credits
This course covers industrial water treatment processes. Students will study boiler water treatment, raw water treatment and the design and operation of ion exchangers. The course also covers cooling water treatment equipment and waste water treatment equipment and systems.

ENRT 205 Steam Generation  3 credits
In this course the various types of boilers, systems and auxiliary systems associated with steam generators are covered. Different designs of boilers will be covered including low/high pressure, fire tube/water tube, negative/positive draft, drum type, supercritical and fluidized bed boilers. Boiler operation, combustion, safety and emission control equipment will be covered along with efficiency measures.

ENRT 215 Operations, Troubleshooting & Communications  3 credits
Students will gain the knowledge necessary to comprehend overall plant operations and respond to abnormal operating conditions. Students will also participate in root cause analysis exercises while troubleshooting different operating scenarios. This course is designed to provide instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Students will use existing knowledge of equipment, systems and instrumentation to understand the operation of an entire unit in a facility. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the process technician’s individual and team role in performing tasks associated with these concepts within an operating unit.

ENRT 220 Practical Applications  2 credits
Students will participate in hands-on lab activities, internships or industry job shadowing to gain entry-level job competencies.

PROP 235 Hydrocarbon Chemistry  3 credits
This course provides a fundamental study of the organic chemistry of hydrocarbons associated with crude oil. This course will also focus on process chemistry, chemistry fundamentals, typical process reactions and process solubility theory.

PROP 237 Distillation & Refinery Operations  3 credits
This course provides a comprehensive study of processes associated with refining, and petrochemical distillation. This course will also focus on equipment designs, operation requirements and technician responsibilities associated with the operation of typical distillation facilities.
PSYCHOLOGY (PSYC)

PSYC 100 Human Relations in Organizations
BD 2 credits
This course is an exploration of interpersonal relationships in and out of any occupational environment. Topics include: communication, motivation, leadership and teamwork.

PSYC 105 Relationships and Self Esteem
F&S SM 2 credits
This course discusses career options, financial budgeting, interpersonal communication, family relations, and parenting skills. Emphasis is on self-esteem and motivational techniques to achieve personal goals.

PSYC 107 Mental Skills Training for Performance Excellence
Fall 2 credits
This is a hands-on course designed to help students gain practical knowledge and learn how to improve their personal performance. Using specific mental training tools, students will learn how to develop mental toughness and resilience when practicing, competing, and presenting – to become the best they can be in athletics, on stage, in the classroom, in business, and in life.

PSYC 111 Introduction to Psychology F&S SM 3 credits
Psychology is a science that attempts to understand and predict behavior and to study its relationship to unseen mental processes and to external events in the environment. Subject matter includes the learning processes, perception, motives, emotions, personality, developmental, social and abnormal behavior. This course is a general prerequisite to other psychology courses.

PSYC 211 Introduction to Behavior Modification
Spring 3 credits
Basic principles and procedures for acquiring, maintaining and changing behavior, emphasizing human applications. Major assignment involves designing, implementing, and reporting an individual project. Prerequisite: Psychology 111.

PSYC 230 Educational Psychology F&S 3 credits
The application of psychology principles of development: perception and learning; and motivation to contemporary educational problems — classroom management, planning and effective teaching, student testing and evaluation, and parent/home issues. Prerequisite: Psychology 111. Recommend completion of Psychology 211 or Psychology 250.

PSYC 250 Developmental Psychology F&S SM 3 credits
A study of human development through the life-span with an emphasis on physical, cognitive, social, emotional and personality development. Prerequisite: Psychology 111.

PSYC 252 Child Psychology Fall 3 credits
Overview of theories of human development from conception through childhood including physical, cognitive, language, social, and self help skills in family, school, and community settings. Prerequisite: Psychology 111.

PSYC 261 Psychology of Adjustment BD 3 credits
Principles of the normal range of adjustment mechanism in behavior as it responds to life situations and changes. Prerequisite: Psychology 111 or consent of instructor.

PSYC 270 Abnormal Psychology F&S 3 credits
A study of psychopathology, comparison to functional normal behavior, and related issues. This course examines the current clinical and experimental findings and theories regarding the etiology, symptoms, and treatment of these important and sometimes devastating disorders. Prerequisite: Psychology 111.

PSYC 276 Social Psychology Fall 3 credits
An interdisciplinary approach to the study of individual behavior in its social context: how people influence, and are influenced by, the others around them. Prerequisite: PSYC 111.

PSYC 299 Special Topics in Psychology BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in psychology.

PSYC 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

PSYC 197-297 Cooperative Education/Internship F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

REFRIGERATION (REFG)
SEE HEATING, VENTILATION AND AIR CONDITIONING

RELIGION (RELS)

RELS 120 Religion in America Fall 3 credits
An introduction to the rich variety of religious expressions in the United States. Mainline Christians, lesser known groups, and some Eastern religions will be visited by lecture, reading and guest speakers.

RELS 201 Life and Letters of Paul Spring 3 credits
This course develops a deeper understanding and a heightened appreciation for Paul, the infamous persecutor of Christians, who eventually became the first great Christian missionary, and whose writings were canonized as a major portion of the New Testament.
RELS 203 World Religions  F&S  3 credits
An introduction to the origin and major tenants of Hinduism, Buddhism, Confucianism, Daoism, Judaism, Christianity and Islam by lecture, reading, discussion and video.

RELS 220 Old Testament  Fall  3 credits
A study of the religious, political, and social history of ancient Israel as reflected in the Hebrew Bible. The focus is from Abraham to Jesus.

RELS 230 New Testament  Spring  3 credits
A study of the New Testament and other writings that came into being between 50 and 150 C.E. This includes the canonical gospels, history, epistles and apocalypse, along with several other gospels and epistles that did not make it into the accepted 27. Texts are analyzed by using contemporary literal-historical, redactional, comparative, and thematic methods.

RELS 294 Independent Study  1-3 credits
Independent or directed study of special topics in religion. Department chairperson approval is required.

RELS 299 Special Topics  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics in religion.

RELS 195-295 Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

RELS 197-297 Cooperative Education/Internship  F&S SM  1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

RENEWABLE GENERATION TECHNOLOGY (RENG) (ENRT)

ENRT 101 Introduction to Energy Technology  4 credits
An introduction to the expanding industry known as “Energy.” Students will learn about a variety of energy facilities from traditional to renewable, including but not limited to fossil fuel power plants, petroleum refineries, ethanol and biodiesel facilities, gasification plants, wind farms, geothermal and hydro power production facilities, natural gas processing facilities, petroleum production, water and wastewater treatment and others. The role of the technician in these facilities will be a focus, as will be the expectations and culture of the industry.

ENRT 105 Safety, Health & Environment  3 credits
This course covers the personal protective equipment and proper safe work practices and procedures commonly used in the energy industry. Students will also gain a working knowledge of standard safety, health and environmental practices and regulations set by various government entities.

ENRT 107 Mechanical Fundamentals  2 credits
This course introduces mechanical concepts commonly found in a plant setting. This course provides students with an overview of piping systems including dimensions, connections, blindings and more. Students will become familiar with common hand tools and terminology found in many plants. Students will learn about steam traps, strainers and their applications. Students are introduced to common pumps and drivers, compressors and fans and heat exchangers.

ENRT 110 Plant Equipment & Systems  4 credits
This course provides an introduction to equipment used in power, process and renewable industries. Valves, piping, pumps, compressors, generators, turbines, motors, lubrication systems, heat exchangers, furnaces, boilers, cooling towers, separators, reactors, and distillation columns are covered. The utilization of this equipment within systems will be covered.

ENRT 112 Print Reading  3 credits
This course covers schematics, prints, and piping and instrument diagrams used in the energy industry. Students will learn how to read and interpret block and single-line diagrams, which will prepare them for the logic and electrical schematics included in this course.

ENRT 103 Applied Math  3 credits
This course includes math skills and how they apply to the energy industry. Students will learn volume and area calculations as well as conversions of temperature, pressure, level and flow through the use of algebra, trigonometry, and other math applications.

ENRT 104 Electrical Fundamentals  3 credits
This course covers basic direct current theories and applies those to the electrical system and related equipment. Students will also study basic DC circuit calculations. This course will also cover basic alternating current theories and apply those theories to electrical systems and related equipment. Students will learn various methods of producing a voltage. Students will also study essential generator and motor design, construction and operating principles.

ENRT 116 Instrumentation & Control  4 credits
This course provides a comprehensive look and study of instrumentation components, control theory, control systems and typical controllers associated with the operation of energy facilities.

RENG 210 Safe Work Practices  3 credits
This course covers specific work practices in the areas of electricity, elevated work and rigging. OSHA standards and safe permitting practices are components of this course.

RENG 213 Hydraulic Fundamentals  3 credits
This course covers principles and operation of hydraulic systems. Hydraulic system analysis and troubleshooting in the lab setting is part of this course.

RENG 216 Advanced Mechanical  4 credits
Building on the Mechanical Fundamentals course, the focus of this course is the application of mechanical skills and knowledge to the industrial setting. Demonstration by the student in the areas of “torquing”, measurements, gap adjustments and shaft alignments is included. An emphasis on practical lab work is part of this course.

RENG 218 Solar and Distributed Grid Systems  4 credits
This course includes an in-depth study of grid-direct solar arrays, small wind systems and other distributed grid systems. Sizing and installation of systems as well as student lab work are included in this course.
SCNC 100 Success in STEM Careers

This course focuses on the electronic components and devices that are critical in the operation of renewable energy facilities. Students will understand their function and how to troubleshoot them.

SCNC 101 Physical Science I Spring 3 credits
SCNC 102 Physical Science II Fall 3 credits
SCNC 103 Physical Science III F&S 3 credits

SCNC 294 Independent Study 1-3 credits
Independent or directed study of special topics in science. Department chairperson approval is required.

SCNC 299 Special Topics in Science BD 1-3 credits
Repeatable up to six semester hours. An examination of special topics in science.

SCNC 195-295 Service Learning 1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

SCNC 197-297 Cooperative Education/Internship F&S SM 1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

SOC 115 Social Problems F&S 3 credits
Utilizing a critical thought approach, this course identifies those social conditions that are recognized as problematic to society. Students will analyze and evaluate the factors that create, maintain or change social problems in our society.
SOC 120  Transition to College Life/Seminar  2 credits
This course is designed to ease the transition for new students to Bismarck State College. The students will learn skills and techniques used by successful college students. Some topics include: learning/ study skills, academic planning, time management, leadership, interpersonal relations, and career planning.

SOC 123  Investigations in Environmental Problems  BD  1-3 credits
Maximum of three credits. Student project or discussion topics will be designed to meet the needs of individual students or small groups. Instructor’s consent required.

SOC 220  Family  Fall  3 credits
The institution of family will be analyzed utilizing a sociological perspective. The focus will be on courtship, marriage, family, communication and child rearing.

SOC 221  Minority Relations  F&S  3 credits
A study of the relations between advantaged and disadvantaged groups in American society. The experience and present status of racial and ethnic groups are examined.

SOC 225  Death and Dying  Spring  3 credits
The course takes an intellectual view of the process of dying, bereavement and grief. Issues to be addressed include the differences in age groups when dealing with either their own death or the death of a loved one; various end-of-life issues such as assisted suicide, living wills and organ donations; and the various theories associated with death and dying.

SOC 235  Cultural Diversity  F&S  3 credits
This course is an introductory survey of the racial, ethnic and cultural mosaic of American society. Basic theories of intragroup and intergroup relations, prejudice and discrimination are covered.

SOC 251  Gerontology  Spring  3 credits
Gerontology is the interdisciplinary study of the processes of aging and the experience of growing old. This includes the sociological, psychological and biological aspects of aging.

SOC 252  Criminology  F&S  3 credits
A study of theories from religious, political, psychological, biological and sociological perspectives that attempt to explain crime, criminals, and criminal behavior.

SOC 253  Juvenile Delinquency  Fall  3 credits
A critical evaluation of the role of the family, school, community officials, social agencies, and community programs and institutions in delinquency prevention and control.

SOC 275  American Indian Studies  F&S SM  3 credits
This course is designed to meet requirements of the Education Standards and Practices Board, which is the program approval entity for teacher education programs in North Dakota, that teachers in North Dakota schools possess an understanding of the histories and cultures of native people in North Dakota. Students will become familiar with United States Federal Indian policy history, the concept of tribal sovereignty, as well as the cultures, histories and traditions of American Indian tribes in North Dakota and surrounding areas.

SOC 294  Independent Study  1-3 credits
Independent or directed study of special topics in sociology. Department chairperson approval is required.

SOC 299  Special Topics in Sociology  BD  1-3 credits
Repeatable up to six semester hours. An examination of special topics in sociology.

SOC 195-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

SOC 197-297  Cooperative Education/Internship  F&S SM
1-3 credit hours each
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

SOIL (SOIL)
SEE AGRICULTURE

SPANISH (SPAN)

SPAN 101-102  First Year Spanish I and II  4 credits
Fundamentals of Spanish grammar, oral and written use of the language and readings in easy Spanish. No prerequisite for 101. Spanish 101 or one year of high school Spanish prerequisite for 102.

SPAN 201-202  Second-Year Spanish I-II  4 credits
Review of structure of Spanish, advanced grammar, and practice in written and oral expression. Reading in Spanish and Latin-American literature and culture. Prerequisite: Spanish 101-102 or their equivalent (see Foreign Language Curriculum section).

SPAN 195-295  Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

SPAN 294  Independent Study  1-3 credits
Independent or directed study of special topics in Spanish. Department chairperson approval is required. Repeatable up to six semester hours.

SPAN 299  Special Topics in Spanish  1-3 credits
Repeatable up to six semester hours. An examination of special topics in Spanish.

SPEECH COMMUNICATION (COMM)

COMM 110  Fundamentals of Public Speaking  F&S SM  3 credits
The course is designed to lay a foundation in skills for informal and formal speaking situations. There is an emphasis on content, organization, audience adaptation, critical evaluation of messages, language, and delivery.

COMM 211  Oral Interpretation  Fall  3 credits
The techniques of expression as applied to oral reading are studied and practiced. Students are encouraged to use all types of literature to secure an understanding of the intellectual and emotional content of the literature and to communicate this meaning to the listener.
COMM 212  **Interpersonal Communications**  
F&S  3 credits  
This course will acquaint students with fundamental concepts of communications between individuals. Course will give insights into the dynamics of interpersonal communication, aid in understanding how people present themselves to others, and how others perceive them in turn.

COMM 214  **Persuasive Speaking**  
BD  3 credits  
This course will examine principles of motivation, argumentation and techniques utilized in influencing human conduct. Student will prepare, deliver, and analyze various types of persuasive messages.

COMM 222  **Voice and Diction**  
Spring  3 credits  
Studies and exercises designed to develop the “career voice.” For students going into fields where the quality of public vocal presentation is important.

COMM 271  **Listening and Nonverbal Communication**  
BD  3 credits  
This course will examine the activity of listening as a process and skill by examining theories and practices in the field. The course will also help students identify specific barriers to effective listening and strategies and tools to overcome listening problems.

COMM 282  **Yearbook Editing**  
F&S  1-2 credits  
Laboratory course for members of yearbook staff.

COMM 294  **Independent Study**  
1-3 credits  
Independent or directed study of special topics in speech communication. Department chairperson approval required.

COMM 299  **Special Topics in Speech Communication**  
BD  1-3 credits  
Repeatable up to six semester hours. An examination of special topics in speech.

COMM 195-295  **Service Learning**  
1-3 credits  
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

COMM 197-297  **Cooperative Education/Internship**  
F&S SM  
1-3 credit hours each  
Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

**SURGICAL TECHNOLOGY (SRGT)**

SRGT 110  **Introduction to Surgical Technology**  
Spring  3 credits  
SRGT 110 will cover the fundamentals of working as a surgical technologist. Included will be discussions of the surgical technologist and the field of surgical technology, professional credentialing, and the disciplines of other surgical team members. The organizational structure of health care facilities and their financing, hospital departments and interdepartmental communication will continue the semester. Surgical suite design, individual operating room design, safety considerations and communication skills for the surgical technologist will complete the semester. Prerequisites: BIOL 220, 220L. Corequisites: SRGT 120, SRGT 130, SRGT 125L.

SRGT 120  **Introduction to Operating Room Procedures**  
Spring  3 credits  
This course is the introduction to patient care concepts. Introduction to the principles of asepsis, the surgical conscience, and disinfection and antisepsis begin the semester. Included will be discussion of preoperative routines, positioning and prepping the patient, and care of surgical specimens. Prerequisites: BIOL 220, 220L. Corequisite: SRGT 110, SRGT 125L, SRGT 130.

SRGT 125L  **Introduction to Operating Room Procedures and Materials Lab**  
Spring  2 credits  
This course will begin with the introduction to the principles of asepsis, surgical conscience, and disinfection and antisepsis. The instrumentation, equipment and other materials utilized by the surgical technologist in the practice setting will be introduced. Included will be the types and function of surgical instruments and equipment, and sterile disposable surgical supplies. The routine procedures for patient preparation and admission to the operating room are practiced. These procedures will include patient identification and transportation to the operating room. The semester will continue with positioning for surgery and surgical skin preparation, along with instruction in the use of suture and needles, sterile set up, opening and preparation of instruments and supplies for any operative procedure. The semester concludes with the care and handling of surgical specimens and instruction in the use of draping materials for any operative procedure. Corequisites: SRGT 110, SRGT 120, SRGT 130. Prerequisites: BIOL 220, BIOL 220L.

SRGT 130  **Introduction to Operating Room Materials**  
Spring  3 credits  
This course will cover the instrumentation, equipment and other materials utilized by the surgical technologist in the practice setting. Included will be the types and function of surgical instruments and equipment, and surgical supplies. Instruction in the use of suture, needles, and draping materials with the set up, opening and preparation of instruments and supplies for any operative procedure will complete the semester. Prerequisites: BIOL 220, 220L. Corequisites: SRGT 110, SRGT 120, SRGT 125L.

SRGT 215  **Introduction to Pharmacology for Surgical Technology**  
Fall  3 credits  
This course will cover the basic knowledge of pharmacology that the surgical technologist is required to have for safe patient care. The student will identify the various systems of dosage and measurement utilized in standard pharmacology, convert equivalents from one system to another, and accurately identify, prepare and measure drugs for patient use. Definitions of general terminology associated with drug use and the procedures for the care and handling of drugs and solutions will follow.
The classifications of drugs, the principles of drug use in the care of surgical patients, and a detailed discussion of anesthesia, including the preoperative drugs, intraoperative anesthetic agents, and complications of anesthesia, will conclude the semester. Prerequisites: BIOL 221 and 221L, SRGT 110, 120 and 130.

**SRGT 240  Specialty Surgical Procedures**  
Fall  5 credits

This course will cover surgical procedures in all surgical specialty areas. Included will be discussion of the preoperative diagnosis and types of incisions and wound closure. The surgical specialties of general and rectal surgery, peripheral vascular surgery, obstetric and gynecologic surgery, and genitourinary surgery will begin the semester. These will be followed by the specialties of ear, nose, and throat surgery, head and neck surgery, oral and maxillofacial surgery, plastic and hand surgery, and orthopedic surgery. Neurosurgery and thoracic/cardiac surgery will be the next surgical specialties to be covered. The semester will conclude with trauma surgery, transplant surgery, and organ procurement surgery. General pediatric and geriatric aspects of surgery, and endoscopy will be included in each area of surgical specialty. Prerequisites: BIOL 221 and 221L, SRGT 110, 120 and 130. Corequisite: SRGT 250.

**SRGT 250  Surgical Procedures Lab**  
Fall  2 credits

In this class, students will continue to learn about and practice the skills of gowning and gloving, table set-up, and the uses of sutures, needles and draping. This lab will cover surgical procedures in all surgical specialty areas. The surgical specialties of general and rectal surgery, obstetric and gynecologic surgery, endoscopic surgery, and genitourinary surgery will begin the semester. These will be followed by the specialties of ear, nose and throat surgery, head and neck surgery, oral and maxillofacial surgery, and ophthalmic surgery. Orthopedic surgery, neurosurgery, plastic surgery, and hand surgery will be the next surgical specialties to be covered. The semester will conclude with a review of thoracic and cardiac surgery, peripheral vascular surgery, trauma surgery, transplant surgery, and organ procurement surgery. General pediatric and geriatric aspects of surgery will be included in each area of surgical specialty. Prerequisites: BIOL 221 and 221L, SRGT 110, 120 and 130. Corequisite: SRGT 240.

**SRGT 260  Professional Skills for the Surgical Technologist**  
Fall  3 credits

This course will cover the patient’s response to illness and hospitalization including the physical, spiritual, and psychological needs of the patient, and the patient’s bill of rights. Advanced patient care skills of vital signs, managing emergency situations, and documentation will follow. The semester will continue with personal relations, professional relations, and legal aspects including consent for surgery, ethical and moral responsibilities of the surgical technologist. A discussion of health agencies, accrediting agencies, and job-seeking skills will conclude the semester. Prerequisites: BIOL 221 and 221L, SRGT 110, 120 and 130.

**SRGT 280  Operating Room Clinical Internship**  
Spring  12 credits

SRGT 280 will allow students to practice the skills, critical thinking, and professional behaviors that comprise competent entry-level surgical technology practice. This experience will take place in a patient care setting. The student performance will include 2nd and 1st scrubbing on minor and major cases, doing counts, basic setups, holding retractors, passing instruments, and in general, assisting operating room personnel. The students will also perform circulating duties, including pre-operative, intra-operative, and post-operative care, allowing the student to function in the role of a supervised circulating surgical technologist. Prerequisites: All other SRGT courses.

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**SUSTAINABLE CONSTRUCTION TECHNOLOGY (CARP, BCT, CMT, ARCT)**

**ARCHITECTURAL DRAFTING AND ESTIMATING (ARCT)**

**ARCT 144  Construction Estimating**  
Fall  3 credits

This course is an introduction to residential material estimating. Techniques, formulas and tools to develop complete and accurate construction estimates will be studied.

**CONSTRUCTION MANAGEMENT TECHNOLOGY (CMT)**

**CMT 252  Project Management**  
Fall  3 credits

Prerequisite: BCT 216 and BCT 218. This course is designed to provide study in construction project management. Students will study, develop and apply work place interpersonal skills, construction documentation, trades and resource scheduling and control and construction planning.

**CMT 253  Construction Scheduling**  
Spring  3 credits

Prerequisite CMT 252. This course is design to give an overview of construction scheduling. Emphasis will be placed on coordinating plans, specifications, construction materials, employees, subcontractors, equipment and evaluating if resources and schedules are being utilized in an efficient and profitable process.

**BUILDING CONSTRUCTION TECHNOLOGY (BCT)**

**BCT 216  Sustainable Building I**  
Spring  3 credits

This course introduces and defines sustainable/green building. Energy efficiency and conservation will be studied as a system considering materials production, site selection and design, building construction, owning and maintaining a sustainable/green home, impact on the natural environmental by the built environment, and the end of life cycle and deconstruction of buildings. Emphasis will be placed on preparing students for Sustainable Building II in which students will design a sustainable/green-built home and study the construction process and contracting of the home.

**BCT 218  Sustainable Building Science II**  
Spring  3 credits

Prerequisite: BCT 216. This course is a study of how the systems of a house are combined to form a sustainable/green built whole house system. Emphasis will be placed on the sequence of construction and the functioning interrelationship of the systems. Students will be required to design a home based on the concepts studied in BCT 216 and 218.

**BCT 222  Construction Safety**  
Spring  3 credits

This course is designed to parallel the 29CFR1926 OSHA Construction Industry Regulations and to conform to the National Center for Construction Education and Research (NCCER). The course covers both construction safety and health training, including OSHA standards and regulations. It will cover the fundamentals of safety management, including accident investigation, safety training, and the role of the construction worker.

**BCT 260  Residential Building Codes**  
Spring  3 credits

This course is a study of residential building codes. Students will learn specific codes, effective use of code books, and the importance of building codes on the home building industry.
This course covers how energy is used, conserved, and measured in a residential structure. National home energy rating and certification systems will be studied including LEED, Energy Star, and National Green Building Standard systems.

Prerequisite: CARP 110 or BCT 216. This course is designed to give an overview of integrated residential home systems. Introductory study in the areas of mechanical and electrical systems will be provided. The study will be designed for students with little or no experience in the mechanical or electrical trades.

This course is designed to introduce students to an understanding of the green mind-set. Discussions will cover the impact of building on the green environment within the context of market realities.

An introduction to the expanding industry known as “Energy.” Students will learn about a variety of energy facilities from traditional to renewable, including but not limited to fossil fuel power plants, petroleum refineries, ethanol and biodiesel facilities, gasification plants, wind farms, geothermal and hydro power production facilities, natural gas processing facilities, petroleum production, water and wastewater treatment and others. The role of the technician in these facilities will be a focus, as will be the expectations and culture of the industry.

The techniques of expression as applied to oral reading are studied. Students are encouraged to use all types of literature to secure an understanding of the intellectual and emotional content of the literature and to communicate this meaning to the listener.

Studies and exercises designed to develop the “career voice.” For students going into fields where the quality of public vocal presentation is important.

A survey of the world’s greatest dramatic literature from Greek times to present. The history of playhouses and stagecraft and other related arts of the theatre are observed in connection with the study of world masterpieces. Prerequisite: English 110 or permission of instructor.

Basic orientation and historical perspective to theatre arts. Study of the roles of playwright, director, actor, designer, producer and audience members in current theatre practice. Course will include attendance at area performances.

This class focuses on the fundamental techniques and skills of acting. Improvisation exercises, activities and games are used to develop self-awareness, observation, concentration, emotional availability, and vocal and physical interpretive skills. The class lays a strong foundation for performance training but also helps students develop interpersonal communication skills.

This course will explore dance through the practice of its elements, dynamics and expression, incorporating ordinary gesture and movements and using abstract space to achieve a synthesis of dance and theatre. Repeatable.

Repeatable up to four semester hours. Open to students who are selected for an important role in a college play or for an important duty on the production staff.

Introduces the student to the principles and elements of design, the design process, and the methods of presentation of design ideas.

This course covers the basic principles of design and how they apply to the creation of makeup designs. Students become acquainted with the basic tools and materials of stage makeup. Different techniques of applying makeup to create effective illusions for the stage will be studied.

This course provides students with hands-on experience in directing and play production. Enrollment is limited. Pre-requisite: permission of instructor; over-ride required for registration. Repeatable.

This class provides practical application of basic acting skills to textual material. In a workshop format, students will analyze, rehearse, and perform monologues and scenes from contemporary American dramatic literature. Prerequisite: Acting I or permission of instructor.

Practical application of the dynamics of motion though manipulation of dance elements and effort to create meaning through movement. Repeatable.

An introduction to the organization and operation of a theatre plant; the construction, crafting and finishing of stage scenery; and the principles of stage lighting.

Independent or directed study of special topics in theatre. Department chairperson approval is required.

Repeatable up to twelve semester hours. Study of special topics in theatre including lighting design, scene painting, and stage management.

Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.
# THEA 197-297 Cooperative Education/Internship

F&S | SM | 1-3 credit hours each
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Repeatable up to a maximum of six hours. Work hours are arranged by employer, advisor and student. Progress is checked by oral and written reports from the employer. Periodic student-advisor conferences are required to discuss progress or problems. Students are required to submit an accounting of their experiences to their instructor. All co-op experiences are based on a satisfactory/unsatisfactory basis. Department chair approval is required.

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# VETERINARY SCIENCE (VETS)

**SEE AGRICULTURE**

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# WELDING (WELD)

## WELD 110 Oxyfuel Operations

**Spring** | **2 credits**
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This course provides the training to develop the manual skills necessary to produce high quality welds using the oxyacetylene welding, brazing, and cutting process on mild steel.

## WELD 118 Testing OA in Welding, Brazing, Cutting

**Spring** | **2 credits**
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This course provides the lab to develop the manual skills necessary to produce high quality welding using the oxyacetylene welding, brazing, and cutting processes on mild steel.

## WELD 130 Advanced Testing in OA Welding, Brazing, Cutting

**Spring** | **2 credits**
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This course provides the advanced lab to develop the manual skills necessary to produce high quality welds on mild steel plate using the gas metal and flux cored arc welding process in all positions.

## WELD 135 Welding Principles

**Spring** | **2 credits**
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This course provides the training to develop the manual skills necessary to produce high quality welds on pipe in the 2G, 5G, and 6G positions. Department approval required.

## WELD 140 Methods in GMA & FCA Welding

**Spring** | **2 credits**
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This course provides the lab to develop the manual skills necessary to produce high quality welds on mild steel plate using the gas metal and flux cored arc welding process in all positions.

## WELD 145 Advanced Methods in GMA & FCA Welding

**Spring** | **2 credits**
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This course provides the advanced lab to develop the manual skills necessary to produce high quality welds on mild steel plate using the gas metal and flux cored arc welding process in all positions.

## WELD 150 Methods in GTA & PA Welding

**Spring** | **2 credits**
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This course provides the training to develop the manual skills necessary to produce high quality welds using the gas tungsten and plasma arc cutting process on mild steel plate in all positions.

## WELD 155 Blueprint Reading for Welders

F&S | **3 credits**
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This program concentrates on the understanding and use of technical blueprints. This includes basic lines, geometric construction, orthographic projection, isometric projection, oblique projection, pictorial drawings, and structural sizes.

## WELD 155 Blueprint Symbols for Welding

F&S | **3 credits**
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This course is a continuation of WELD 155, and introduces the American Welding Society standardized welding symbols used on blueprints. Actual prints from industry are used during this course. Prerequisite: Welding 155.

## WELD 160 Advanced Methods in GTA & PA Welding

**Spring** | **2 credits**
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This lab provides the advanced technical training to develop manual skills necessary to produce high quality welds on mild steel plate using the gas tungsten arc welding process in all positions according to the American Welding Society Standards and the plasma cutting process. This course concentrates on the understanding and use of technical blueprints. This includes basic lines, geometric construction, orthographic projection, isometric projection, oblique projection, pictorial drawings, and structural sizes.

## WELD 165 Blueprint Symbols for Welding

F&S | **3 credits**
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This course is a continuation of WELD 155, and introduces the American Welding Society standardized welding symbols used on blueprints. Actual prints from industry are used during this course. Prerequisite: Welding 155.

## WELD 170 Arc Welding Operations

**Fall** | **2 credits**
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This course provides the training to develop the manual skills necessary to produce high quality welds using the shielded metal arch welding process in all positions, on thin and medium thickness mild steel, using single and multi pass welds with the E60 series electrodes.

## WELD 173 Methods in Arc Welding Operations

**Fall** | **4 credits**
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This course provides the training to develop thetesting skills necessary to produce high quality welds on mild steel plate in all positions using the shielded metal arc welding process according to the American Welding Society Standards.

## WELD 180 Shielded Metal Arc Welding

**Fall** | **2 credits**
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This course provides the training to develop the manual skills necessary to produce high quality welds using the shielded metal arc welding process on thin and medium thickness mild steel plates in all positions using the E70 series electrodes.

## WELD 183 Testing in Shielded Metal Arc Welding

**Fall** | **4 credits**
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This course provides the training to develop the testing skills necessary to produce high quality welds using the shielded metal arc welding process on mild steel plate in all positions with E70 series electrodes according to the American Welding Society Standards.

## WELD 187 Types of Non-Destructive Testing

**Fall** | **3 credits**
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This course studies non-destructive tests such as: magnetic particle, eddy current, visual, ultrasonic, dye penetrant, and radiographic.

## WELD 210 Gas Tungsten Arc Pipe Welding

**Fall** | **3 credits**
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This course provides the training to develop the manual skills necessary to produce high quality groove welds on four-inch diameter schedule 40 steel pipe in the 2G, 5G, and 6G positions. Department approval required.

## WELD 215 Testing in Gas Tungsten Arc Pipe Welding

**Fall** | **3 credits**
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This course provides the training to develop the manual skills necessary to produce high quality groove welds on pipe in the 2G, 5G, and 6G positions using the gas tungsten arc welding process. All testing is in accordance with the American Society of Mechanical Engineer Standards. Department approval required.
WELD 220  Shielded Metal Arc Pipe Welding  
Fall  3 credits
This course provides the necessary training to make high quality groove welds on open root mild steel pipe in the 2G, 5G, and 6G positions using the shielded metal arc open root process. Department approval required.

WELD 225  Testing in Shielded Metal Arc Pipe Welding  
Fall  3 credits
This course provides the training to develop the testing skills necessary to produce high quality groove welds on pipe in the 2G, 5G, and 6G positions using the American Society Mechanical Engineer Standards. Department approval required.

WELD 230  Gas Metal Arc Pipe Welding  
Fall  3 credits
This course provides the training to develop the manual skills necessary to produce high quality groove welds on 6-inch diameter schedule 40 steel pipe in the 2G, 5G, and 6G positions using the gas metal arc process. Department approval required.

WELD 235  Testing in Gas Metal Arc Pipe Welding  
Fall  3 credits
This course provides the training to develop the testing skills necessary to produce high quality groove welds on pipe in the 2G, 5G, and 6G positions using the gas metal arc welding process. All testing is in accordance with the American Society of Mechanical Engineer Standards. Department approval required.

WELD 240  Special Projects  
Fall  3 credits
To design and/or build a special project concentrating on the students major area of interest in the field of welding. This project will allow the student to integrate all the theoretical and hands-on skills acquired in the program. Department approval required.

WELD 245  Special Projects  
Fall  3 credits
A continuation of W240, Special Projects 1, for advanced design and development of projects concentrating on the student’s major area of interest in the field of welding, allowing the student to integrate all the theoretical and hands-on skills acquired in the program. Department approval required.

WELD 294  Independent Study  1-3 credits
Independent or directed study of special topics in welding. Department chairperson approval is required.

WELD 299  Special Topics  1-3 credits
Variable topics in the field of welding technology. Repeatable as long as content varies. Consent of department chairperson.

WELD 195-295 Service Learning  1-3 credits
Maximum of six semester hours. Service learning may be accomplished by one of three methods: Joining a club that has a public service component, doing volunteer work at a non-profit organization, or taking a course that links public service with its curriculum.

WELD 197-297 Cooperative Education/Internship  
1-3 credit hours each
Repeatable up to a maximum of six hours. Students get on-the-job experience under qualified supervision in welding occupations. Work hours are arranged by employer, advisor, and student. Student progress is checked by oral and written reports from the employer. Student advisor conferences are held to discuss progress and/or problems. All co-op experiences are based on a satisfactory/unsatisfactory basis. Consent of department chairperson.
Bismarck State College Administrators

Dr. Larry C. Skogen.... President ................................................................. 224-5431
Dave Clark ............... Executive Vice President ........................................ 224-5434
Dr. Drake Carter....... Provost and Vice President for Academic Affairs ... 224-5545
Gordon Binek......... Vice President for College Advancement & Executive Director,
BSC Foundation .......................................................... ....................................... 224-5697
Kari Knudson.......... Vice President, National Energy Center of Excellence ... 224-5604
Dr. Jane Schulz ...... Associate Vice President for Institutional Effectiveness and Strategic Planning 224-5491
Carla Hixson .......... Associate Vice President for Continuing Education, Training & Innovation 224-5580
Bruce Emmil........ Associate Vice President, National Energy Center of Excellence 224-5758
Tamara Barber......... Associate Vice President for Finance & Operations 224-5476
Dr. Donna Fishbeck ... Associate Vice President for Student Affairs 224-5638
Dr. Janelle Masters... Dean of Academic Affairs ........................................ 224-5525
Robert Kuntz........... Chief Buildings and Grounds Officer 224-5485
Lane Huber ............. Chief Distance Learning & Military Affairs Officer 224-5714
Rita Lindgren......... Chief Human Resources Officer 224-5427
Elmer Weigel......... Chief Information Services Officer 224-5515
Thomas Leno........ Director of Academic Records & Registrar 224-5497
Greg Sturm........... Director of Admissions & Enrollment Services 224-5426
Buster Gilliss........ Director of Athletics .............................................. 224-5512
Lori Heinsohn......... Director of Continuing Education, Training & Innovation 224-5690
Jay Meier ............... Director of Counseling and Advising Services 224-5666
Jeff Jacobs............ Director of Financial Aid 224-5441
Kim Christianson.... Director, Great Plains Energy Corridor 224-2410
Marlene Anderson.... Director of Library Services ........................................ 224-5578
Mary Friesz.......... Director of Marketing ................................................ 224-5748
Julie Erickson........ Director of Resource Development 224-5696
Heather Sheehan...... Director of Student & Residence Life 224-5465
Kevin Holmstrom .... Program Manager, National Energy Center of Excellence 224-5776
Daniel Schmidt ...... Program Manager, National Energy Center of Excellence 224-5735
Wade Vogel........... Program Manager, National Energy Center of Excellence 224-5597
Zachery Allen........ Project Manager, National Energy Center of Excellence 224-2524

Instructional Department Chairpersons and Program Managers

Arts & Communication.......................................................... Michelle Lindblom, 224-5520
Business ............................................................... Jim Wright, 224-5462
National Energy Center of Excellence........... Kevin Holmstrom, 224-5776; Dan Schmidt, 224-5735;
Wade Vogel, 224-5597
Industrial Technology .......................................................... Bob Arso, 224-5416
Math & Computer Technologies........................................ Dan Leingang, 224-5445
Medical Arts & Emergency Services.................. Angie Uhlich, 224-5669
Science & Engineering ...................................................... Jean Rolandelli, 224-5401
Social Sciences, Humanities & Education........... Henry Riegler, 224-5549
Transportation & Construction ........................................... Lee Friese, 224-5657
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A.A., Bismarck State College  
B.S., University of Mary  
M.B.A., University of North Dakota

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Associate Professor of Automotive Technology (July 1996)  
A.A., Bismarck State College  
A.A.S., North Dakota State College of Science  
A.S., Bismarck State College  
B.S., Valley City State University  
B.S., Minot State University  
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Darling, John  
Associate Professor of Music (August 2003)  
A.A., The University of the State of New York  
B.A., The University of the State of New York  
D.M.A., Ohio State University  
M.A., Virginia Commonwealth University

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Grant Development Coordinator (October 2007)  
B.A., University of California, Irvine, CA

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A.A.S., A.A.S., Minot State University, Bottineau  
B.S.Ed., Valley City State University

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A.A., Bismarck State College

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A.A., Bismarck State College  
B.S., Minot State University  
M.M., University of Mary

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A.A.S., Bismarck State College  
B.A.S.T., Dickinson State University

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Director of Resource Development (March 2001)  
B.A., University of Mary  
M.A., St. Mary’s University of Minnesota

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Enrollment Services Coordinator (September 2008)  
B.S., University of Minnesota, Crookston

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B.S., University of Mary  
M.S., St. Cloud State University

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Help Desk Coordinator (September 1986)  
A.A., Bismarck State College

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Programmer Analyst (November 2004)  
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Systems Administrator/Computer Support Manager (November 1997)  
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A.S., North Dakota State College of Science  
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Fossum, Linda  
Payroll Accountant (April 1972)  
A.A.S., Bismarck State College

Fricke, Donna  
Career Resource Coordinator (August 2001)  
A.A., Bismarck State College  
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Fried, Sandy  
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A.A.S., Bismarck State College  
B.S., Minot State University
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B.S., Valley City State University

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B.S., North Dakota State University

Friez, Angie
Human Resources Specialist (December 2004)
B.S., North Dakota State University

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Associate Professor of Computer Information Systems (August 2005)
B.S., University of Mary

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Bookstore Manager/Purchasing Coordinator (August 2001)
B.S., University of Mary
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Technology Support Specialist (January 2009)
A.A.S., Bismarck State College

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M.A., Eastern Illinois University
M.S.W., University of North Dakota

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Audiovisual/IVN Coordinator (August 1977)
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D.A., University of North Dakota
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B.A., Salisbury State University  
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B.S., University of Minnesota  
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B.N.Sc., Medcenter One College of Nursing  
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RN  

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M.S. Ed, Northern State University  

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Academic Support Services Coordinator (September 1997)  
B.A., Concordia College, Moorhead  

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B.S., University of North Dakota  
M.S., North Dakota State University  

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B.S., University of Mary  

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B.S., Bemidji State University  
M.M., Minnesota State University, Mankato  

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Associate Professor of Agriculture, Technology & Natural Resources (August 2001)  
B.S., North Dakota State University  
M.Ed., North Dakota State University  

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Degree Audit Coordinator (July 2010)  
B.A., University of North Dakota  
M.B.A., North Dakota State University  

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Lab Facilitator/Associate Professor, NECE (August 2001)
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A.A.S., Bismarck State College
A.S., Bismarck State College
B.U.S., Dickinson State University

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Transcript Evaluation & Articulation Coordinator (September 2008)
B.S., University of Mary

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B.A., University of Nebraska, Omaha

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A.A.S., Bismarck State College

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Agriculture, Technology & Natural Resources Laboratory Coordinator (August 2010)
A.A.S., Bismarck State College

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A.A.S., National Radio Institute

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B.S., Moi University
M.Phil., Moi University
Ph.D., University of Texas at Dallas

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B.A., Wartburg College
M.A., Wartburg Seminary

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B.S., University of Great Falls, Great Falls, MT
M.S., University of Great Falls, Great Falls, MT

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B.S.Ed., University of North Dakota

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OSHA Safety & Health Consultant (May 2004)
B.S., University of North Dakota

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B.S., Valley City State University

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B.S., University of Mary

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B.S., US Naval Academy
M.Ed., Idaho State University

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B.A., Minot State University
M.A., Eastern Illinois University

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A.A.S., Bismarck State College
B.S., Valley City State University

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A.A.S., Dickinson State University
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M.S.N., University of Mary

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Professor of Welding (July 1980)
B.S., Minnesota State University-Moorhead
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A.S., Bismarck State College
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B.S., Brigham Young University  
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B.A., Minnesota State University, Mankato  
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B.S., University of Grand Forks  
M.S., North Dakota State University

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A.A.S., North Dakota State College of Science  
B.S., Valley City State University

Riegler, Henry  
Associate Professor of Psychology (August 1991)  
B.A., Virginia Military Institute  
M.Ed., Springfield College  
Ph.D., University of Kansas

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Associate Professor of Surgical Technology (November 2000)  
A.A.S., Northwest Technical College, E Grand Forks, MN  
B.U.S., Dickinson State University  
CST

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A.A., Northwest Community College  
B.A., Rocky Mountain College  
M.A., Mankato State University

Rolandelli, Jean  
Associate Professor of Biology (August 1996)  
B.A., St. Cloud State University  
M.S., North Dakota State University

Ross, Gregory  
Controller (August 2004)  
B.A., Jamestown College  
M.B.A., University of Mary

Rude, Art  
Associate Professor of Mathematics/Physics (August 2003)  
B.S., Minot State University  
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Sagsveen, David  
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B.S., University of South Dakota

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B.S., Iowa State University

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Program Manager, NECE (June 2000)  
A.A., Bismarck State College  
B.A.S.T., Dickinson State University

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B.A., University of North Dakota  
B.S., University of North Dakota  
B.S.Ed., University of North Dakota  
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B.S., Dickinson State University  
M.L.S., University of Arizona  
Ed.D., University of North Dakota

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A.A.S., Barstow Community College  
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B.A., Concordia, Moorhead, MN

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Rich Media Developer, NECE (February 2004)  
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B.S., North Dakota State University

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Serials/ILL/Archives Librarian (September 1974)  
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A modern Civic Center, the Dakota Zoo, the North Dakota Heritage Center, historic Fort Lincoln, a variety of dining establishments, and area-wide interest in the arts all combine to make Bismarck-Mandan one of the most delightful cities in the Upper Midwest.

Outdoor recreational opportunities are plentiful, with excellent boating, fishing, hunting, and camping. The park board operates a multi-unit park system with swimming pools, tennis courts, golf courses, walking trails, and other recreational activities.

THE CAMPUS

Bismarck State College is located on the northwestern edge of Bismarck, on a hilltop near the east bank of the Missouri River. This vantage point provides a beautiful view of the river, the wooded river bottoms, and the bluffs beyond the west bank.

The 107-acre campus contains 16 buildings used by the BSC community.

The Bismarck Community Bowl, located west of the campus proper, is a multi-use community facility developed by a coalition of public entities. The Bowl has been used for athletic and community events since 1979. A phased development of the Bowl began in the spring of 1996 and has resulted in completion of a football/soccer field, a 10-lane track, field events areas, practice fields, permanent seating for spectators, locker room facility, concession/ticket area, and improved parking.

Interstate Highway 94 is close by to the north, giving commuters easy access to the College. Edwards Avenue and College Drive are the primary routes from the city to the east.

BSC AQUATIC AND WELLNESS CENTER

The BSC Aquatic and Wellness Center opened in March 2010. Features of the center include two swimming pools and a diving well, a strength and cardio area, group fitness area, and community rooms. The Bismarck Parks and Recreation District manages the facility.

BSC ARMORY

The Athletics Department is located in the Armory. Many of the Mystic’s varsity sports events, physical education classes, and intramural sports take place in the Armory gymnasium.

FOUNDATION AND ALUMNI HOUSE

Formerly a private home, the Foundation and Alumni House is located at 1255 Schafer St. Offices of the BSC Foundation, College Advancement, and BSC National Alumni Association are located here.

HORIZON BUILDING

The Horizon Building is located at 1815 Schafer St., north of the campus. BSC offices on second floor include Accounting Services, Marketing and Communications, and OSHA Consultation Services. Other offices on first and second floor are occupied by North Dakota University System personnel, and campus representatives of BSC collaborative partners: Dickinson State University, Minot State University, and the University of North Dakota.
JACK SCIENCE CENTER

The Jack Science Center was completed in 1998. The three-story, 74,340 square-foot building is one of the most advanced science education facilities in the state.

Disciplines taught in the Jack Science Center are mathematics, computer science and engineering on first floor; biological sciences, medical lab sciences and physics on second floor; and physical sciences and astronomy on third floor. The building also has two student computer labs, an astronomy deck and a biology greenhouse.

The learning-centered environment includes multi-media technology in classrooms and laboratories providing these features where needed: video projection system, computer/CD, VCR, video disk, video presenter, and state-of-the-art audio system.

The Jack Science Center is connected via a wide corridor to Schafer Hall. Within this link is the Sykes Student Success Center.

LIBRARY

The Library building, completed in 1968, houses the Library, BSC Archives, classrooms, faculty offices, N.D. Career & Technical Curriculum Library, and the Clell and Ruth Gannon Art Gallery.

With a collection of more than 80,000 items, the Library provides numerous services, including Internet and e-mail access. More information on the library can be found on pages 30-31.

The N.D. Career & Technical Curriculum Library, funded by the State Board for Career & Technical Education, provides a centralized location for curriculum guides and materials for secondary and postsecondary career and technical teachers throughout the state.

LIDSTROM HALL

Lidstrom Hall, a co-ed residence hall, was completed in 2008. The hall is divided into four pods to house nearly 80 students. Other features are a meeting room, kitchen, main lounge and a balcony overlooking the lounge. The hall was named for Dr. Kermit Lidstrom, BSC president from 1977-95.

MEADOWLARK BUILDING

Remodeling of the Meadowlark Building at 1700 Schafer St. was completed in February 2010. Personnel from the Human Resources and Buildings and Grounds departments are located in the office building.

MYSTIC HALL

Constructed in 1979 as a student apartment complex, Mystic Hall is again a residence for students. For several years, the building was named Office Annex and was used for employee offices. Recent remodeling allowed 30 students to be housed there by fall semester 2010.

NATIONAL ENERGY CENTER OF EXCELLENCE

Completed in the fall of 2008, the 106,200 square-foot National Energy Center of Excellence houses the National Energy Center of Excellence programs; other technical programs; Division of Continuing Education, Training and Innovation; Great Plains Energy Corridor Office; and administrative offices. The NECE features state-of-the-art technology and equipment, providing students access to advanced simulators, interactive media and hands-on lab exercises.

SCHAFER HALL

Schafer Hall, completed in 1961, was the first building constructed on the campus. It is named for the late Harold Schafer, a Bismarck businessman who was one of the College’s principal benefactors. Many of the Student Affairs offices, including Admissions and Enrollment Services, Academic Records, Financial Aid, as well as Student Finance Services, are on the first floor. Classrooms and faculty offices are on second and third floors.

Also located in Schafer Hall are the Sidney J. Lee Auditorium, named for the second dean of the college, and the Elsa Forde Art Gallery, named in memory of a local arts enthusiast and promoter.

The Rue Fine Arts Addition, completed in 1964, provided additional classroom space adjacent to the auditorium. Funds for the addition were donated by the late Mr. and Mrs. Milton Rue.

An addition to the front of Schafer Hall was constructed in 1990 to provide space for an elevator to make the building accessible to the handicapped.

In the late 1990s, a three-phase remodeling project began on the entire building. The final phase on first floor was completed in the summer of 2008.

STUDENT UNION

The Student Union, built in 1974, serves as a focal point of campus activities for students, faculty, alumni, and friends of the College. Facilities of the Union include bookstore and coffee bar, snack bar, contract dining area, game room and conference rooms.

Also located in the Union are the Mystic Advising and Counseling Center (MACC), offices of Associate Vice President for Student Affairs, Director of Student and Residence Life and the Board of Governors.

A renovation on the lower level was completed in 2009 for the Mystic Advising and Counseling Center. Renovation of the Union in 2000 included addition of an elevator.

SWENSEN HALL

Swensen Hall, the women’s residence, has space for 107 women in double rooms. Completed in 1972, it is named for Walter J. Swensen, BSC’s first dean, the title for the chief administrator at the time.

TECHNICAL CENTER

Constructed in 1974, the Technical Center has classroom, laboratory and shop space for many of the college’s technical programs and for several high school career and technical programs. Also located in the building are four interactive video network classrooms, an ITV classroom, and offices. An addition
constructed on the east end of the building in 1983 increased the size of the Center to 640 feet in length.

Major remodeling took place in 2010-11 after the Bismarck Public Schools Career Academy was completed across the street from the Technical Center. Both buildings are shared facilities between BSC and BPS. Some BSC programs previously located in the Technical Center moved to the BPS Career Academy. Other programs, including the BPS Adult Learning Center, moved into the Technical Center.

**TOM AND FRANCES LEACH MUSIC CENTER**
This addition to Schafer Hall was completed in April 2001. The 6,000 square-foot addition is located on the north side of Schafer Hall and adjacent to the Rue Fine Arts Wing. The Leach Music Center houses a state-of-the-art rehearsal hall, electronic piano studio, ensemble rooms, percussion studio, music library and faculty offices.

**WERNER HALL**
Werner Hall, completed in 1965, was named for Ralph Werner, the college’s third executive officer, in May 1989. Located in the building are the men’s residence, which has space for 102 men in double rooms, the Visual Arts Program, and faculty offices.

**OFF-CAMPUS PROGRAMS**
The Electrical Lineworker Program is located at the headquarters of the North Dakota Rural Electric Cooperatives northwest of Mandan. The classroom building can be reached by taking Exit 152 off Interstate 94, and continuing west from the Seven Seas Motor Inn.

Allied health programs are located at the Allied Health Campus, 500 E. Front Ave., downtown Bismarck. Programs include nursing and surgical technology.

The Bismarck State College - Mandan Campus opened in February 2007 at 1901 Twin City Drive S.E. in Mandan. The 12,500 square foot building was constructed to house the Mechanical Maintenance Technology program.

**ACCREDITATIONS**
**Bismarck State College** is accredited by The Higher Learning Commission, a Commission of the North Central Association of Colleges and Schools. The College was initially accredited in 1966.

The **Medical Laboratory Technician program** is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

The **Phlebotomy Technician program** is approved by the North Dakota Board of Nursing.

The **Surgical Technology program** is accredited by the Commission on the Accreditation of Allied Health Education Programs.

The Certificate program in **Practical Nursing** and the Associate in Applied Science in **Nursing** are accredited by the North Dakota Board of Nursing.

The **Paramedic (EMT) Technology program** at St. Alexius Medical Center is accredited by the Commission on Accreditation of Allied Health Education Programs.

The **Automotive Technology program** is certified in all eight instructional areas by the National Automotive Technicians Education Foundation, a board of the National Institute for Automotive Service Excellence.

The **Automotive Technology** limited curriculum offered at the Missouri River Correctional Center is NATEF certified.

The **Automotive Collision Technology program** is certified in all five instructional areas by the National Automotive Technicians Education Foundation, a board of the National Institute for Automotive Service Excellence.

The **Carpentry (Residential) program** has been approved for accreditation as an Associated General Contractors of America Recognized Program by the Associated General Contractors of North Dakota.

The **Engineering Technology program** is accredited by the Technology Accreditation Commission of ABET, Inc.

**CERTIFICATIONS**
North American Electric Reliability Corporation (NERC) has recognized Bismarck State College as a continuing education provider that adheres to NERC Continuing Education Program Criteria for the **Electrical Transmission Systems Technology program**.

Nuclear Energy Institute (NEI) has recognized Bismarck State College as an education provider that adheres to NEI’s Nuclear Uniform Curriculum Program (NUCP) criteria for the **Nuclear Power Technology program**.
STUDENT POLICIES

The student policies that follow are printed in full so that students may be aware of the college’s policies on student grievances, grade appeals, satisfactory progress for financial aid eligibility, student conduct, alcoholic beverages, illegal drugs, crime awareness and campus security, sexual assault and sexual harassment. The complete text of other student policies is on BSC’s website at bismarckstate.edu/staff/humanresources and click on Policies and Procedures.

POLICY ON CLEP - COLLEGE LEVEL EXAMINATION PROGRAM

If you have acquired knowledge through experience or prior academic learning that may be equivalent to college level courses, BSC offers the opportunity for you to earn credit for that knowledge.

Limits and Regulations:
1. Credits may be awarded only to enrolled BSC students.
2. New students must have transcriptable course work entered on a BSC academic record prior to recording CLEP credit.
3. CLEP credits have neither letter nor numerical grades assigned, thus, will not be used to compute a student’s grade point average.
4. Credits will not be granted if a student is currently enrolled or has previously enrolled in coursework covered by CLEP examinations.
5. CLEP credits earned while attending BSC usually transfer to other colleges and universities. However, transferability of coursework is determined by the receiving school, so BSC does not assume responsibility for the transferability of CLEP credits.
6. A maximum of 45 semester hours of non-traditional college credit (i.e. AP, CLEP, DSST, military training, BSC challenge test credit, portfolio development, prior learning, and courses covered under high school articulation agreements) may be applied to an associate’s degree, diploma, or certificate at BSC. A maximum of 60 semester hours of non-traditional college credit may be applied to a bachelor of applied science degree at BSC.
7. Credits earned through CLEP do not meet BSC institutional requirements.
8. Students must earn a score of at least the 50th percentile to obtain college level credit at BSC.
9. Duplicate credit will not be awarded for overlapping exams.
10. CLEP exams can be repeated after 6 months using regular registration procedures.
11. The number of CLEP credits awarded is equal to BSC course credits.

Procedures:
CLEP is given by scheduled appointment only. Sessions are limited.
1. The student should secure a CLEP registration form and fact sheet, from Testing and Assessment Services, Schafer Hall, Room 205, or by visiting http://www.bismarckstate.edu/current/testing/.
2. The registration form must be completed and returned (postmarked) at least 2 weeks prior to the test date along with the $15.00 non-refundable registration/transcript fee (payable to BSC). This fee is required to secure your test date. (Cash will not be accepted.)
3. An Admission Ticket will be sent to the student prior to the date of the test to confirm test date and time. The Admission Ticket will need to be presented at check-in along with a photo ID and the $70.00 fee, made payable to CLEP.
4. The student must request that CLEP credits are posted to his/her transcript and meet with the Testing and Assessment Coordinator to review CLEP Policy and Procedures.
5. BSC Academic Record’s Office staff will record necessary CLEP credit information and will send a copy of the student’s transcript which will show that the necessary recording has been completed.

NOTE: Test appointments may not be changed by phone. To reschedule a test, you must submit a new registration along with an additional non-refundable fee.

Under Policy 403.7.4.c, the Academic Affairs Council of the North Dakota University System (NDUS) has adopted the American Council on Education (ACE) recommendations for minimum CLEP scores. The Council has not adopted course equivalents for CLEP general examinations.

The following CLEP Subject tests are accepted at Bismarck State College, subject to achievement of specified scores and the conditions stated in the CLEP policy.
The policy of Bismarck State College (BSC) allows the awarding of college credit for Advanced Placement (AP) courses completed in high school. There are no guarantees that these courses will receive college credit at BSC. Each college/university has policies which govern the awarding or accepting of AP courses. These policies may vary widely. It is the student’s responsibility to determine the policies, procedures, and limitations regarding AP at each college or university a student may wish to attend.

**Limits and Regulations:**

1. Only enrolled BSC students who have completed all requirements for admission to BSC may petition for AP course evaluation.
2. New students must have transcriptable course work entered on a BSC academic record prior to recording AP credit.
3. Students may not earn duplicate credit by taking BSC or other college’s courses if BSC has awarded credit for similar high school AP courses.
4. AP credits, once recorded on a student’s BSC transcript, become a permanent part of the academic record.
5. AP credits are graded “S” (successful) and as such are not used in calculating a student’s cumulative grade point average.
6. A maximum of 45 semester hours of non-traditional college credit (i.e., AP, CLEP, DSST, military training, BSC challenge test credit, portfolio development, prior learning, and courses covered under high school articulation agreements) may be applied to an associate’s degree, diploma, or certificate at BSC. A maximum of 60 semester hours of non-traditional college credit may be applied to a bachelor of applied science degree at BSC.

### CLEP Exam

<table>
<thead>
<tr>
<th>COMPOSITION AND LITERATURE</th>
<th>Minimum Score</th>
<th>BSC Course Equivalent</th>
<th>Credits Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Literature</td>
<td>50</td>
<td>English 261 &amp; 262 American Literature I &amp; II</td>
<td>6 (HUM)</td>
</tr>
<tr>
<td>English Literature</td>
<td>50</td>
<td>English 251 &amp; 252 British Literature I &amp; II</td>
<td>6 (HUM)</td>
</tr>
<tr>
<td>College Composition</td>
<td>50</td>
<td>English 110 College Composition I</td>
<td>3 (ENGL)</td>
</tr>
</tbody>
</table>

### FOREIGN LANGUAGES

| Spanish Language - Level 1/2 | 50/63 | Spanish 101 & 102 Spanish I & II | 4/8 (HUM) |
| French Language - Level 1/2  | 50/59 | Transfer 110 - General Education Arts & Humanities | 4/8 (HUM) |
| German Language - Level 1/2  | 50/60 | Transfer 110 - General Education Arts & Humanities | 4/8 (HUM) |

### SOCIAL SCIENCES AND HISTORY

| American Government        | 50            | Political Science 115 American Government | 3 (SS) |
| Education Psychology, Intro to | 50            | Psychology 230 Educational Psychology | 3 (SS) |
| History of the US I: Early Colonizations to 1877 | 50 | History 103 US to 1877 | 3 (HIST) |
| History of the US II: 1865 to the Present | 50 | History 104 US Since 1877 | 3 (HIST) |
| Human Growth and Development | 50            | Psychology 250 Developmental Psychology | 3 (SS) |
| Microeconomics, Principles of | 50            | Economics 201 Principles of Microeconomics | 3 (SS) |
| Macroeconomics, Principles of | 50            | Economics 202 Principles of Macroeconomics | 3 (SS) |
| Psychology, Introductory   | 50            | Psychology 111 Introduction to Psychology | 3 (SS) |
| Sociology, Introductory    | 50            | Sociology 110 Introduction to Sociology | 3 (SS) |
| Western Civilization I: Ancient Near East to 1648 | 50 | History 101 Western Civilization I | 3 (HIST) |
| Western Civilization II: 1648 to Present | 50 | History 102 Western Civilization II | 3 (HIS) |

### SCIENCE AND MATHEMATICS

| Algebra, College            | 50            | Math 103 College Algebra | 4 (MATH) |
| Pre-Calculus                | 50            | Math 107 Pre-Calculus | 3 (MATH) |
| Biology                     | 50            | Biology 150/150L General Biology I/Lab | 4 (LABSC) |
| Calculus                    | 50            | Math 146 Advanced Calculus I | 3 (MATH) |
| Chemistry                   | 50            | Chemistry 121/121L General Chemistry I/Lab | 5 (LABSC) |
| Information Systems & Computer Applications | 50 | Transfer 170 - General Education Computer Science | 2 (COMPSC) |

### BUSINESS

| Financial Accounting        | 50            | Accounting 200 & 201 Principles of Accounting I &II | 6 |
| Business Law, Introductory  | 50            | Accounting 215 Business in the Legal Environment | 3 |
| Management, Principles of   | 50            | BADM 202 Principles of Management | 3 |
| Marketing, Principles of    | 50            | BADM 201 Principles of Management | 3 |

### GENERAL ELECTIVES

| Analyzing & Interpreting Literature | 50 | Transfer 100 - Elective Credits | 6 |
7. Credits earned through AP do not meet BSC institutional requirements.
8. The number of AP credits awarded is equal to BSC course credits.

The following AP Tests are accepted at Bismarck State College, subject to achievement of specified scores and the conditions stated in the AP policy.

<table>
<thead>
<tr>
<th>AP Exam</th>
<th>Minimum Score</th>
<th>BSC Course Equivalent</th>
<th>Credits Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ART</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art History</td>
<td>3</td>
<td>ART 210 &amp; 211 Art History I &amp; II</td>
<td>6 (FA)</td>
</tr>
<tr>
<td>Studio Art 2D Design</td>
<td>3</td>
<td>ART 122 Two-Dimensional Design</td>
<td>3 (FA)</td>
</tr>
<tr>
<td>Studio Art 3D Design</td>
<td>3</td>
<td>ART 124 Three-Dimensional Design</td>
<td>3 (FA)</td>
</tr>
<tr>
<td>Drawing</td>
<td>3</td>
<td>ART 130 &amp; 230 Drawing I &amp; Drawing II</td>
<td>6 (FA)</td>
</tr>
<tr>
<td><strong>BIOLOGY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>3</td>
<td>BIOL 111/L Concepts of Biology / Lab</td>
<td>4 (LABSC)</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>3</td>
<td>BIOL 124/L Environmental Science / Lab</td>
<td>4 (LABSC)</td>
</tr>
<tr>
<td><strong>CHEMISTRY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>3</td>
<td>CHEM 115/L Introduction to Chemistry / Lab</td>
<td>4 (LABSC)</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>3</td>
<td>CSCI 160 Computer Science I</td>
<td>4 (COMPSC)</td>
</tr>
<tr>
<td>Computer Science AB</td>
<td>3</td>
<td>CSCI 160 &amp; 161 Computer Science I &amp; II</td>
<td>8 (COMPSC)</td>
</tr>
<tr>
<td><strong>ECONOMICS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microeconomics</td>
<td>3</td>
<td>ECON 201 Principles of Microeconomics</td>
<td>3 (SS)</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>3</td>
<td>ECON 202 Principles of Macroeconomics</td>
<td>3 (SS)</td>
</tr>
<tr>
<td><strong>ENGLISH</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Language &amp; Composition</td>
<td>3</td>
<td>ENGL 110 College Composition I</td>
<td>3 (ENGL)</td>
</tr>
<tr>
<td>English Literature &amp; Composition</td>
<td>3</td>
<td>Transfer 110 - General Education Arts &amp; Humanities</td>
<td>3 (HUM)</td>
</tr>
<tr>
<td><strong>FOREIGN LANGUAGE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish Language</td>
<td>3</td>
<td>SPAN 101 &amp; 102 1st Year Spanish I &amp; II</td>
<td>8 (HUM)</td>
</tr>
<tr>
<td>French Language</td>
<td>3</td>
<td>Transfer 110 - General Education Arts &amp; Humanities</td>
<td>8 (HUM)</td>
</tr>
<tr>
<td>German Language</td>
<td>3</td>
<td>Transfer 110 - General Education Arts &amp; Humanities</td>
<td>8 (HUM)</td>
</tr>
<tr>
<td>Latin Literature</td>
<td>3</td>
<td>Transfer 110 - General Education Arts &amp; Humanities</td>
<td>8 (HUM)</td>
</tr>
<tr>
<td><strong>GOVERNMENT &amp; POLITICS</strong></td>
<td></td>
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<tr>
<td>U.S. Government &amp; Politics</td>
<td>3</td>
<td>POLS 115 American Government</td>
<td>3 (SS)</td>
</tr>
<tr>
<td>Comparative Government &amp; Politics</td>
<td>3</td>
<td>Transfer 130 - General Education Social Sciences</td>
<td>3 (SS)</td>
</tr>
<tr>
<td><strong>HISTORY</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>European History</td>
<td>3</td>
<td>HIST 101&amp;102 Western Civilization I &amp; II</td>
<td>6 (HIST)</td>
</tr>
<tr>
<td>United States History</td>
<td>3</td>
<td>HIST 103 &amp; 104 US to 1877 &amp; US since 1877</td>
<td>6 (HIST)</td>
</tr>
<tr>
<td>World History</td>
<td>3</td>
<td>Transfer 110 - General Education Arts &amp; Humanities</td>
<td>6 (HUM)</td>
</tr>
<tr>
<td><strong>MATH</strong></td>
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<tr>
<td>Calculus AB</td>
<td>3</td>
<td>MATH 165 Calculus I</td>
<td>4 (MATH)</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3</td>
<td>MATH 165 &amp; 166 Calculus I &amp; II</td>
<td>8 (MATH)</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td>MATH 210 Elementary Statistics</td>
<td>3 (MATH)</td>
</tr>
<tr>
<td><strong>MUSIC</strong></td>
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<tr>
<td>Music Theory</td>
<td>3</td>
<td>MUSC 122 &amp; 124 Music Theory I &amp; II</td>
<td>6 (HUM)</td>
</tr>
<tr>
<td><strong>PHYSICS</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Physics C-Mechanics</td>
<td>3</td>
<td>PHYS 251/L University Physics I / Lab</td>
<td>5 (LABSC)</td>
</tr>
<tr>
<td>Physics C- Electricity &amp; Magnetism</td>
<td>3</td>
<td>PHYS 252/L University Physics II / Lab</td>
<td>5 (LABSC)</td>
</tr>
<tr>
<td>Physics B</td>
<td>3</td>
<td>Transfer 150 - General Education Lab Sciences</td>
<td>8 (LABSC)</td>
</tr>
<tr>
<td><strong>PSYCHOLOGY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>PSYC 111 Introduction to Psychology</td>
<td>3 (SS)</td>
</tr>
<tr>
<td><strong>SOCIAL SCIENCE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Geography</td>
<td>3</td>
<td>Transfer 130 - General Education Social Sciences</td>
<td>3 (SS)</td>
</tr>
</tbody>
</table>
Students who have completed Advanced Placement courses in high school and who wish to have the BSC Academic Records Office evaluate that course work for purposes of determining the possibility of awarding college credit must follow the procedure below.

1. Contact the College Board for Advanced Placement Program Office and request that official AP Grade Reports be forwarded directly to the Academic Records Office at BSC. “Student” copies of AP grade reports will not be accepted for evaluation purposes. The address and/or phone number of the College Board AP Program offices can be found by contacting the high school official responsible for coordinating AP courses.

2. Complete all requirements for admission to BSC.

3. The student must contact the BSC Registrar to request that AP credits are posted to their transcript.

4. BSC Academic Records Office staff will record necessary AP information and will send a copy of the student’s transcript which will show that the necessary recording has been completed.

**CHALLENGE EXAMINATION POLICY**

Bismarck State College will permit students to demonstrate college level competency and establish college credits by successfully passing an institutional challenge examination as provided for in the following limits, regulations, and procedures.

**Limits and Regulations:**

1. Students who are fully accepted and currently enrolled may challenge selected courses to establish college level credit at Bismarck State College. Official copies of all previous college work must be on file with the Academic Records Office.

2. To establish this credit, a student must pass an examination (evaluated by a regular course instructor or department chair/designated faculty member) in the subject being challenged.

3. Challenge examination criteria will be prepared for appropriate courses by regular course instructor(s) and department chair/designated faculty member. Criteria must be approved by the Department Chairperson.

4. The fee for challenging a course is 50% of the regular credit hour charge. Fees must be paid in advance. Students may also be charged for materials used as part of the challenge examination.

5. Credits earned through challenge examination do not count toward BSC residence requirements.

6. Credits earned through challenge examination do meet BSC graduation requirements.

7. Students should be aware that challenge examination credits may not transfer to other colleges.

8. Students are not allowed to challenge courses, or equivalent courses: a. which they have previously challenged, or b. which they have previously enrolled in, or c. which they are currently enrolled in, or d. for which there is a College Level Examination Program (CLEP) or DSST Exam.

9. A maximum of 45 semester hours of non-traditional college credit (i.e., AP, CLEP, DSST, military training, BSC challenge test credit, portfolio development, prior learning, and courses covered under high school articulation agreements) may be applied to an associate’s degree, diploma, or certificate at BSC. A maximum of 60 semester hours of non-traditional college credit may be applied to a bachelor of applied science degree at BSC.

10. Departments shall determine the challenge examination methods and questions, and determine the grade required for the successful completion of the challenge examination.

11. Grades for challenge examinations shall be recorded on a “S” satisfactory and “U” unsatisfactory basis. Challenge examination results do not affect the GPA of a student’s record.

**Procedure:**

1. Procedures for challenge examinations may vary by academic department. Student should contact appropriate course instructor and/or department chairperson to determine if challenge examination is available for course.

2. Student obtains challenge examination petition and Challenge Exam Policy and Procedures from the Testing and Assessment Services Office, Schafer Hall Rm. 205, or online at http://www.bismarckstate.edu/current/testing/.

3. Student completes petition.

4. The Testing and Assessment Coordinator determines eligibility to take challenge examination.

5. Student pays challenge fee.

6. Student schedules time and date for examination with the Testing and Assessment Coordinator.

7. Student takes examination.

8. Instructor evaluates completed examination.

9. Instructor submits test results and petition to department chairperson.

10. Department chairperson submits results to the Registrar.

11. The Academic Records Office:
   a. Records successful (using “S” grade) challenge information on academic records transcript.
   b. Attaches unsuccessful petition to transcript.
   c. Notifies the student with a letter regarding the challenge examination and a copy of the student’s transcript.

**ACADEMIC HONOR CODE**

Students at Bismarck State College are expected to be honorable in behavior and above reproach in pursuit of their academic achievements. Cheating, plagiarism, or collusion in class work, laboratory performance, shop work, or test taking is unacceptable and subject to disciplinary action (http://www.bismarckstate.edu/uploads/resources/372/StudentConduct.pdf). Disciplinary action is defined on page 243.

**Definitions:**

1. Cheating includes, but is not limited to:
   a. Copying from another student.
   b. Possessing or using material during an academic activity not authorized by the instructor.
   c. Collaborating with or seeking aid from another stu-
of college policy or procedure.

Definitions:

- **Grievance**: A grievance is an alleged unfair, inequitable, or discriminatory interpretation, application, or implementation of college policy or procedure.

**APPEAL POLICY**

**STUDENT GRIEVANCE AND APPEAL POLICY**

Bismarck State College recognizes the importance of providing prompt and efficient procedures for fair and equitable resolutions of a student grievance or appeal. The following are procedures to follow for resolving a grievance or appeal.

**Definitions:**

- **Grievance**: A grievance is an alleged unfair, inequitable, or discriminatory interpretation, application, or implementation of college policy or procedure.

**Specific Procedures:**

**Grade Appeals**: Students who receive a grade that they believe does not correctly reflect their performance should discuss the grade with the instructor. If the matter is not resolved, it should be discussed with the appropriate department chair. If the matter is still not resolved, it should be discussed with the Dean of Academic Affairs. If the matter is still not resolved, it should be discussed with the Associate Vice President for Academic Affairs. If the matter remains unresolved, the student may appeal the issue to the Standing Committee on Grade Appeals. Information relating to the appeal process is available in the Associate Vice President for Academic Affairs Office.

**Financial Aid Appeal**: Students who have a grievance or concern about a financial aid decision must present their appeal or grievance directly to the Financial Aid Committee. Information relating to the appeal process is available in the Financial Aid Office.

**General Grievance/Appeal Procedure:**

**Informal Process**: The purpose of the informal procedure is to allow the parties involved in a grievance or appealable decision to attempt to resolve the problem themselves through the following steps:

1. The student should attempt to discuss the complaint with the person who appears to be the source of the grievance or who made the appealable decision. This should be done within 10 class days of the incident or situation.
2. If the problem is not resolved in the first step, the student should take the complaint to the respondent’s immediate supervisor.
3. If the problem is not resolved in to the satisfaction of the student through the informal process, the student may enter the formal grievance process. This should take place within 5 class days after talking to the supervisor in step 2.
4. If the student does not initiate the informal process within 10 class days of the incident or situation but at a later date, either the student or the respondent may refer the issue to the formal grievance process.

**Formal Grievance/Appeal Process:**

1. The student shall submit a complaint in writing to the appropriate college Director, Department Chair, or Dean (respondent) of the area responsible for the action which forms the basis of the grievance or appeal. The complaint shall contain a clear and concise statement of the grievance or appeal, the remedies sought and a request for a meeting with the involved person or persons. The complaint must be submitted within 10 class days of the event, unless there are extenuating circumstances.
2. The respondent shall schedule a meeting with the student within 10 class days of receiving the written grievance or appeal, to discuss the matter. A written reply by the respondent to the student indicating the results of the meeting and including further action, if any, to be taken shall be attached to the written grievance or appeal.
3. If the student is not satisfied, the student may appeal in writing to the Chair of the Standing Committee on Student and Campus Relations. The grievance or appeal must be filed within 5 class days after the decision of the Director, Department Chair or Dean. The Committee Chair will inform the student...
4. The student shall be given every reasonable opportunity to present the case, including the presentation of written and oral testimony, alone or by witnesses, and all parties will have the right to be assisted by an advisor, friend or counsel.

5. The Committee Chair shall submit a written report of the proceedings to the student within 2 class days of the decision. The report must include all matters upon which the final recommendations are made.

6. The student may appeal the committee decision to the appropriate Vice President of the College. The appeal must be in writing and within 5 class days of receipt of the committee decision. The appropriate Vice President will uphold, modify or reject the committee decision, and this will become the final campus decision on the grievance or appeal. A written reply by the Vice President to the student indicating the results of the meeting and including further action, if any, to be taken shall be attached to the written grievance or appeal. The student and appropriate college officials shall be notified in writing of the decision within 10 class days after the last consideration of the grievance or appeal.

STANDARDS OF SATISFACTORY PROGRESS FOR FINANCIAL AID ELIGIBILITY STUDENT POLICY

Bismarck State College, in compliance with federal regulations, established these policies and procedures to ensure that students who receive federal financial aid are making satisfactory academic progress toward a degree, diploma, or certificate. Students who fail to meet these standards of satisfactory progress will not be eligible to receive federal financial assistance until eligibility has been re-established.

Measures of Satisfactory Progress:

Two measures of satisfactory progress are used:

a) qualitative academic standard and

b) quantitative rate of progress.

Qualitative Academic Standard (Grade Point Average):

Students who receive Federal financial aid (i.e. Pell Grant, Supplemental Grant, Academic Competitiveness Grant, Perkins Loan, Work Study, ND State Grant and Stafford Loan) are required to maintain a grade point average of 2.00.

At the conclusion of each semester the cumulative grade point average will be evaluated for all students at Bismarck State College. All students must have earned a minimum of a 2.00 grade point average for each semester of attendance. Students not meeting the 2.00 minimum GPA standard will be placed on Financial Aid Probation for the next semester the student enrolls in. Students on Financial Aid Probation have access to all financial aid programs for which they are eligible for during that semester. If the student does not earn a 2.00 GPA for the probationary semester, the student will then be placed on Financial Aid Suspension, which terminates financial aid eligibility.

Quantitative Rate of Progress:

1. Maximum Time Frame: All students are expected to complete their degree requirements within 150% of the published length of the program. For example, if a program normally requires 60 credits to graduate, the student would be allowed 90 attempted credits (60 x 150%=90 attempted credits)

2. Completion of Attempted Credits: Students must successfully complete two-thirds (66.667%) of the credits they attempt each semester. This percentage is determined by dividing the total number of successfully completed credits by the total number of credits the student registered for on the Bismarck State College financial aid census date. The financial aid census date is the first day after the last day to drop/add classes at 100% refund.

Students who officially withdraw from all classes during any given semester will be placed on a Financial Aid Probation for the next semester the student enrolls in.

Exception for Immediate Financial Aid Suspension:

Students who receive all failing grades or incomplete grades in any given semester are considered to have unofficially withdrawn from the college and are immediately placed on financial aid suspension without a probation period. Federal Regulations require that a refund calculation be done for all students receiving federal funds, unless the financial aid office staff can document an official last date of attendance beyond the 60% point in the given semester. The calculation and return of funds may result in the student owing a balance to Bismarck State College and/or U.S. Department of Education.

Notification Process:

Students will receive notification of their satisfactory academic progress probation or suspension status at the end of each semester after grades are posted. Notification will be by a letter sent to the student’s campus connection to-do list.

Financial Aid Probation - means a student can receive federal financial aid while in this status. The student must complete all of the classes attempted and earn a 2.0 grade point average to maintain eligibility for financial aid.

Financial Aid Suspension - means a student cannot receive federal financial aid while in this status. Financial aid refers to federal grants, loans, and work-study programs. Students will be placed on Financial Aid Suspension at the end of any semester if they were placed on Financial Aid Probation during the previous regular semester and their cumulative grade point average is still below the required minimum of a 2.00 GPA.
Financial Aid Suspension Appeal Process
1. Students can complete one semester successfully without financial aid. Students must complete all attempted credits with a 2.0 grade point average. Students need to file an appeal to request reinstatement of financial aid.
2. If “I” (incomplete) credits are a factor in failure to maintain satisfactory progress, subsequent completion of these credits may be used to re-establish eligibility for aid.
3. Provide documentation of extenuating circumstances.
   All appeals of extenuating circumstances will be dealt with on a case-by-case basis. If an appeal is approved, the student eligibility for financial aid will be re-instated.
   • Students who are placed on Financial Aid Suspension may complete an appeal form and submit all requested documents to the Financial Aid Director within 30 days of the date of the letter of notification of Financial Aid Suspension.
   • Students will be notified in writing of the decision of the Financial Aid Director within 15 working days.
   • If the Financial Aid Director denies the appeal, the student may request a review by the Associate Vice President for Student Affairs. The student must submit a written request for a review to the Financial Aid Office by August 15 for the first semester and by January 15 for the second semester.
   • The decision of the Associate Vice President for Student Affairs will be final.

POLICY ON STUDENT CONDUCT
It shall be the policy of Bismarck State College to have rules and regulations governing the conduct of students and to provide regulations and procedures for disciplinary action.

Authority:
The North Dakota State Board of Higher Education has delegated the administration of student discipline to the President of the College, who in turn may assign to individuals and/or committees the responsibility for assisting with the enforcement of the rules, regulations, and policies of the College.

Definitions of Disciplinary Actions:
1. A FINE - is the imposition of a monetary penalty. Besides its use as a disciplinary sanction, it may also be used to compensate the College for a monetary loss.
2. A WARNING - is a discussion of misconduct which becomes a matter of at least temporary record.
3. PROBATION - indicates that continued enrollment is conditional upon good behavior during a specified period. It is a matter of temporary record and may include specific restriction of activity.
4. SUSPENSION FOR CONDUCT - is a temporary withdrawal of the privilege of enrolling in the College for a specific period. Suspension may be deferred to allow completion of an academic term, after which it is automatically invoked. During a period of deferment, the suspension may be enacted immediately by the Provost and Vice President for Academic Affairs, hereafter referred to as the Provost, or the Vice President, NECE and Director, National Energy Center of Excellence, hereafter referred to as the VP for NECE, if additional misconduct occurs.
5. EXPULSION FROM THE COLLEGE - is the withdrawal of enrollment privileges with no promise of reinstatement at any time and no opportunity for review for at least one year.
6. EXPULSION FROM CLASS - is the immediate revocation of the privilege of attending a class, using a laboratory, or participating in a shop.
7. EVICTION - is the formal removal of a student from College housing.
8. WITHHOLDING TRANSCRIPTS & GRADES - is a refusal by the College to provide transcripts and grades to the student, to other institutions, to employers, and to other agencies.
9. FAILING GRADE - is one possible penalty that may be used in the case of academic dishonesty. Depending on the circumstances, the failure may apply to a single assignment or exam, a unit of study, or an entire course.

Standards of Conduct Expected of Students:
1. A student is expected to obey the rules, regulations, and policies of the College. Failures to show proper respect for good order and the rights of others, or insubordination toward a College official in the proper execution of his or her duties will be regarded as cause for disciplinary action.
2. A student is expected to abide by the BSC Academic Honor Code (http://www.bismarckstate.edu/uploads/resources/356/StudentAcademicHonorCode.pdf). Any violation of the Academic Honor Code is subject to disciplinary action, including possible expulsion from the College. See page ___ for definitions of disciplinary actions.
3. A student arrested and convicted of a law violation may be considered as subject to disciplinary action.
4. A student who has failed to discharge a financial obligation to the College is subject to disciplinary action.
5. A student who furnishes false or misleading information on admission, registration, student I.D., or any other forms, or who alters College records, is subject to disciplinary action.
6. A student who willfully damages or removes College property or who obstructs the normal operation of the College shall be subject to disciplinary action and/or civil action.
7. A student who brings firearms onto campus or stores firearms in a campus housing unit is subject to disciplinary action.
8. A student who destroys or tampers with fire alarms or fire protection equipment is subject to disciplinary action.
9. A student who possesses unauthorized College keys is subject to disciplinary action.
10. A student who brings intoxicating liquors or other alcoholic beverages on campus is subject to disciplinary action.
11. BSC is a tobacco free campus. A student who uses tobacco in BSC buildings, BSC property and/or BSC rented property is subject to disciplinary action.
12. A student is expected to pay any library, parking, etc. fines accumulated. If the fines are not paid within a certain time frame, a “hold” will be placed on the student’s records.
13. The College considers the use, possession, distribution, or sale of those drugs (hallucinogens, narcotics, stimulants, and depressants) which are illegal except when taken under a physician’s prescription as contrary to the welfare of the College. Students involved in such activities are subject to disciplinary action and will be prosecuted according to the law.
14. Situations, other than those already mentioned, which will warrant disciplinary action are those in which a stu-
dent endangers or seriously threatens the life or physical safety of others, himself, or herself, lends or participates in destructive group action, has difficulties with law enforcement authorities, is cited for not obeying the laws of the community, state and/or nation, commits sexual offenses, does not respect public and private property, refuses to cooperate in efforts made to help him or her adjust to College responsibilities, or behaves in ways which discredit the College.

Procedures for Expulsion from Class or from the College:
1. All instructors and academic administrators (Department Chairs, Deans, Associate Vice President for Academic Affairs, NECE Program Managers, and the Associate Vice President for NECE) are empowered to temporarily expel a student from a class, laboratory, or shop. Temporary expulsion will continue for not more than one calendar week or until the Provost shall overturn the expulsion, institute permanent expulsion, or the student appeals the expulsion.
2. A student may be permanently expelled from a class, laboratory, shop, program, or from the College by the Provost or VP for NECE.
3. Students may appeal temporary or permanent expulsion by following the due process procedures stated in the Student Grievance and Appeal policy.

Limits, Regulations, and Procedures:
1. If misconduct is alleged, the Provost or VP for NECE may order immediate disciplinary action or require a hearing.
2. If the Provost or VP for NECE requires a hearing, he/she may assign the responsibility of a hearing to a Hearing Committee or a Hearing Officer.
   a. Pending completion of the hearing, the status of a student should not be altered or the right to be present on the campus and attend classes suspended, except for reasons relating to his or her physical or emotional safety and well-being, for reasons relating to safety and well-being of other students, faculty or College property.
   b. Students shall be given every reasonable opportunity to present their case, including the presentation of written and oral testimony by themselves and their witnesses, and students will have the right to be assisted by an advisor, friend, or counsel.
   c. If the Hearing Committee or Officer decides that disciplinary action is required, they will notify the Provost or VP for NECE of their decision.
   d. The Hearing Committee or Officer shall submit a written report of the proceedings to the Provost or VP for NECE. The report need not be verbatim, but must include all matters upon which the final decision was based.
   e. Ordinarily the College shall abide by the recommendations of the Hearing Committee or Officer, except that the Provost or VP for NECE retains the right to modify or reject Committee or Hearing Officer’s recommendations.
3. A student may follow due process procedures as stated in the Student Grievance and Appeal Policy if he or she disagrees with the final decision.

Records and Reinstatement:
1. Suspension and expulsion from the College are matters of permanent record.
2. Reinstatement after suspension—the Registrar may permit reinstatement after suspension. However, the Registrar may do so only after the student has completed the terms of the suspension.
3. Reinstatement after expulsion from the College—in unusual cases the Provost or VP for NECE may readmit a student who was expelled, for reasons of conduct.

STUDENT POLICY ON ALCOHOL AND ILLEGAL DRUGS

Students at Bismarck State College are required to abide by all federal, state and local laws regarding the possession, sale, use and consumption of alcoholic beverages. In addition, they are required to obey campus regulations regarding alcoholic beverages, as stated in this policy.

The College also considers the use, possession, distribution, or sale of those drugs (hallucinogens, narcotics, stimulants, and depressants) which are illegal except when taken under a physician’s prescription as contrary to the welfare of the College. Students involved in such activities are subject to disciplinary action and will be prosecuted according to the law.

Statement of General Principles:
Bismarck State College recognizes the serious problems created by the use and abuse of alcohol and drugs. In response to this awareness, Bismarck State College has an alcohol and drug prevention program and is committed to:
1. Establishing and enforcing clear policies and regulations regarding the use of alcohol and/or drugs.
2. Educating students about the dangers and health risks associated with the abuse of alcohol and/or use of illegal drugs.
3. Conducting programming each year to provide activities and events promoting a healthy lifestyle and environment.
4. Providing resources and referral services for students who experience alcohol and/or drug abuse.

Campus Regulations:
1. A student who brings or uses intoxicating liquors, alcoholic beverages or illegal drugs on campus is subject to disciplinary action.
2. A student who attends class under the influence of alcohol or illegal drugs is subject to disciplinary action.
3. Faculty and staff are justified in contacting appropriate law enforcement authorities and/or campus security in the event a student is under the influence.
4. Students who are involved in illegal drug usage, off the premises of the campus, may also face disciplinary action.
5. Student organizations, societies and clubs are not allowed to sponsor on-campus or off-campus events at which alcohol or illegal drugs are consumed.
6. Sale of alcoholic beverages and/or drugs by student organizations, societies and clubs is strictly forbidden. (This is to include any action that can be remotely construed as alcohol sale such as charging admission to parties, passing the hat, selling empty cups, selling drink tickets, etc.)
7. Alcoholic beverages and/or drugs may not be used as awards or prizes in connection with events or activities sponsored by student organizations, societies and clubs.
8. Advertisements for alcohol sales and bars are not allowed to be posted on campus. These advertisements will also not be allowed electronically or printed in BSC publications.

9. Disciplinary action, which may include expulsion from the College, shall follow the procedures and regulations for disciplinary action that are found in the BSC Student policy titled “Student Conduct.” In addition, such matters may be reported by the College to the appropriate law enforcement authorities.

10. Since involvement with drugs may be associated with medical and/or psychological problems, students may be referred or may refer themselves to counseling or medical services.

North Dakota Law on Alcoholic Beverages:
1. The state of North Dakota requires that individuals be at least 21 years of age to buy, possess and consume alcoholic beverages.
2. It is illegal to give or sell alcohol to an individual under the age of 21.
3. It is illegal to have an open container of alcohol in any vehicle.
4. It is illegal to serve alcohol to an intoxicated person.
5. It is illegal to sell alcohol of any kind without a license or permit.
6. Organizations are not immune from prosecution for a legal violation. The officers of that group are usually the parties cited, but every group member is liable.
7. Driving while intoxicated (.08 blood alcohol content) is a criminal offense.
8. Being intoxicated is not a legal defense for any charge, including assault, rape, vandalism, slander, manslaughter or accident.
9. If an underage person is involved in a drinking/driving crash after leaving a party, the victim(s) of the crash may sue both the person at fault and those who provided the alcohol.

North Dakota Law on Illegal Drugs:
North Dakota has adopted the Uniform Controlled Substances Act, which restricts the manufacture, transfer, and possession of narcotic drugs and other drugs that have a potential for abuse or that may lead to physical or psychological dependence.

1. It is a Class A felony to manufacture, deliver, or possess with intent to manufacture or deliver a controlled substance such as methamphetamine or narcotic drugs such as opium or cocaine in North Dakota.
2. Felony Penalties: Class A (up to 20 years imprisonment and/or a $10,000 fine), Class C (up to five years imprisonment and/or $5,000 fine).
3. Possession of one-half ounce to one ounce of marijuana is a Class A misdemeanor. Possession of less than one-half ounce (14.175 grams) is a Class B misdemeanor.
4. Possession of drug paraphernalia for controlled substances other than marijuana is a Class C felony.
5. Possession of drug paraphernalia for marijuana is a Class A misdemeanor.
6. It is a Class A misdemeanor to advertise drug paraphernalia.
7. Misdemeanor penalties: Class A (up to one year imprisonment and/or $2,000 fine), Class B (up to 30 days imprisonment and/or $1,000 fine).

Federal Law:
Federal law provides criminal and civil penalties for unlawful possession or distribution of drugs and alcohol. See http://www.usdoj.gov/dea/agency/policies.htm for details on federal trafficking penalties for controlled substance violations. Penalties include incarceration, fines, forfeiture of property, ineligibility to own firearms, and becoming ineligible to receive federal benefits such as student loans and grants.

Disciplinary Action:
1. Students are expected to obey the regulations of this policy, are obliged to obey the alcoholic beverage and drug laws of the State of North Dakota and federal laws regarding these matters. Failure to abide by the College regulations and North Dakota and federal law, will result in disciplinary action.
2. State law, Federal law and College policy will be regarded as the principle bodies of rules governing the use of drugs for BSC students.
3. Procedures and definitions of disciplinary action are found in BSC Student Policy titled, “Student Conduct.”
4. Each student will be held responsible for his/her own behavior, and it will not be regarded as “double jeopardy” for both civil authorities and the College to initiate disciplinary sanctions against a student who violates College policy or law.
5. A federal or state drug conviction can disqualify a student from Federal Student Aid eligibility. If a student is convicted of possession or sale of illegal drugs during a period of enrollment for which the student was receiving federal financial aid, the student will lose eligibility for federal student aid funding. The student can lose federal financial aid eligibility of one year from the date of the first conviction, two years from the date of the second conviction and indefinitely for a third offense for the possession of illegal drugs. A student can lose federal financial aid eligibility for two years from the date of the first conviction and indefinitely for the second conviction for the sale of illegal drugs. A student can regain eligibility the day after the period of ineligibility ends or when he or she successfully completes a qualified drug rehabilitation program.

Health Risks of Alcohol and Other Substances of Abuse:
Alcohol: Alcohol consumption causes a number of impairments including changes in behavior and normal body function. Even low doses significantly impair judgment, coordination mental function thus increasing the risks of accidents and injuries. Moderate to high doses of alcohol cause marked impairments in higher mental functions, severely altering a person’s ability to learn and remember information.

Very high doses taken acutely can cause respiratory depression and even death. Statistics show that alcohol use is involved in a majority of violent behaviors on college campuses, including acquaintance rape, vandalism and fights. Additional consequences include DUI arrests and serious or fatal car crashes.
abuse may lead to dependency, which can cause permanent damage to vital organs and deterioration of a healthy lifestyle.

**Amphetamines:** Amphetamines can cause a rapid or irregular heartbeat, tremors, convulsions, loss of coordination, and death. Heavy users are prone to irrational acts.

**Cannabis (Marijuana, Hashish):** The use of marijuana may impair or reduce short-term memory and comprehension, alter sense of time, and reduce coordination and energy level. Users often have a lowered immune system and an increased risk of lung cancer. The active ingredient in marijuana, THC, is stored in the fatty tissues of the brain and reproductive system for a minimum of 28 to 30 days.

**Club Drugs:** Club drugs are drugs such as MDMA (Ecstasy), Rohypnol, GHB, LSD, and methamphetamine and others, which are used at all-night parties such as trances or raves, dance clubs and bars. These party drugs, particularly when mixed with alcohol, can cause serious health problems, injuries, or even death.

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

**Hallucinogens:** Lysergic acid (LSD), mescaline, and psilocybin cause illusions and hallucinations. The user may experience panic, confusion, suspicion, anxiety, and loss of control. Delayed effects, or flashbacks, can occur even when use has ceased. Phencyclidine (PCP) affects the section of the brain that controls the intellect and keeps instincts in check. Because the drug blocks pain receptors, PCP episodes may result in self-inflicted injuries, violence and aggressive behavior toward others.

**Heroin:** Heroin is an opiate drug that causes the body to have diminished pain reactions. Overdoses of this highly addictive drug can result in coma or death due to respiratory failure or cardiovascular collapse.

Where to Turn for Help:

Students may initiate help for themselves or others by contacting any of the following:

**On Campus:**
1. Personal Counselor 224-2449; located in the Mystic Advising & Counseling Center (Lower level of the Student Union)
2. Alcohol and Other Drug Prevention Coordinator; 224-5798
3. Director of Student and Residence Life, 224-5465

**Community Resources**
1. “211” – 24 hour referral and crisis management hotline for North Dakota.
2. West Central Human Services, 328-8888
3. Heartview Foundation, 222-0386
4. Alcoholics Anonymous, 222-2100

**National Numbers**
1. The National Drug & Alcohol Hotline: 1-800-711-6375 or 1-800-711-6402

**POLICY ON WEAPONS AND FIREARMS**

**Purpose:**
Bismarck State College is committed to providing a safe environment for students, employees, and visitors on all BSC campus/state property sites.

**Policy:**
The possession, display, storage or use of weapons on college owned and leased property, including in personal vehicles, and at Bismarck State College sponsored events is prohibited.

1. Weapons include, but are not limited to: BB guns, bombs, bows and arrows, dart guns, explosives, handguns, knives (blade length of five inches or more), martial arts implements, paint ball guns, pellet guns, rifles, sabers, shotguns, swords, tasers, and other incendiary devices whether purchased or manufactured.
2. Concealed weapons permits are not valid on BSC property or at sanctioned events.
3. This policy does not apply to legally sworn law enforcement officers/officials.
4. Other items may be considered weapons when those items are used to inflict bodily injury or to threaten the infliction of bodily injury to others.

**Enforcement:**
Students will be subject to disciplinary action (Student Conduct Policy, http://www.bismarckstate.edu/uploads/resources/372/StudentConduct.pdf).

**POLICY ON USE OF COMPUTER AND NETWORK FACILITIES**

Individuals who use Bismarck State College (BSC) computing and networking resources assume the responsibility to use the resources in an appropriate manner. Misuse of computing and networking resources is considered a violation of the campus computing policy and regulations. It may also be a violation of law if data or individuals are disturbed or the privacy of the individuals is violated.

North Dakota University System (NDUS) Procedure 1901.2, Computer and Network Usage, contains specific policies, procedures, rights, and responsibilities which also apply to BSC. NDUS Procedure 1901.2, Computer and Network Usage, can be viewed at: http://www.ndus.edu/makers/procedures/ndus/default.asp?PID=301&SID=62

This BSC Use of Computer and Network Facilities policy is in addition to NDUS Procedure 1901.2, Computer and Network Usage, and is based in large part on the definitions of “Authorized Use” and “Authorized Users” from section 1 of NDUS Procedure 1901.2, Computer and Network Usage:

“Authorized use:
Use of computing and networking resources shall be limited to those resources and purposes for which access is granted. Use for political purposes is prohibited (see Section 39-01-04 of the ND Century Code). Use for private gain or other personal use not related to job duties or academic pursuits is prohibited, unless such use is expressly authorized under governing institution or system procedures, or, when not expressly authorized, such use is incidental to job duties or limited in time and scope, and such use does not: (1) interfere with NDUS operation of information technologies or electronic mail services; (2) burden the NDUS with
incremental costs; or (3) interfere with the user’s obligations to the institution or NDUS.”

“Authorized user(s):”
Computing and networking resources are provided to support the academic research, instructional, outreach and administrative objectives of the NDUS and its institutions. These resources are extended to accomplish tasks related to the individual’s status with NDUS or its institutions. Authorized users are (1) current faculty, staff and students of the North Dakota University System; (2) individuals connecting to a public information service (see section 5.3); and (3) other individuals or organizations specifically authorized by the NDUS or an NDUS institution. For the purposes of this policy, no attempt is made to differentiate among users by the user’s group. These policies treat all users similarly, whether student, faculty, staff or other authorized user, in terms of expectations of the user’s conduct.”

Limits and Regulations:
The use of the campus computer and networking service is a privilege that may be revoked at any time for inappropriate behavior. Examples of uses which BSC considers to be unauthorized and unacceptable include, but are not limited to:

- Stalking, fraud, misrepresentation, luring of minors or sending harassing, intimidating and/or threatening messages through electronic mail or other means; Intentionally intercepting, disclosing or using any electronic communication to which authorized access is not explicitly provided;
- Initiating or encouraging chain letters, unauthorized automated or mass postings, or other types of unauthorized large-scale distributions; Providing others with access to one’s personal computer account(s); Gaining or attempting to gain access to the personal computer accounts, files, electronic information of others, or to accounts, files or systems to which authorized access has not been granted;
- Hacking or related behavior attempting to compromise BSC security or the security of remote systems accessed through BSC equipment or networks; Creating or releasing computer viruses or engaging in other destructive or potentially destructive programming activities;
- Browsing, viewing and/or sharing of pornographic material or Internet chat of a sexual nature; Disruption of network traffic by overloading the system or otherwise denying or restricting the access of others;
- Modifying, altering or otherwise tampering with systems hardware, software or networking infrastructure unless explicitly authorized to do so by the Chief Information Services Officer; Setting up a router and building a private subnet; Setting up wireless access points unless explicitly authorized to do so by the Chief Information Services Officer; Copying or distributing commercial or other copyrighted software or proprietary data which has not been placed in the public domain or been distributed as freeware;
- Use of BSC computers, systems, networks and/or services for political purposes, for commercial purposes or unauthorized financial gain; Use of BSC computers, systems, networks and/or services for on-line gaming or on-line gambling (playing games on BSC computers is prohibited unless done in a classroom situation under the supervision of an instructor);
- Use of BSC computers, systems, networks and/or services for peer-to-peer file sharing applications to download or share music or movies is prohibited. Examples of peer-to-peer applications include, but are not limited to Limewire, BitTorrent, Kazaa, Gnutella, Morpheus, Napster, Web radio, etc.;
- Use of BSC computers for mail spoofing (sending mail so as to appear to come from someone other than the actual sender) or for TCP spoofing (making your computer look like a different computer on the network); Use of BSC computers, systems, networks and/or services for packet sniffing (putting your network interface card in the promiscuous mode in order to see data destined for other machines) unless explicitly authorized to do so by the Chief Information Services Officer; Any act chargeable as a violation of local, state or federal law, whether or not charges are brought by civil authorities.

In order to protect the campus data networks, BSC Information Services department reserves the right to control network access. In the event of threats or network disruption, it may be necessary to temporarily block specific types of network traffic or isolate portions of the network. Devices may be removed from the network or have network access blocked without notice if they pose a threat to the network, the device itself or the user(s) of the device. Examples of reasons why a device might be removed or blocked from the network include, but are not limited to the following:

- A device is used for unauthorized use or by unauthorized users; Network addresses are unauthorized, misappropriated or have been modified to avoid restrictions; The provisioning of network services from user computers (e.g. BBS, IRC Server, DHCP Server, DNS Server, FTP, POP3, SMTP, WINS Server, Hotline, SNMP). Users who have a need to provide such services from their personal computers must have prior written authorization from the Chief Information Services Officer at BSC before running any such services. A device poses a threat to the network or the user because of vulnerabilities, compromises, incompatibilities with the network or other reasons.
- Violation of this policy may be subject to discipline, which may include loss of computer and network privileges.
- Portions of this policy are drawn from those developed by North Dakota State University and the University of North Dakota.

**POLICY ON CAMPUS CRIME REPORTING**

**Clery Act**

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1998, commonly referred to as the “Clery Act,” is a federal law that requires each university receiving federal financial aid to annually compile and report specified crime statistics for the campus and to provide other safety and crime information to members of the campus community. The law, which was originally known as the “Crime Awareness and Campus Security Act of 1990,” was amended in 1992 and again in 1998 when it was renamed. Bismarck State College fully complies with the Clery Act and describes its programs, crime reporting procedures, and annual statistics in the annual Campus Security Report. A printed copy of the report may be obtained from the Office of Institutional Research, Bismarck State College, PO Box 5587, Bismarck North Dakota 58506-5587. An online copy is available at www.bismarckstate.edu/security/.

**Policy:**

The Security Office, located in the BSC Meadowlark Building, Room 224 (224-5789), will be the office of official record for all criminal reports made on campus. Students, faculty, staff and visitors are encouraged to report immediately any and all criminal activity to the Security Officer or the Bismarck Police Department.
Who Should Report:

All employees, faculty or staff who become aware of an allegation of violation of college policy, student code of conduct, civil or criminal law should report said complaint or allegation to their supervisor and the Security Officer. The Federal Register, dated April 29, 1994, expands those required to make reports by defining Campus Security authorities to include “officials of the institution who have significant responsibility for student and campus activities, but not including counselors.” Counselors are encouraged to inform students being counseled concerning reportable crimes that they can voluntarily and confidentially report those crimes for inclusion in the annual disclosure of crime statistics if the counselor finds such disclosure to be appropriate. Campus staff “with significant counseling responsibility” is required to provide the Security Officer with the statistical information relating to crimes on campus but may continue to honor the confidentiality of victims.

Any criminal activity should be reported directly to the Security Officer and/or the Bismarck Police Department. However, the following have been identified as being required to report situations of a criminal nature that have come to their attention, to the Security Officer. Accordingly, initial reports can be made to them in addition to the Security Officer.

- President
- Executive Vice President
- Provost and Vice President for Academic Affairs
- Vice President, National Energy Center of Excellence
- Vice President for College Advancement & Executive Director
- BSC Foundation
- Associate Vice President for Continuing Education, Training & Innovation
- Associate Vice President for Student Affairs
- Associate Vice President for Academic Affairs
- Associate Vice President, National Energy Center of Excellence
- Associate Vice President for Finance & Operations
- Dean of Academic Affairs
- Director of Admissions & Enrollment Services
- Director of Financial Aid
- Director of Academic Records & Registrar
- Director of Student & Residence Life
- Director of Athletics
- Director of Marketing
- Director of Communications
- Director of Continuing Education, Training & Innovation
- Director of Counseling & Advising Services
- Director of Library Services
- Director of Resource Development
- Director, Great Plains Energy Corridor
- Chief Human Resources Officer
- Chief Buildings & Grounds Officer
- Chief Information Services Officer
- Chief Distance Learning & Military Affairs Officer
- Security Officer
- Academic Support Services Coordinator
- Veterans Services & Student Accessibility Coordinator
- Multicultural Student Services Coordinator
- Testing and Assessment Coordinator
- Project Manager, National Energy Center of Excellence
- Department Chairs
- Programs Managers, National Energy Center of Excellence
- Coaches
- Residence Hall Supervisors and Resident Assistants
- Faculty Advisors of Clubs/Organizations
- Programs Managers, National Energy Center of Excellence

According to the Federal Register, April 29, 1994, “the function of these administrators is not to determine whether a crime took place - that is the function of the law enforcement professionals working within the criminal justice system but with respect to these regulations to report the alleged crime, that was received in good faith, to the appropriate law enforcement personnel, either campus or local police.”

Victims of crimes or witnesses to a crime are encouraged to report the crime to any of these individuals as soon as possible so the victim can receive assistance and so that a timely warning can be made to the campus if necessary.

Reference:
Title II of Public Law 101-542 - Crime Awareness and Campus Security Act of 1990. Clery Act

POLICY ON HARASSMENT

It is the policy of Bismarck State College to maintain academic conditions under which students are free from unlawful harassment. Engaging in harassment is unacceptable conduct which will not be tolerated. Any student or employee found to have engaged in harassment will be subject to disciplinary action. Managers and supervisors who know or should have known of harassment and fail to report such behavior, or fail to take immediate, appropriate action, will be subject to disciplinary action up to and including termination.

This policy recognizes BSC’s commitment to the understanding that the maintenance of ethical standards and the concerns for academic freedom prohibit the exploitation of students and employees. BSC is required by law and State Board of Higher Education (SBHE) Policy to take all steps necessary to prevent harassment. These steps include informing individuals of their rights and responsibilities, developing educational programs to sensitize the campus community to the issue, and developing sanctions against harassment.

Guidelines:

1. Harassment is a form of offensive treatment or behavior, which to a reasonable person creates an intimidating, hostile or abusive environment. It may be sexual, racial, based on gender, national origin, age, disability, religion or a person’s sexual orientation. It may also encompass other forms of hostile, intimidating, threatening, humiliating or violent behavior, which are not necessarily illegal discrimination, but are nonetheless prohibited by this policy.

2. Sexual harassment means unwelcome or unwanted sexual advances, requests or demands for sexual favors, verbal abuse or kidding that is sex-oriented and considered unacceptable by a student, engaging in any type of sexually oriented conduct that would unreasonably interfere with a student’s academic performance, or creating a learning environment that is intimidating, hostile or offensive because of unwelcome or unwanted sexually-oriented conversations, suggestions, requests, demands, physical contacts, or attentions.

3. Illegal harassment may consist of verbal or physical behavior which relates to an individual’s race, color, national origin, religion, gender, age and/or disability when such conduct has the purpose or effect of unreasonably interfering with an individual’s academic performance or creating an intimidating.
Supervisor and Employee Responsibility:

1. Administrators, managers and supervisors are expected to deal promptly with all employees, students, customers, contractors, and visitors who are harassing students at any BSC campus or BSC activity.
2. An employee or student who engages in harassment of students is subject to standard disciplinary procedures.
3. Administrators, managers and supervisors who become aware of harassment but fail to take immediate action against it will be subject to disciplinary procedures, also. Not taking immediate action is viewed by the courts as condoning the behavior. EEOC states an employer is responsible for acts of harassment in the workplace where the employer knows, or should have known, of the conduct, unless it can be shown the organization took immediate and appropriate corrective action.
4. Any employee who becomes aware of any complaint or type of harassment must report it immediately to their supervisor or Rita Lindgren, Chief Human Resources Officer, or designee and fill out the “Harassment Complaint Form.” Employees who fail to immediately report any complaint or type of harassment are subject to disciplinary procedures.

Reporting Harassment:

The Harassment Complaint Procedure (http://www.bismarckstate.edu/uploads/resources/385/HarassmentComplaint.pdf) is available for any person who wishes to file a complaint alleging a violation of this policy.

References:

- ND SBHE Policy 603.1
- Title VII of the Civil Rights Act of 1964
- Title IX of the Education Amendments of 1972

POLICY ON SEXUAL ASSAULT

Bismarck State College strives to create a campus community free from interpersonal abuse including sexual assault. BSC commits its resources to the following two fold process: (1) to provide crisis intervention and a judicial/disciplinary response for victims and alleged offenders, and (2) to educate and promote discussion on interpersonal abuse and violence.

Definition:

For the purpose of this policy, sexual assault is any sexual behavior between two or more people to which one person does not or cannot consent. BSC relies upon North Dakota state law concerning sexual imposition which is much broader than the traditional concept of rape.

BSC prohibits sexual acts or contacts with others which can involve compelling a victim to sexual acts or contacts by force or threat of force, use of intoxicants to substantially impair the victim’s power to give consent, engaging in such acts when there is reasonable cause to believe the other person suffers from a mental state which renders him or her incapable of understanding the nature of the contact, or where the victim is under fifteen years of age. The abuse of alcohol or other substances does not relieve individuals of their responsibilities to themselves or others.

Prohibited behavior includes all forcible and non-forcible sex offenses provided for under North Dakota state law. Examples of prohibited behavior include, but are not limited to the following:

1. Acquaintance or date rape
2. Stranger rape
3. Attempted sexual acts by use of verbal or non-verbal threats
4. Indecent exposure

Discipline Action:

Campus sexual assault is both a violation of the BSC student policy and a violation of local, state, and federal laws. A sexual assault offense can lead to two proceedings: (1) disciplinary action as outlined in the student conduct policy, and (2) a criminal court case against the assailant.

Disciplinary proceedings following a sexual assault report include:
- The right of the accuser and the accused to have the same opportunities in having others present during the campus disciplinary process
- The right of the accuser and the accused to be informed of the outcome of the campus disciplinary process

Reporting Sexual Assault:

The guiding principle in the report of a sexual assault is to avoid potentially re-victimizing the sexual assault survivor by forcing the individual into any plan of action. A student who has been sexually assaulted should:
The Following are Reporting Suggestions:

1. It is recognized that a sexual assault survivor may be undecided about reporting the assault to the police. A report to the police can empower the survivor in exercising legal rights and aid the protection of others. If a report is to be made to the police, the survivor will be encouraged not to destroy evidence by bathing, douching, changing clothes, or cleaning up in any way.

2. The sexual assault survivor, who does not wish to see the police, will be encouraged to seek medical treatment. A medical exam will treat physical problems and may diminish fears about injury or venereal disease. The confidential medical exam includes preserving evidence in the event that the survivor later chooses to file a police report.

All reports of sexual assault are treated with respect to the privacy of the involved individuals. Incidents are reported to appropriate departments and agencies in consideration of safety concerns and investigative needs. BSC publishes annual statistics on incidents of sexual assault in accordance with the Cleary Act.

Bismarck State College offers the following services:

- Escort services
- Place of residence and phone number change
- Restraining order assistance
- Academic schedule adjustments
- College withdrawal
- Student judicial procedures

Campus Surroundings:

BSC continuously considers the physical surroundings in addressing campus security to avoid assault and other crimes on campus. The physical surroundings are modified when seen as a possible threat to the safety of students, staff, and faculty. Campus administrators, police, and the BSC Board of Governors tour campus on an annual basis to determine if there are any safety concerns. They assess campus signs, lighting, and locking procedures.

Resources:

The following are individuals and agencies that can assist victims of sexual assault and other sexual offenses:
1. BSC Police...............................527-1972 or 224-5789
2. Bismarck & Mandan Emergency Response .......... 911
3. Bismarck Police (administrative) .......................223-1212
4. Mandan Police (administrative)..........................667-3455
5. BSC Director of Student Life/Housing .................224-5465
   Lidstrom Hall (co-ed) RHD .............................224-2554
   Mystic Hall (co-ed) or Swensen Hall (women’s) RHD .......224-5460
   Werner Hall (men’s) RHD ...............................224-5455
6. BSC Counseling Office ..................................224-5752
7. Associate VP for Student Affairs .......................224-5638
8. BSC Chief Human Resources Officer ...................224-5427
9. St. Alexius Medical Center (hospital) ....................530-7001
10. Abused Adult Resource Center (for assistance with sexual assault or domestic violence)......1-866-341-7009
11. West Central Human Service Center
   (24 hour emergency line) ...............................328-8888

Notice of Nondiscrimination

Bismarck State College is an equal opportunity institution that does not discriminate on the basis of race, color, gender, national origin, age, religion, sexual orientation or disability in its admissions, student aid, employment practices, education programs or other related activities.

Inquiries concerning compliance with Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendment Act of 1972, Section 504 of the Rehabilitation Act of 1973, Americans with Disabilities Act and the Age Discrimination and Employment Act may be referred to: Rita Lindgren, Chief Human Resources Officer, Bismarck State College, BSC Meadowlark Building, 1700 Schafer St., Bismarck, ND 58501. (701)224-5427, Rita.Lindgren@bismarckstate.edu. Inquiries concerning compliance may also be directed to the Office for Civil Rights/Chicago, U.S. Department of Education, Citigroup Center, 500 W Madison Street, Suite 1475, Chicago, IL 60661. Telephone: (312) 730-1560, Fax: (312) 730-1576, TDD: (312) 730-1609 or (877) 521-2172, website: http://www.ed.gov/ocr/.
INDEX OF PROGRAMS AND COURSES

Accounting .................................................................62, 142-143
Administrative Assistant ........................................71, 151-152
Agriculture, Technology and Natural Resources .......63-65, 143-145
Art: Visual .................................................................65, 145-146
Automotive Collision Technology ..........................66, 147
Automotive Technology ...........................................67, 147-148

Biology ........................................................................68, 149-150
Business Administration .........................................69, 150-151
Business Education .................................................73
Business and Office Technology .............................71-73, 151-152

Carpentry (Residential) .............................................74, 153-154
Chemistry .................................................................75, 154-155
Chiropractic ...............................................................75
Computer Information Systems ............................76-77, 155-158
Computer Science ....................................................78, 158-159
Computer Support Specialist ................................76, 155-158

Dance (See Theatre Arts) ...........................................199
Dentistry .................................................................81

Economics ..............................................................81, 160
Education .................................................................82, 160
Electric Power Technology .................................84, 161-163
Electrical Transmission Systems Technology ........85, 163-164
Electronics Technology .........................................86, 164-165
Electronics/Telecommunications Technology .......87, 164-165

Eligibility Worker .....................................................100, 174
Energy Management ...............................................88, 166
Engineering ..............................................................89, 166-168
Engineering Technology ........................................91, 166-168
English .....................................................................92, 168-170

Farm Management Education ................................65, 143
Fire Technology .........................................................170
Foreign Language ....................................................93

Geographic Information Systems Technician ..........94, 170
Geography ...............................................................170
Geology .....................................................................171
Graphic Design and Communications ....................95, 171-172

Health Education ......................................................96
Heating, Ventilation and Air Conditioning ...............96, 172-173
History .................................................................98, 173-174
Human Services .....................................................99, 174

Information Processing Specialist .........................77, 155-158
Instrumentation and Control Technology ..............101, 175-176

Journalism ..............................................................102, 176-177

Legal Administrative Assistant ...............................71, 151-152
Liberal Arts .............................................................103
Lineworker (Electrical) ..........................................104, 177

Management ............................................................69-70, 150-151
Mass Communication .............................................105, 150-151
Mathematics ..........................................................106, 176-177
Mechanical Maintenance Technology ....................107, 178-180
Medical Administrative Assistant .........................71, 151-152
Medical Laboratory Science ................................108-109, 180-181
Medical Laboratory Technician ..............................108, 180-181
Military Leadership ...............................................110, 181-182

Music .................................................................111, 182-184

Nuclear Power Technology ....................................112, 184-185
Nursing .................................................................113-114, 185-186
Nursing Transfer ....................................................114-115, 185-186

Optometry ..............................................................116

Paramedic (EMT-P) Technology .........................117, 186-188
Petroleum Engineering Technology ......................118, 188-189
Petroleum Production Technology .........................119, 189
Pharmacy ...............................................................120

Philosophy ..............................................................120
Phlebotomy Technician ...........................................109, 180-181
Physical Education .................................................121, 189-190
Physics .....................................................................122, 190-191

Political Science ......................................................122, 191
Power Plant Technology .......................................123, 191-192
Pre-Medical ..........................................................124

Prior Learning Assessment ......................................193
Process Plant Technology ....................................125, 193-194
Psychology ............................................................126, 194
Public Administration ...........................................128

Radiologic Technology ...........................................128
Religion .................................................................194-195
Renewable Generation Technology ......................129, 195-196
Respiratory Therapy ..............................................130

Science .................................................................196
Social Sciences .......................................................131
Social Work ...........................................................131, 196
Sociology ...............................................................132, 196-197
Spanish .................................................................93, 197
Speech Communication ........................................132, 197-198
Surgical Technology .............................................133, 198-199
Sustainable Construction Technology ...................135, 199-200

Technical Studies ..................................................136
Theatre Arts ..........................................................137, 200-201

Web Page Development and Design ......................138, 155-158
Welding ...............................................................140, 201-202
DIRECTIONS TO CAMPUS:

FROM THE WEST (I-94): Take Exit 157. At the stoplight, proceed straight on Schafer St. approximately 2 blocks.

FROM THE EAST (I-94): Take Exit 157. At the stoplight, turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

FROM THE NORTH (HWY 83): Turn right (west) on I-94 (Exit 159) and proceed to Exit 157. Take Exit 157. At the stoplight turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

FROM THE SOUTH (HWY 83): Turn left (west) on I-94 (Exit 182) proceed to Exit 157. Take Exit 157. At the stoplight turn left, proceed 2 blocks. Turn right on Schafer Street and continue approximately 2 blocks.

1 - BISMARCK COMMUNITY BOWL
2 - BISMARCK PUBLIC SCHOOLS CAREER ACADEMY
3 - BSC AQUATIC & WELLNESS CENTER
4 - BSC ARMORY
5 - FOUNDATION/ALUMNI HOUSE
6 - HORIZON BUILDING
7 - JACK SCIENCE CENTER
8 - LEACH MUSIC CENTER
9 - LIBRARY
10 - LIDSTROM HALL
11 - MEADOWLARK BUILDING
12 - MYSTIC HALL
13 - NATIONAL ENERGY CENTER OF EXCELLENCE
14 - ND LAW ENFORCEMENT TRAINING ACADEMY
15 - SCHAFER HALL
16 - SIDNEY J. LEE AUDITORIUM
17 - STUDENT UNION
18 - SWENSEN HALL
19 - TECHNICAL CENTER
20 - TENNIS COURTS
21 - WERNER HALL

- HANDICAP PARKING
- PERMIT-ONLY PARKING
- NO BSC PARKING