

2008-2009 *Catalog*



Nashua
Community
College

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While the **Catalog** lists associate degree programs in a two-year format, the College recognizes that students frequently take three or more years to complete their programs of study. Copies of structured three-year formats for associate degree programs are available for your use from the Admissions Office.



Nashua Community College

505 Amherst Street
Nashua, New Hampshire 03063

Telephone: (603) 882-6923
Fax: (603) 882-8690
Email: nashua@ccsnh.edu
Website: www.nashuacc.edu



Nashua Community College (NCC) is one of the seven colleges in the Community College System of New Hampshire. For more information about the System, call (800) 247-3420.

This catalog is a guide to NCC, and its contents are subject to revision at any time. The College reserves the right to change fees, courses, policies, programs, services and personnel as required. *A matriculated student must follow the curriculum of the program at the time of matriculation.*

Nashua Community College is a smoke-free campus.

This catalog is current as of July 1, 2008.

PRESIDENT'S MESSAGE



On behalf of Nashua Community College, I extend an invitation to you to visit our campus. Upon your arrival, you will find newly-renovated offices, centrally-located to accommodate your needs including: Admissions, Financial Aid, Registrar and the Bookstore. As you walk through our campus, you will see an educational environment that reflects the changing needs of the students, workplace and technology.

Our new 40,000 square foot Wellness Center embraces our commitment to students' physical, mental and environmental wellbeing. The Center houses a dining hall, indoor gymnasium, yoga/pilates room, massage therapy room, weight/aerobics area, conference and lounge space, and suspended walking track. "Green-technology" was utilized throughout the building to minimize our carbon footprint.

The success of NCC's programs, courses and services can be measured by the continued accreditation from the New England Association of Schools and Colleges and other program-specific accrediting agencies. These accreditations reflect the College's commitment to accommodating diversity as well as its progressive vision.

Nashua Community College is proud of providing educational excellence at affordable levels to our community for over thirty years. We will continue this tradition by making strategic choices driven by student needs.

On your visit, I encourage you to speak with our students, faculty and staff. Our welcoming collegial spirit is one of our finest attributes.

At NCC, we believe in service to the greater community. In February 2008, we were honored as a recipient of the President's Higher Education Community Service Honor Roll for contributing over 4,000 volunteer hours to area organizations.

Nashua Community College seeks to meet the region's educational needs through a comprehensive program of transfer, technical, business and industry specific programs. Students interested in attaining a Bachelor's degree may earn an Associate Degree in Liberal Arts and transfer their credits to a four-year institution. Others who seek more immediate employment or opportunities to advance in their current career can select from an array of Associate degrees or Certificate programs in various technical fields.

I wish you well as you embark on your new path, and Nashua Community College welcomes the opportunity to help navigate your educational journey.

A handwritten signature in cursive script that reads "Lucille Jordan".

Lucille A. Jordan
President

MISSION

The Community College System of New Hampshire (CCSNH) is committed to providing comprehensive, market-driven, accessible, quality programs of higher education that respond to the needs of students, businesses, and communities.

VISION

Nashua Community College (NCC) will meet the changing educational needs of the communities that it serves. Through a process of continuous improvement, the College will become

- The preferred provider of two-year postsecondary education in the Nashua region
- A student-centered, educational institution that will advance and enrich the educational, economic, and cultural life of the diverse community we serve.

To achieve this vision, the College selected ten strategic goals as the framework for its strategic plan:

- | | |
|-----------------------------------|-------------------------------|
| • Accessibility and Affordability | • Programs of Instruction |
| • Preparation for Transfer | • Development of Partnerships |
| • Services and Citizenship | • Workforce Development |
| • Governance | • Student Development |
| • Financial Management | • Technology |

GUIDING PRINCIPLES

Nashua Community College recognizes the dignity and worth of all persons and believes that postsecondary education should be available to all who can benefit from the opportunity. Further, the College believes that education should be a rewarding experience offered in a supportive environment that fosters the growth and the well-being of members of the community it serves. The College advances attitudes of mutual respect, tolerance, and support for individual differences.

Actions taken by the College should reflect a commitment to accessible and affordable educational experiences that cultivate a passion for learning. Believing that the College should reflect the diversity of the community it serves, we will assist students with varying levels of ability and diverse backgrounds to develop skills, attitudes, and values to enrich their lives.

Working together as a community of empowered, resourceful, and responsible individuals, we will measure our institutional success by the accomplishments of our students and the College itself.

Three major principles guide the operation of the College:

A Commitment to Access and Diversity

We believe in open access to the College and its services. To that end, the College has a special responsibility to encourage students who might not aspire to higher education to explore opportunities at the College.

A Commitment to Partnerships and Involvement with the Community

We recognize the importance of enhancing the economic vitality and quality of life for citizens in the community. In this regard, the College continues to foster cooperative relationships with other educational institutions, community and government organizations, and business and industry.

As part of its involvement in the community, the College teaches students about their responsibility to contribute to the welfare of the community in which they live. Through service learning and volunteerism, students make a positive impact in the community.

A Commitment to Effective Stewardship of Resources

The institution accepts its responsibility to be accountable to the community that supports the College. Thus, in its operation, College personnel are always mindful to exercise prudent management of finances and other resources.

CORE VALUES

The College addresses four major areas through its core values:

Communication

We recognize the importance of providing a learning environment that is characterized by open communication, involvement in decision-making, and respect for individuals. Consequently, the College provides a positive academic and social environment for all stakeholders by:

- Encouraging collaboration, involvement, and participation in College operations
- Empowering faculty, staff, and students to be actively involved in the College's governance structure
- Fostering an environment of acceptance and belonging
- Demonstrating sound teamwork principles and practices.

Striving for Excellence

The College focuses on achieving results that improve its reputation by:

- Having high expectations for faculty, staff, and students
- Being learner-focused to meet the various needs of our students
- Providing challenging learning opportunities and appropriate related services
- Developing integrated learning communities and interdisciplinary curricula
- Documenting institution outcomes
- Encouraging continuous improvement and growth through systematic evaluation and the refinement of programs, services, and processes.

Innovation

The College will encourage risk-taking to meet the changing needs of the marketplace and our key stakeholders by:

- Being flexible and willing to adapt to changing needs of the community
- Anticipating and capitalizing on opportunities for institutional growth.

Integrity

The College will thrive by maintaining trusting relationships with our key stakeholders. Integrity will be characterized by:

- Being mutually respectful
- Demonstrating honesty and sincerity
- Acting fairly and reasonably
- Demonstrating responsible behavior in meeting commitments and obligations.

EDUCATIONAL PHILOSOPHY

Since the College serves a diverse student population possessing a wide range of backgrounds and academic abilities, the institution provides a variety of educational programs, instructional methods, supplementary services, and co-curricular activities. The major aim of the College is to assist students to become self-reliant, self-confident, skilled workers and educated persons.

DEFINITION OF THE EDUCATED PERSON

The College believes that the educated person is able to read critically, write clearly and comprehensively, reason analytically, and utilize mathematical and scientific skills. The educated person functions as a responsible and ethical member of society, recognizes and copes with the ambiguities of life, and appreciates diversity.

The educated person moves from concrete to abstract levels of thinking, integrates and synthesizes knowledge, is comfortable with the interchangeability of roles as both student and teacher, and engages in constructive self-criticism. The educated person is a life-long learner.

By embracing an understanding and appreciation of today's socially and technologically-complex world, and by applying intellectual skills, the educated person improves his/her life and contributes to the community.

EXPECTED INSTITUTIONAL COMMITMENT TO THE COMMUNITY

The College fulfills its mission as determined by the extent to which the institution:

- Engages in programs and activities that expand access to higher education for all members of the community
- Offers college-preparatory instruction that prepares students for success in college-level work
- Provides students with a full range of student development and academic support services
- Offers students the opportunity to contribute to the well-being of others through service learning and volunteerism
- Prepares individuals for employment in a variety of careers in business, the health sciences, computer applications, engineering and industrial technologies, and public service
- Serves as an entry-point for bachelor degree programs by providing the first two years of a four-year program through a sequence of general education that stresses an appreciation of the arts and the humanities, the social sciences, communication and computational skills, the sciences, and computer literacy
- Provides economic development and continuing education activities to meet the needs of business, industry, and government while enhancing employee skills and enriching their lives
- Collaborates with visual and performing arts organizations in the community to elevate the human spirit.

HISTORY

Since 1970, the New Hampshire Community Technical College at Nashua has been successfully meeting the educational needs of the Greater Nashua area. In 1976 the College expanded its facilities to include a separate automotive building. A \$3.6 million addition to the main building was completed in June 1986. This addition featured an expanded science area, general classrooms, a hydraulics/pneumatics/robotics laboratory, photography laboratory and studio, microcomputer laboratories and an expanded cafeteria. In 1990, renovations were completed to accommodate a new program in Aviation Technology (Airframe and Powerplant). To address regional employment demands, the College implemented new programs such as Human Services, Early Childhood Education, Computer Engineering Technology, and Computer Science.

Funds were approved in Spring 1999 to build a new library and to upgrade science laboratories. The Walter B. Peterson Library & Media Center opened in December 2000. In 2001, The Claremont Nursing Program was brought as a satellite to the Nashua Campus. Southern New Hampshire Medical Center continues to provide laboratory and classroom space on its West campus for this program. The College received accreditation through the Commission on Institutions of Higher Education in 2002. Renovations to the main building and to the automotive building were undertaken in 2004 and 2005. In 2004, the Speech Language Pathology Assistant Program was added to address regional employment demands. The Restaurant Management Program was added in 2005 to provide an opportunity for community college students to have an international experience. Also in 2005, the College was chosen to be the site for the Honda PACT Program. That same year, a bond was approved to build a Wellness Center. The New Hampshire Board of Nursing gave approval to the Nashua Nursing Program in 2006, and the program received National League of Nursing initial accreditation in 2007. Ground was broken in April 2007 for the Wellness Center. In 2007, the New Hampshire legislature approved money to plan a new health and science academic building. An addition to the Automotive Building is also being planned. In January 2008, the New Hampshire legislature approved a name change to Nashua Community College. It is one of seven colleges in the Community College System of New Hampshire. The Wellness Center will open in Fall 2008.

CAMPUS SETTING

The three buildings contain nineteen general classrooms, twenty program-specific classrooms and laboratories, the Academic Support Center, the Advising Center, the Peterson Library, administrative and faculty offices, the Maintenance Department, cafeteria, bookstore, and three annexes. Spaces for more than 500 vehicles offer convenient parking with spaces for handicapped persons. The College is located on the City bus line and is approximately three miles from downtown Nashua. The College has a satellite campus at Crotched Mountain Rehabilitation Center in Greenfield, NH. Students who are enrolled in the Restaurant Management program spend two semesters at the Les Roches International School of Hotel Management in Crans-Montana, Switzerland.

REGIONAL ACCREDITATION

Nashua Community College is accredited by the New England Association of Schools and Colleges, Inc. through its Commission on Institutions of Higher Education.

Accreditation of an institution of higher education by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the accreditation status by the New England Association should be directed to the administrative staff of the institution. Individuals may also contact:

*Commission on Institutions of Higher Education, New England Association of Schools and Colleges
209 Burlington Road, Bedford, MA 01730-1433 • (781) 271-0022 • E-mail: cihe@neasc.org*

SPECIALIZED ACCREDITATIONS

Automotive Technology and Collision Repair Technology – The programs are certified by the National Automotive Technicians Education Foundation (NATEF) and the instructors are certified by the National Institute for Automotive Service Excellence (ASE) certifications, 101 Blue Seal Drive, Suite 100, Leesburg, VA 20175.

Aviation Technology – FAA approval

Computer Engineering Technology – TAC/ABET (Technology Accreditation Commission/Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202 – Telephone (410) 347-7700.)

Nursing – The Associate of Science in Nursing Program secured New Hampshire Board of Nursing Initial Approval on June 15, 2006. The Nashua program has received NLNAC Initial Accreditation in 2007. Further information about accreditation status can be obtained from the National League for Nursing Accrediting Commission, Inc., 61 Broadway, 33rd Floor, New York, NY 10006 or by calling 1-800-669-1656 or 1-212-989-9393.

CCSNH DISABILITIES SERVICES MISSION STATEMENT

It is the mission of CCSNH Disabilities Services to provide equal educational access, opportunities, and experiences to all qualified students with documented disabilities who register with the college's Disabilities Services office. Reasonable accommodations are provided to students to allow them to achieve at a level limited only by their abilities and not by their disabilities. Assistance is provided in a collaborative way to help students develop strong and effective independent learning and self-advocacy skills, as they assume responsibility for reaching their academic goals.

Students requesting accommodations for disabilities must register with the Disability Coordinator, located in the Academic Support Center, and provide documentation to support the request.

NOTICE OF NONDISCRIMINATION

Nashua Community College does not discriminate in the administration of its admissions and educational programs, activities, or employment practices on the basis of race, color, religion, national origin, age, sex, handicap, veteran status, sexual orientation, or marital status. This statement is a reflection of the mission of the Community College System of New Hampshire and Nashua Community College and refers to, but is not limited to, the provisions of the following laws: Title VI and VII of the Civil Rights Act of 1964, The Age Discrimination Act of 1967, Title IX of the Education Amendment of 1972, Section 504 of the Rehabilitation Act of 1973, The Americans with Disabilities Act of 1990, Section 402 of the Vietnam Era Readjustment Assistance Act of 1974, and the NH Law Against Discrimination (RSA 354-A). Inquiries regarding discrimination may be directed to Catherine Barry or Dan Jones Nashua Community College (603) 882-6923 or to Sara A. Sawyer, Director of Human Resources for the Community College System of New Hampshire, 26 College Drive, Concord, NH 03301, (603) 271-6300. **Inquiries may also be directed to the Office for Civil Rights, Boston Office, US Department of Education, 33 Arch Street, Suite 900, Boston, MA 02110 Tel: (617) 289-0222, FAX: (617) 289-0150, TDD (617) 223-9695, e-mail OCRBoston@ed.gov;** the Equal Employment Commission, John F. Kennedy Federal Building, Government Center, 4th Floor, Room 475, Boston, MA 02203, (617) 565-3200, TTY (617) 565-3204. To be automatically connected with the nearest EEOC field office, call 1-800-669-6820, TTY 1-800-669-6820; and/or the New Hampshire Commission for Human Rights, 2 Chennell Drive, Concord, NH 03301, (603) 271-2767.

ADMISSIONS PROCEDURES

Admission to Nashua Community College is open to all applicants who are qualified according to the admissions standards of respective programs, and applicants will not be barred from admission because of race, age, sex, handicap, religion, or national origin. First priority for admission will be given to residents of New Hampshire. Second priority will be given to students qualifying under the New England Regional Student Program. The facilities and services of the College will be available to all enrolled students, day and evening (except when restricted by judicial action).

Procedures

An application for admission may be found in this catalog or obtained from the Admissions Office at the College, our website or from your high school guidance office. The application should be mailed to: Admissions Office, Nashua Community College, 505 Amherst Street, Nashua, NH 03063

Once applications are received, the applicant will be informed of any additional information or procedures necessary for acceptance to the College. These procedures may include a personal interview, letters of reference, and pre-admission assessment. It is the responsibility of the applicant to ensure that all documents requested by the College are received. **All documents submitted to the College become the property of NCC and will not be returned or sent to other organizations.**

General Admissions Requirements

1. Present evidence of graduation from an approved high school (transcript with date of graduation or high school diploma) or possess a General Equivalency Diploma or its satisfactory equivalent. Nursing applicants will need proof of completion of English, Algebra, Biology, and Chemistry.
2. File an official Nashua Community College application form, a \$10 application fee, and complete a personal interview with a College representative, if required. If reapplication is necessary either for a new program or for a new academic year, the applicant must submit a new application and \$10 fee.
3. When requested, present recommendations from a high school and/or employers. The recommendations should reflect character, personality, special abilities, and general qualifications for college study.
4. Submit official transcripts of all previous college work. Grades of courses transferred are not included in the GPA (Grade Point Average) or CGPA. Credits earned at another institution will be added to the total credits accumulated for graduation.
5. Participate in Accuplacer Course Placement As-

essment when required. There is a \$10 fee to take this test. Students with documented disabilities needing accommodations for Accuplacer Assessment must notify the admissions office prior to the testing date.

6. Every degree student must demonstrate basic arithmetic and algebra skills before enrolling in college-level math and other courses (e.g., science). To earn an associate degree, students will be required to complete successfully one or more college-level math classes as specified by the particular program and curriculum to which the student has been accepted. Students lacking basic arithmetic and algebra skills may achieve those competencies through developmental math courses offered at the college.
7. Apprise the College of eligibility for Veterans Administration and other sources of financial assistance.

Residency Status

Any student who has, on his/her first admission to the system, been classified as out-of-state for tuition purposes, may apply to the college Admissions Office for a change of status on or before September 1 for the subsequent Fall semester, on or before January 1 for the subsequent Spring semester, and on or before June 1 for the subsequent summer term.

Academic Amnesty

A student who has previously attended a college within the CCSNH and is admitted at a later time may be eligible for Academic Amnesty, which provides for the following:

1. All grades taken during the student's previous time at the college will no longer be used to calculate the student's new cumulative GPA. However, grades C- and above taken during the student's previous time at the Institute/College will be used to meet course requirements (where appropriate), subject to the approval of the Vice President of Academic Affairs.
2. Even though previous grades will not be used to calculate the new cumulative GPA, all previous grades will remain on the student's transcript.

In order to be eligible for Academic Amnesty, a student must meet all of the following conditions:

1. The student has not taken any courses at the original college of enrollment for a period of at least 3 years from the last semester of attendance.
2. The student applies for Academic Amnesty at the time of admission.
3. The student has never before received Academic Amnesty.
4. The student achieved a cumulative GPA below 1.7 during previous attendance.

INTERNATIONAL STUDENTS: APPLICATION MATERIAL REQUIRED

In addition to the admissions requirements, international students must submit the following:

1. Official English translation of all secondary and postsecondary academic records.
2. Applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and earn a score of 500 or better (173 or better on the computer-based test); inquiries regarding the test should be addressed to: TOEFL, Education Testing Service; Box 899; Princeton, NJ 08540.

For students currently in the United States seeking a student visa, the College may waive the TOEFL requirement and administer the Accuplacer Placement Test.

3. **Affidavit of Financial Support** (forms may be printed from our website) from the person(s) who will be financially responsible for the student; letter should include student's name, intent to attend NCC, and the amount of money available. The form must be in English and notarized. The funds must be stated in US dollars. All supporting documents must be included.
4. Copies of current passport and immigration documents including current visa and Duration of Status (D/S) card.

Dollar amounts promised by the sponsor and available in the sponsor's bank account should be sufficient to cover a minimum of two years expenses (out-of-state tuition, fees, room and board, books, and miscellaneous expenses). Before a Certificate of Eligibility for an F-1 visa (I-20) can be issued, applicants must have submitted all documents required and be accepted into a full-time program (12 credits or more per semester).

Please note: On-campus housing is not available.

EXPENSES FOR 2008-2009

Students will pay tuition on a per credit basis:

Resident	\$175.00 per credit
New England Regional Student Program	\$262.00 per credit
Non-Resident	\$400.00 per credit

Comprehensive Student Services

Fee per credit (Day & Evening Programs)	
Supports student activities and Wellness Center	\$16.00

Tuition Deposit (non refundable from matriculated students)	100.00
Orientation Fee (non refundable from matriculated students)	30.00
Required Graduation Fee (Seniors only, paid spring term)	60.00
Academic Instruction Fee (per lab credit)*	44.00
Accuplacer Placement Test Fee	10.00

A non-refundable tuition deposit of \$100.00 will be required from all matriculated* students. The President or his/her designee reserves the right to waive the fee for students identified as evening matriculated students, or in circumstances where the collection of the deposit is not feasible (e.g., late admits, financial hardship, obstacle to disbursing financial aid). The deposit will be applied to the tuition for the semester immediately following the student's matriculation and will not be refunded even if the student withdraws during the designated full refund period or if the student fails to attend. The tuition deposit is not transferable to another semester unless an exception is made by the President or his/her designee.

*A matriculated student is defined as one who has been formally accepted into a degree or professional certificate program.

*A fee will be charged for all Laboratory/Practicum/Internship/Fieldwork or other similar experiences. This fee will be calculated by subtracting the number of lecture hours from the number of credit hours and multiplying the remainder by \$44.00 for each course. This will be added to the normal tuition charge for that course.

Example: <u>CL</u>	<u>LAB</u>	<u>CR</u>	
SCIN215 Microbiology	3	3	4
$4 - 3 = 1 \times 44 = \$44$			

This fee will be charged to all students with no exceptions. No other academic instruction fees are permitted without the written authorization of the Chancellor of the Community College System of New Hampshire.

A Comprehensive Student Services Fee is determined by the Student Senate and the Vice President within administrative guidelines. This fee covers the cost of student activities, athletics, College sponsored programs, and the Wellness Center.

The cost of textbooks and supplies can average \$750 per year.

The required graduation fee, paid at the beginning of the spring term by all graduating seniors, covers the cost of a cap and gown and other graduation expenses.

Some programs at NCC require the use of and sup-

plies which must be purchased by the student. These materials are necessary for career entry upon graduation and are important for the student to receive a high-quality, hands-on college education.

For information regarding estimated costs and requirements, please refer to the desired degree program within this publication.

Nursing Clinical Fee

All nursing students taking clinical courses will be charged a nursing clinical surcharge of \$350.00 per semester. This surcharge is designed to assist in covering the increased expenses associated with clinical classes. This fee is in addition to the academic instruction fee and comprehensive fee.

Restaurant Management Costs

Room, board, and related fees for the 21-week semester in Switzerland will be \$7,975. Room, board, and taxes for the internship in Switzerland are deducted from wages paid by the internship employer. Students will net an estimated \$3,500 - \$3,800 from the internship.

Swiss medical insurance costing approximately \$165/month is required unless students can demonstrate that the family medical plan in the USA meets the requirements of Swiss law. Please note that additional expenses of a passport, visa, and airfare to and from Switzerland are not included in the expenses described above.

Tuition

Tuition is due two weeks prior to the start of the semester. Failure to make payment in full or arrangements for payment will result in the cancellation of the student's registration. It may be paid online through the use of the e-cashier link on our website, in the Business Office, or by mail. If tuition is paid in installments, it must be paid in full 10 days prior to the beginning of final exams or two weeks prior to the end of the term, whichever is applicable.

A fee of \$50.00 per semester will be charged to all students who fail to make arrangements to pay tuition and fees prior to the start of classes.

Monthly Payment Plan

In an effort to assist students with tuition charges, the College offers an interest free monthly or annual payment plan administered by Facts/Nelnet Business Solutions. The plan allows students to fulfill their financial obligation to the College by automatic electronic processing of installment payments. There is a per semester or annual enrollment fee for this program. More information can be obtained from the Business Office or on our website by accessing the FACTS/Nelnet e-cashier link.

Delinquent Account Collection Process

The following collection clause will be listed on all forms requiring the student's signature:

"I understand by registering for courses at NCC, I am financially obligated for ALL costs related to the registered course(s). Upon a drop or withdrawal, I understand that I will be responsible for all charges as noted in the student catalog and handbook. I further understand that if I do not make payment in full, my account may be reported to the credit bureau and/or turned over to an outside collection agency. I also understand that I will be responsible for the costs of the outside collection agency, any legal fees, and any bounced check fees under RSA 6:11, which will add significant costs to my account balance."

Employee Reimbursement

Where the employer, the VA, or other agency is guaranteeing both tuition and fees, such guarantee must be in writing and signed by an authorized representative of the company or agency.

Refund Policy

Students who officially withdraw from the College or an individual course by the end of the eighth (8th) calendar day of the semester will receive a 100% refund of tuition, less non-refundable fees. This policy applies to all semester length and alternative semester formats. Students in classes which after the designated start of the semester (e.g. a mid-semester start) will have 8 calendar days from the start of the class to withdraw for a full refund. **Exception:** Students in courses that meet for two weeks or fewer must drop by the end of the first day of the class in order to get a 100% refund.

Non-refundable fees are defined as advance tuition, application fee, and orientation fee. All other fees are to be considered refundable. This includes, but is not limited to, comprehensive student services fee.

In extenuating circumstances, the President (or designee) is authorized to offer alternative compensation in the form of tuition credit or waiver to students on a case-by-case basis. Tuition credit on a student account must be used within one calendar year from the date of authorization.

In accordance with Federal regulations, refunds for an amount less than \$1.00 (\$.99 or less) will be forfeited.

FINANCIAL AID

The College is well aware of the financial burden of meeting college costs. The Financial Aid Office at the College encourages students to apply for assistance.

Assistance is available in the form of scholarships, grants, loans, and work study. Federal, state, and private scholarship funds are often limited. Applicants with the greatest financial need receive first consideration for assistance. Applications should be filed by May 1 each year to receive priority consideration. Detailed information regarding financial aid can be found at <http://www.ccsnh.edu/links.html>.

The first step in applying for financial aid is for the student and, if applicable, his/her parent or his/her spouse, to complete the Free Application for Federal Student Aid (FAFSA). The FAFSA can be filed electronically at <http://www.fafsa.ed.gov>. The school code for Nashua Community College is 009236. Please allow 2-3 weeks for the results of your processed FAFSA to be sent to the College. Upon receipt of your processed FAFSA, the Financial Aid Office will contact you if additional information is required.

The following is required of an applicant to be awarded financial aid:

1. Complete the financial aid application process;
2. Be admitted to a degree granting certificate or associate degree program that is financial aid eligible;
3. Be a United States citizen or eligible non-citizen;
4. Be registered with the Selective Service if male between the ages of 18 and 25;
5. Not owe a refund on a grant or be in default on any federal student loan;
6. Not have borrowed in excess of the annual or aggregate federal loan limits;
7. Demonstrate financial need as determined by federal and/or state guidelines;
8. Be enrolled in a minimum of six (6) credits per semester. The Pell Grant may be awarded to exceptionally needy students enrolled in three (3) credits per semester;
9. Meet Satisfactory Academic Progress guidelines to continue to receive financial aid each academic year; and
10. Reapply each academic year.

GRANT PROGRAMS

Federal Pell Grant

The Federal Pell Grant is a federally funded program that assists students who demonstrate financial need with the actual costs of attending college. A Pell Grant is considered “gift money” that does not have to be repaid. To qualify for a Pell Grant, you must be an undergraduate student who does not already have a bachelor degree. Awards are granted on a sliding

scale ranging from \$400 to \$4,731 and are based on estimated family contribution (EFC).

Federal Supplemental Educational Opportunity Grant (FSEOG)

FSEOG is also a federal grant made available to students who demonstrate exceptional financial need. The FSEOG is considered “gift money” that does not have to be repaid. To qualify for FSEOG you must have Pell Grant eligibility, however, all students who receive the Pell Grant will not receive FSEOG.

NHIP State Grant

New Hampshire Incentive Program (NHIP) provides grants for New Hampshire residents attending a college in or outside the State of New Hampshire. This grant is considered “gift money” that does not have to be repaid. Students must demonstrate financial need and submit the FAFSA by May 1 or each year to be considered.

Massachusetts State Grant Vermont State Grant/Maine State Grant

The Massachusetts State Grant, the Vermont State Grant and the Maine State Grant programs provide grants for their respective residents attending a college in his/her state or another state. Students must demonstrate financial need. Massachusetts and Maine residents must submit the FAFSA by May 1 of each year to be considered.

LOAN PROGRAMS

Federal Perkins Loan Program

The Federal Perkins Loan program provides low interest loans to students with demonstrated financial need. This loan program has a 5 percent interest rate and repayment does not begin until nine (9) months after graduation, withdrawal, or when enrollment drops below six (6) credits.

Federal Stafford Loan Programs

Requirements: A student must be enrolled in a minimum of six (6) credits to be eligible for these programs. The amount a student may borrow may not exceed cost of attendance minus other assistance (or, for subsidized loans, other assistance plus the EFC). First time borrowers at NCC must complete loan entrance counseling at <http://www.MappingYourFuture.org/se>.

Subsidized Stafford Loan

This is a loan program that is subsidized by the federal government for students demonstrating financial need. Subsidized means the student is not respon-

sible for payment of accrued interest during periods of at least half time enrollment (six (6) credits or more). Repayment begins six (6) months after graduation, withdrawal, or when enrollment drops below six (6) credits.

Unsubsidized Stafford Loan

This is a loan program that is not subsidized by the federal government and is for students who do not demonstrate financial need. Unsubsidized means the student is responsible for payment of accrued interest during periods of at least half time enrollment (six (6) credits or more) although actual payment can be deferred. Repayment begins six (6) months after graduation, withdrawal, or when enrollment drops below six (6) credits.

Loan Limits

Dependent Students (Except students whose parents cannot borrow PLUS) who qualify may borrow the following per academic year:

Freshmen (0-31 credits earned) up to \$5,500 of which only \$3,500 can be subsidized; Sophomore (32+ credits earned) up to \$10,500 of which only \$4,500 can be subsidized. *The average loan debt for graduates is \$4,373.*

Federal Parent Loan for Undergraduate Students (Plus)

Parent Loans for Undergraduate Students (Plus) are loans made to parents of dependent undergraduate students. Parents may borrow up to the student's cost of attendance less the anticipated financial aid. Additional information is available through the Financial Aid Office.

Alternative Loans for Parents and Students

These programs are developed by various agencies to assist parents and students in meeting his/her educational expenses. Such funds may assist families that do not qualify for or need to supplement other forms of financial aid. Additional information is available through the Financial Aid Office.

FEDERAL WORK STUDY PROGRAM

Federal College Work Study

Federal work study opportunities exist both on and off the NCC campus. Hourly wages range from \$9.00 to \$10.00 per hour.

On-Campus jobs are available throughout the campus.

Off-Campus jobs are available throughout the local Nashua area in non-profit agencies. Students must

provide their own transportation. Additional information is available through the Financial Aid Office.

REFUND OF TITLE IV FUNDS FOR FINANCIAL AID RECIPIENTS

Students who withdraw from all classes before the 60% point in a semester may be required to repay all or a portion of the financial aid they received for that semester. This is known as the Return to Title IV calculation. The exact amount to be returned will vary depending on the amount of financial aid received and at what point during the semester the student withdraws from the College.

In addition, the student is liable for the balance owed the College as a result of the repayment of financial aid based on the Return to Title IV calculation. Students owing a balance to the College will receive a revised statement of account. Students who choose to withdraw from the College must complete an official Withdrawal Form. This form must be signed and returned to the Registrar's Office.

RETURN OF FUNDS FOR FINANCIAL AID RECIPIENTS

Financial aid recipients who withdraw from all classes after a semester has begun and prior to the 60% point of the semester will have the percentage of their unearned financial aid funds returned to the financial aid (Title IV) programs. No refunds will be made after 60% of the semester is completed.

A recipient is one whose financial aid has been credited to his/her account for that particular semester.

Withdrawal forms are available in the Registrar's office. The date the form is completed and signed is the withdrawal date. For students who do not complete the College's withdrawal form, the withdrawal date is the midpoint of the semester.

Refunds will restore funds to the appropriate aid programs as prescribed by law and regulations in the following order:

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal Perkins Loan
4. Federal PLUS Loan
5. Federal Pell Grant
6. Federal Supplemental Education Opportunity Grant
7. Other Title IV Aid Programs
8. Other Federal sources of aid
9. State/Private/College aid

OTHER SCHOLARSHIP PROGRAMS

Assistance for Single Parents or Displaced Homemakers

Are you a single parent or displaced homemaker? Financial support is available to help you with the costs of attending the College such as tuition/fees, books and supplies and childcare. In addition, special support services include individual academic and personal counseling, support groups, assistance with community agencies, and tutoring. Contact Gail Russell at extension 1648.

Leveraged Incentive Grant

The College Scholarship Committee reviews and selects applicants. Students must be New Hampshire residents, enrolled full time, and must have completed their first year courses before the term of scholarship credit. Also, recipients must exhibit academic excellence and financial need. An application and a statement of merit and need is required from applicants.

Paul Kaminski Scholarship

This scholarship was established in memory of Paul Kaminski, a professor in the Mathematics/Science Department and long time friend of the College. The scholarship, which is applied to fall or spring semester tuition, is awarded to a senior in good standing. Selection is based on demonstrated improvement of grades and ability over two or three semesters and demonstrated financial need. The award averages \$350. For further information, contact the Financial Aid Office.

Agnes M. Lindsay Trust Scholarship

Students applying for this scholarship must be permanent residents of a town with fewer than 5,000 residents in NH, VT, ME, or MA. Applicants must also demonstrate financial need.

NASA/PSNH Scholarship

Students who are enrolled in engineering technology, math, and science programs are eligible to apply. They must demonstrate a commitment to their chosen field of study. Preference will be given to underrepresented and non-traditional students, minorities, and women.

New Hampshire Student Service Leadership Corps

The NH Student Service Leadership Corps at Nashua Community College offers opportunities for students to

make substantial contributions to serve his/her community and college through service and leadership. For completing 300 hours of service per academic year, the Corps member will earn an educational voucher and small stipend. For program application and information about the NH Student Leadership Corps please call the Service Learning Coordinator at (603) 882-6923 x1755.

NSF Grant

Students enrolled in Computer Engineering Technology, Computer Science, Electronic Engineering Technology, or Liberal Arts with a Mathematics Concentration are eligible to apply. Applicants must show academic potential and financial need. For further information, contact the Financial Aid Office.

Orphans of Veterans Scholarship

Residents of New Hampshire whose veteran parent died as a result of active service in the armed services of the United States or whose parent has since died from a service connected disability may be eligible for this scholarship. For more information contact the Post Secondary Education Commission at (603) 271-2555.

Valedictorian Scholarship Program

A one-year tuition scholarship will be awarded from New Hampshire New England Association of Schools and Colleges accredited institutions to designated New Hampshire high school valedictorians based on cumulative grade point average. The recipient must be a full time matriculated student in a CCSNH college within 15 months from the time of secondary school graduation.

SATISFACTORY ACADEMIC PROGRESS (SAP)

The Financial Aid office is required by federal regulations to periodically review financial aid recipients to ensure that they are making satisfactory academic progress towards the completion of his/her program of study. Satisfactory academic progress (SAP) for financial aid recipients is measured by both qualitative and quantitative standards and is an assessment of a student's cumulative academic record while in attendance at the College.

Qualitative Standard

Cumulative CGPA Component	Must have earned the <u>minimum published CGPA</u> at the published intervals.
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Quantitative Standard

Completion Rate Component	Must complete more than <u>2/3</u> of the credits attempted
Maximum Timeframe Component	Can receive financial aid for up to 150% of the number of credits

Academic Periods Included in the Review

The qualitative and quantitative standards of the Satisfactory Academic Progress policy will be used to review the academic progress for all periods of the student's enrollment. Even periods during which the student did not receive FSA funds will be included in the review. Additionally, periods for which the student was granted academic amnesty are included in the review.

Coursework Included In SAP

In general, coursework that is taken while in attendance at a CCSNH college and applies to the student's academic program is taken into account when reviewing his/her academic record for satisfactory academic progress. However, there are some exceptions. Please refer to the table below for a breakdown of how each type of course or credit is treated in the review.

	Cumulative CGPA Component	Completion Rate Component	Maximum Timeframe Component
Regular courses in your program of study		Y	Y
Repeat Courses	Y	Y	Y
Transfer Credits	N	Y	Y
Consortium Credits	N	Y	Y
Developmental/ Remedial/ESOL	Y	Y	Y
Incompletes	Y	Y	Y
Audit Courses	N	N	N
Credit by Examination	N	N	Y

Repeat Courses

Only the most recent grade for a course that has been repeated will count towards a student's CGPA. Therefore, grades from prior attempts will be excluded from the student's cumulative CGPA. However, all attempts, including the most current, will be included

in the calculation for the completion rate and maximum timeframe components. Financial Aid will cover a repeated course only when it is repeated to replace an unacceptable grade as determined by a specific course and/or major.

Transfer Credits

Credits that are transferred in from another institution and apply to the most current major will be excluded from the student's cumulative CGPA, however, they will be included in the calculation for the maximum timeframe component and completion rate component.

Consortium Credits

All courses taken at an institution other than the student's home institution through an official consortium are included in the calculation for completion rate and maximum timeframe components, but excluded from the student's cumulative CGPA component.

Developmental/Remedial/ESOL Courses

These courses will be included in the calculations for all three components of the satisfactory academic progress review. You are only eligible for federal financial aid for up to 24 credit hours of this type of coursework.

Incompletes

All incompletes must be resolved by the end of the third week of the semester following the receipt of the incomplete grade. If it is not, the grade is either automatically changed to an "F" or is considered to be an "F" for all components of the satisfactory academic progress review. Financial Aid can be withheld until Incompletes are resolved.

Audit Courses

Financial Aid does not cover any courses a student audits. Further, audit courses are not included for any of the calculated components.

Credit by Examination

Financial Aid does not cover courses in which a student earns credit through Credit by Examination. Credit by Examinations count toward the maximum timeframe component but are excluded from the student's cumulative CGPA component and completion rate components.

Qualitative Standard

Cumulative GPA Component

A student must maintain a minimum cumulative grade point average as noted below to be considered as making satisfactory academic progress.

Total Credits Earned Toward Program	Minimum Cumulative Grade Point Average Required For the Program	
	Certificate	Associate
0 – 13	1.50	1.50
14 – 27	2.00	1.70
28 – 40		1.80
41+		2.00

Quantitative Standard

Completion Rate Component

A student must successfully complete more than two-thirds (66.66%) of the total credits he/she attempts through his/her academic career at the college. All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation.

For example, a student who has enrolled in 36 credits throughout his/her academic career at the College must pass more than 24 credits in order to be making satisfactory academic progress.

Maximum Timeframe Component

A student may receive student federal aid for any attempted credits towards his/her program of study as long as those credits do not exceed 150% of the published length of the student's program of study.

For example, a student enrolled in an eligible 24 credit certificate program can receive financial aid for up to 36 credits attempted. Likewise, a student enrolled in a program of study that requires 64 credits to earn the degree can receive student federal aid for a maximum of 96 credits attempted.

If a student changes curriculum programs or graduates and requests a second degree, a degree audit will be completed and evaluated to determine what portion of the requirements for that curriculum has been satisfied. Students who seek a dual degree may appeal for an extension of the maximum time frame provision of this policy. Appeals will be evaluated on an individual, case-by-case basis.

The Review Process

The qualitative and quantitative components of the SAP policy will be reviewed at the end of each semester within the regular academic year of the student's program of study.

Students who meet SAP standards will be coded as making satisfactory academic progress and will retain eligibility for Student Federal Aid for the following semester.

Students who do not meet SAP standards will be placed on SAP probation for one semester. Students placed on SAP probation will retain their eligibility for Student Federal Aid for the following semester.

Students placed on SAP probation:

At the end of the probationary period, SAP standards will be reviewed. If the student meets SAP standards, he/she will once again be coded as making satisfactory academic progress and will retain eligibility for federal student aid for the following semester.

If the student is still unable to meet SAP standards, he/she may be placed on SAP final probation unless otherwise determined by the FAO. Students placed on SAP final probation will retain eligibility for federal student aid for the following semester.

Students placed on SAP final probation

At the end of the final probationary period, SAP standards will be reviewed again. If the student meets SAP standards, he/she will once again be coded as making satisfactory academic progress and will retain eligibility for Student Federal Aid for the following semester.

If the student is still unable to meet the standards for SAP, he/she will no longer be eligible to receive FSA at the institution until such time that he/she is able to meet the standards of SAP

Appeal Process

A student who becomes ineligible for federal student aid as a result of satisfactory academic progress may appeal for a review of that determination. A student who believes he/she has extenuating circumstances that affected his or her ability to progress satisfactorily should appeal in writing within 30 days of the date of the letter indicating a loss of financial aid eligibility. The letter should be addressed to the Financial Aid Appeals Committee and be submitted to the Financial Aid Office. A successful appeal may preserve the student's eligibility for federal student aid in the following semester.

Change of Program

A student who changes his/her academic program may request an appeal in that determination if s/he has changed programs while enrolled at his/her current col-

lege. If this appeal is taken up then only those courses applicable to the new program will be evaluated for the Completion Rate and CGPA components. However, all courses attempted will be evaluated for the Maximum Timeframe component. If under these circumstances the student is making satisfactory academic progress, the student will regain eligibility for student aid. If under these circumstances the student is not making satisfactory academic progress, the student will not regain eligibility for student aid at this time.

Regaining Eligibility

Students who are denied financial aid for failure to maintain satisfactory progress must regain their eligibility during future semesters at their own expense. Aid can be reinstated only after a student has met the required standards listed above. Withdrawal and re-admission do not necessarily change the student's satisfactory academic progress status.

For further information about the Financial Aid Satisfactory Academic Progress policy, please contact the Financial Aid Office.

VETERANS BENEFITS

The programs of the College are approved by the New Hampshire State Approving Agency (Postsecondary Education Commission) for Veterans Education Programs for persons eligible for educational benefits from the U.S. Department of Veterans Affairs. Students who have questions about their eligibility should contact the Veterans Administration at 1-888-442-4551 or www.gibill.va.gov. Students who request veterans' educational assistance are required to have all previous post-secondary experience evaluated for possible transfer credit in order to be eligible for benefits. For more information, contact the Registrar's Office of the College. The Registrar can provide assistance to veterans regarding status as a student.

Veterans Administration Vocational Rehabilitation

Veterans who served in the Armed Forces during World War II or thereafter are eligible for vocational rehabilitation under specific conditions. Consult the VA for details.

Counseling

Educational and vocational counseling will be provided by the Veterans Administration upon request.

Tutorial Assistance

The Department of Veterans Affairs (DVA) may provide tutorial assistance if necessary.

Entitlement, Duration, and Time Limits

Those who contributed under Chapter 32, (the post-Vietnam Era Veterans' Educational Assistance Program (VIP) during the period of January 1, 1977 to June 30, 1985 must have contributed to the program a minimum of 12 months and completed either 24 continuous months of active duty or the full period for which they were called or ordered to active duty, whichever is less. Those who entered active duty on or after July 1, 1985 (Montgomery G I Bill) must contribute for 12 months and serve a minimum of 24 months of active duty, unless discharged early for medical reasons, hardship, etc. Only those who may be eligible under more than one law have up to 48 months of entitlement.

Survivors and Dependents

Generally, survivors of deceased veterans, spouses of living disabled veterans, as well as children of either, between 18 and 26 years old are eligible when the death or permanent and total disability was the result of service in the Armed Forces.

Spouses and children of servicemen or service-women, who are in one of the following 3 categories, are eligible as long as the serviceman or woman has been listed for more than 90 days and remains in one of the following categories: (1) missing in action; (2) captured in the line of duty; or (3) forcibly detained or interned in the line of duty by a foreign power.

Also, children under the age of 18 and handicapped children may be eligible for benefits. Consult the DVA for details on any of its survivors' and dependents' educational benefits.

STATE OF NEW HAMPSHIRE BENEFITS

Orphans of Veterans

Children of veterans killed, or who died, as a result of service connected causes, and who were legal residents of New Hampshire at the time of death are eligible to receive free tuition and an additional amount by request each year for books, etc. Consult the College Registrar.

Vocational Rehabilitation Aid

By an act of Congress, any physically handicapped student may be eligible for a partial tuition scholarship under the provisions of Public Law 565. Applications for this scholarship aid should be processed through a District Vocational Rehabilitation Office.

ACADEMIC REQUIREMENTS AND POLICIES

Associate Degree

The minimum requirement for the Associate Degree is 64 credit hours and completion of all specified course requirements. Students must successfully complete a minimum of 25 credit hours in General Education courses such as English, social science, mathematics, humanities, science and a minimum of 32 credit hours in technical education in their major program. Finally, students earning the degree must have a cumulative grade point average of at least 2.0.

Additional Associate Degrees

Students must earn a minimum of 15 additional credits at the College for each additional associate degree.

Certificate

Certificate programs emphasize specific skills and outcomes required for employment or for career advancement. There are no specific general education requirements. Students earning a certificate must have a cumulative grade point average of at least 2.0 and have obtained a passing grade in each required subject.

Attendance Policy

Class attendance is considered essential to academic success of students. Since there are constant learning opportunities between faculty members and students, and between students and other students within the classroom or lab, it is expected that students will attend each meeting of each course in which they are enrolled.

Specific attendance policies for each course are determined by the instructor and will be stated in writing in the course syllabus. These policies reflect the instructor's authority to determine whether a student is permitted to make up missed work through absence or lateness and on what terms.

If a student is absent more than the number of hours the course meets during a two-week period, the faculty may withdraw a student from the course with an "AF" grade any time during the semester. An "AF" grade is calculated in the GPA as an "F". All students who stop attending class after the add/drop period and have not officially withdrawn shall receive an "AF" from the instructor at the end of the semester or at any point during the semester that the instructor informs the Registrar's office that the student has been suspended from class. The awarding of an "AF" grade need not be accompanied by a LDA (last date of attendance).

Student Conduct and Discipline

A student's continued enrollment at the College is dependent upon his/her behavior. The awarding of academic credits and recognition and the conferring of degrees, diplomas, certificates and awards are subject to the academic and judicial authorities of the College. A student's attendance may be terminated and he/she may, following due process, be dismissed from the College at any time and on any grounds deemed advisable by the Administration.

Student conduct, both on and off campus, of a nature which would reflect discredit on the student and/or on the College, may result in disciplinary action by the College. Persons are subject to the laws of the State regardless of their student status and are subject to College discipline when the College's interests as an academic community are distinctly and clearly involved.

The judicial process will be the responsibility of the Vice President of Student Services and the Judicial Committee. The Vice President may take administrative disciplinary action when it is deemed necessary to ensure the safety of students, faculty or staff and/or the continuation of the educational process. The final judicial authority of the College is vested in the President.

Grading System

Students earn grades which are assigned by individual faculty members on the basis of an objective evaluation of students' academic achievement. To successfully complete a certificate or an associate degree at the College, students must earn a minimum Grade Point Average (GPA) of 2.0 and meet all program requirements.

The following grades are used in the computation of the Grade Point Average:

Grade	Quality Points
A	4.00
A-	3.70
B+	3.30
B	3.00
B-	2.70
C+	2.30
C	2.00
C-	1.70
D+	1.30
D	1.00
D-	0.70
F	0.00

The following Auxiliary Grades are not used in the computation of the Grade Point Average:

Auxiliary Grades

W: Student initiated withdrawal from a course at any time prior to completion of the drop deadline (60% of the course). Does not affect GPA. Can be initiated by the instructor if the student, because of extenuating circumstances, is unable to initiate the process (e.g., catastrophic illness or injury, job transfer to another state).

WP: Student initiated withdrawal from a course after the drop deadline (60%) of the course; student has a passing grade at time of drop, as determined by the instructor. Does not affect GPA. Can be initiated by the instructor if the student, because of extenuating circumstances, is unable to initiate the process (e.g., catastrophic illness or injury, job transfer to another state).

WF: Student initiated withdrawal from a course after the drop deadline (60%) of the course; student has a failing grade at time of drop, as determined by the instructor. Calculates in GPA as an "F."

AF: Instructor or administrator initiated withdrawal at any time for reasons other than poor grade performance—e.g., failure to meet attendance requirements, as published in the instructor's syllabus, violation of the Student Code of Conduct, disruptive behavior, etc. The grade may also be issued if a student registered in a clinic, practicum, internship or lab is deemed unsafe or performing in an unsatisfactory manner as determined by an evaluation by a faculty member/agency supervisor in accordance with department criteria and procedure. Calculated in GPA as an "F."

AU: A course taken as an audit does not earn credit and cannot be used to meet graduation requirements. Admission by permission of the instructor. **Not all courses can be taken for audit.**

I: Incomplete grade. Indicates that a student has not completed a major course assignment due to extraordinary circumstances. It is not used to give an extension of time for a student delinquent in meeting course responsibilities. The "I" grade is not calculated into the GPA. However, all work must be completed by the end of the third week of the subsequent semester or the grade defaults to an F. *See full Incomplete Grade Policy elsewhere in the college catalogue.*

P: Pass (not calculated into GPA)

PP: Provisional Pass; warning (not calculated into GPA)

NP: No Pass; unsatisfactory (not calculated into GPA)

CS: Continuing Study. Allows student to re-register for developmental course if competencies have not been met by end of the course. Intended for students

who have demonstrated progress and a commitment to succeeding in the course but who need more time to achieve competencies. Does not affect GPA.

Failed or Repeated Courses

For purposes of calculating the cumulative GPA (CGPA), when a student repeats a course at the same CCSNH institution the grade achieved in the most recent course will be the grade used in the CGPA calculation. All previous grades will remain on the transcript but not used in the calculation. Only those repeated courses completed at the student's college of matriculation will be used in the calculation of the CGPA; repeated courses completed at an institution outside of the CCSNH system and transferred into the student's college of matriculation will not be used in the calculation of the CGPA.

Third and subsequent attempts to repeat a course will require the approval of the Vice President of Academic Affairs. A failed course may not be passed by Credit by Exam. Financial aid may be impacted by repeating courses.

Eligibility for Extracurricular Activities

To participate in intercollegiate athletics or hold office, students must be "in good standing" at the College. A student officer who is placed on probation may continue to hold that office for the current semester. If such probation continues after the semester, the office must be vacated and an election held to fill the vacancy.

Transcripts

Transcripts of a student's College record will be furnished upon written request. The first two copies are free. A fee of \$3.00 will be charged for each additional copy. A faxed copy will cost an additional \$5.00 per transcript. Copies sent to other Colleges within the Community College System are free.

Transfer of Credit

Students may be admitted to programs with advanced standing if they have taken appropriate college courses at another accredited institution and earned a grade of "C" or higher. Courses successfully completed prior to admission will be considered for transfer.

It is the responsibility of students to furnish the following: (1) official transcript and (2) copy of the course description. A Department Chair, Program Coordinator or designee will evaluate each program specific course and grade. The Vice President of Academic Affairs determines if the credits should transfer. Students

will receive a copy of the list of courses accepted for transfer.

Current students seeking to take a course at another college and wishing to apply that course to their degree must have prior written approval from the Vice President of Academic Affairs and their Department Chair or Program Coordinator. Without this written approval prior to enrollment in the course, the College does not guarantee acceptance of this course as transfer credit. Grades of courses transferred are not included in the GPA or CGPA. Credits earned at another institution will be added to the total credits accumulated for graduation.

NH Transfer.org

To explore other transfer opportunities within the state of New Hampshire, including the Connections Program, please utilize the website www.nhtransfer.org.

College Board Advanced Placement Tests

The College recognizes the College Board Advanced Placement Examination Program as a means of evaluating student eligibility for advanced placement and credit transfer. Matriculated students who have participated in the AP Program and who have been admitted to the College should have official AP grade reports forwarded directly to the College Admissions Office. These grade reports should come from the College Board, Advanced Placement Examinations, CN 6671, Princeton, NJ 08541-6671; telephone (609) 771-7300. Upon receipt of students' AP reports, the Admissions Office will access the grade and recommend to the Vice President of Academic Affairs credits to be transferred based on the College's policies relating to the AP scores for the various exam subjects. The minimum score to receive credit varies from 3 to 5. No credit is awarded on any AP exam score of less than 3. The policy stating the specific exam scores for each subject area may be reviewed at either the Admissions or Registrar's Office.

Credit by Examination (CBE)

Credit by examination may be earned by matriculated students who, by study, training, or experience outside the College, have acquired skill or knowledge equivalent to that acquired by students enrolled in a course at the College. Such skill, knowledge, or experience shall be in the area of the course concerned and determined to be relevant by the Vice President of Academic Affairs or other authorized personnel. Students may challenge a course by requesting and completing an examination or evaluation that covers

the instructional material of the course. If successful, the appropriate credits earned are applied to the students' programs. Students requesting a CBE shall pay a fee of \$25 per credit to the cashier. This fee is non-refundable. Credit will not be given for grades below C. Students receiving a grade below C are ineligible for another CBE in that course. Students may not CBE a course in which they are enrolled, if they have earned a grade within the CCSNH, or if they have been administratively withdrawn, or if they dropped the course after the two-week drop/add period.

Candidates wishing to review the material for which they shall be held responsible in a CBE may apply to the chairperson of the department concerned for a list of areas of the subject matter covered upon which the exam will be based. The CBE will cover the content of the course being challenged. Students must apply for and take the CBE by the end of the Add/Drop period.

Academic Policy Regarding CLEP Exams

Students may choose to earn credits by taking a nationally standardized exam known as CLEP. Nashua Community College is an approved testing site for CLEP. The college awards credits for courses in the areas of Composition and Literature, Foreign Languages, Social Sciences, Science and Mathematics. A complete list of the CLEP exams accepted for credit by NCC is available in the Admissions Office and the Academic Advising Center.

Passing scores for CLEP are 50 and above. Successful completion of a CLEP exam is treated as a transfer credit. Students may not receive CLEP credits for a course they have attempted and failed. Matriculated students will need to request that a copy of their scores be sent to NCC for review. This request is made to the **College Board** and can be done during or after the exam.

The cost of each exam is \$70.00 plus a \$15.00 administrative fee. For further information and to schedule an appointment, contact the Academic Advising Center at (603) 882-6923, ext. 1450.

Experiential Learning

Credit for prior learning offers students the opportunity to demonstrate the knowledge they have gained through life experiences and apply this knowledge towards credit in a degree/diploma/certificate program. To prepare for this option, students will develop a portfolio to be assessed by appropriate college personnel. A student must be matriculated at one the CCSNH colleges to be eligible to apply for experiential credit. Not all programs provide the experiential credit option; students should consult with their respective colleges for eligible programs and the process used

for application.

Students may be awarded a maximum of 24 credits for experiential learning.

Students will be assessed a fee based on 50% of the current tuition rate on the total credits awarded (e.g. for 12 credits awarded: $0.50 \times \text{current tuition rate} \times 12 \text{ credits}$).

Audit

Students may enroll on an audit basis after consultation with the course instructor and Vice President of Academic Affairs at which time responsibilities are established. Auditing students are subject to regular policies and tuition, but audit courses are non-graded and carry no credit towards graduation.

Running Start Program

The Running Start Program allows high school students, in participating high schools, to enroll in NCC courses taught at their own high school by their high school teachers approved by the College.

This dual-enrollment program provides students with both high school and college credit for these courses. College credits may be used towards completion of a degree, diploma, or certificate at this College or credits may be transferred to other colleges and universities throughout the country. (Please note that the determination of transfer credit is at the discretion of the receiving institution.)

Running Start Program students realize significant advantages: college credit awarded in high school, reduced tuition costs (\$100 per course registration), reduced time to complete higher education requirements, and increased confidence in high school to college transition.

Scholastic Honors

At the end of each semester, the College publishes an Honors List of students who have attained Vice President's List or President's List, based on grade point averages for that semester. A student must be carrying at least 12 credit hours in a semester to be considered for honors.

Academic Standards

Students falling below the following standards will be designated as not meeting satisfactory progress. Failure to meet satisfactory progress will result in either Academic Probation or Academic Suspension.

Academic Probation Definition: A warning which indicates the student may not be on track to graduate because of poor academic performance. The student

may remain in the program, but his/her academic progress will be monitored.

Students not meeting the criteria below will be placed on Academic Probation:

1 – 13 Credits Accumulated:	below 1.50 CGPA
14 – 27 Credits Accumulated:	below 1.70 CGPA
28 – 40 Credits Accumulated:	below 1.80 CGPA
41+ Credits Accumulated:	below 2.00 CGPA

Academic Suspension Definition: Suspension may be from the program or the institution and is usually for one semester. Suspension from the program means that a student may continue to take courses outside of the program as a non-matriculated student. The suspended student may reapply for admission to the program after one semester. Prior to reapplying for admission, the suspended student must show evidence of having successfully completed, with a "C" or better, at least two 3-credit courses as a non-matriculated student.

Suspension from the College prohibits a student from taking classes during the period of suspension.

Students not meeting the criteria below will be put on Academic Suspension:

1 – 13 Credits Accumulated:	below 0.50 CGPA
14 – 27 Credits Accumulated:	below 1.10 CGPA
28 – 40 Credits Accumulated:	below 1.25 CGPA
41+ Credits Accumulated:	below 1.50 CGPA

OR

A student who does not meet satisfactory progress for Academic Probation for three consecutive semesters will be placed on Academic Suspension.

Financial aid may be in jeopardy if a student fails to achieve satisfactory academic progress as defined above.

Withdrawal and Readmission

Students who find it necessary to withdraw from the College should first notify their faculty advisor and then obtain a withdrawal form from the Registrar's Office. The student will circulate the withdrawal form to the indicated College offices and return to the Registrar. Failure to officially withdraw or return College property may result in a student's records being noted: "Withdrawn-Not-in-Good-Standing."

An official withdrawal from the College after the last date to drop a course shall be considered effective the first day of the following semester for academic reasons, and the student will be held academically accountable for the entire semester. A final grade

will be issued as though the student had completed the entire semester.

Students who have officially withdrawn from the College may apply for readmission.

Graduation Requirements

To graduate, students must complete all courses and attain a cumulative grade point average (CGPA) of at least 2.0. Specific requirements for all degree, professional certificate and certificate programs are available from the Registrar. Credits earned in developmental courses are not counted toward graduation requirements. Matriculated students must earn a minimum number of academic credits at the College as follows:

1. Degree students must earn 16 credits, of which 8 credits must be in advanced courses in the student's major.
2. Professional certificate students must earn 9 credits or 25% of the credits, whichever is higher.
3. Certificate students must earn 6 credits or 25% of the credits, whichever is higher.

Academic Honors

A full-time, matriculated student in good standing with a grade point average of at least 3.7 is entitled to honors on the President's List. A full-time student earning a grade point average of 3.0 to 3.69 is entitled to honors on the Vice President's List.

Public Disclosure

According to the most recent figures on the National Center for Education Statistics website, the overall graduation rate for full-time, first-time undergraduates was 27%. It is important to note that many students do not have the goal of graduating from the College. Students often attend to complete a semester or two before transferring, to explore a potential career area, to resolve academic deficiencies before returning to their original college, or to take courses for self-improvement.

The College is proud of the report issued by the System stating that the percentage of students who began classes in Fall 2007 and continued into Spring 2008 was 72.5%, the second highest rate in the System.

STUDENT SERVICES

Fully aware that the value of the college experience for each student is greatly affected by personal problems, needs and interests, the administration and faculty of the College regard student services

as an integral part of the total educational program. A conscientious effort is made to know students as individuals and to serve them accordingly.

The Student Handbook describes specifically the student related policies and programs at the College. Students are expected to be informed about the policies published in this catalog and in the Student Handbook as well as subsequent policies and information that may be published or posted during the school year. Policies of the College may, and often do, change since the College must maintain flexibility to serve its students. It is the responsibility of the student to read and understand the College policies.

Housing

For students who need help locating housing, assistance is available through the Student Services Office. There are no residence halls at the College.

Student Services maintains a virtual housing information site. Please contact Student Services at (603) 882-6923 x1461 for further information.

Counseling Service

Counselors are available to assist students at the College to achieve their maximum potential. Services are available for academic, vocational and counseling concerns.

Activities and Organizations

Students at Nashua Community College have been most enthusiastic in organizing their own activities guided by faculty advisors. Student activities are similar to those found at other commuter colleges and are based upon student interests.

Bookstore

The Bookstore serves as a center for the purchase of textbooks and equipment necessary for study at the College. The store is a contract service with Follett Bookstore. The hours of operation are posted on the door. Questions regarding the Bookstore services should be directed to the Student Services Office. The bookstore number is (603) 880-7083.

Food Services

The College cafeteria offers a variety of hot and cold snack and lunch options. Hours of operation are posted in the Wellness Center. Additionally, vending machines are available for beverages and snacks.

Insurance

A specially designed optional student accident and medical insurance plan, with family coverage for married students, is offered at a reasonable cost.

Graduate Placement

The College is sensitive to the career counseling needs of students and provides a variety of services including computerized career assessment, personal counseling, and interest inventories. Students are assisted in their search for employment through notification of employment opportunities, access to skill building seminars such as resume writing and job search strategies, as well as opportunities for on campus interviews with business representatives. Historically, approximately 90% of the graduates are employed or continue their education within 90 days of graduation. Information on the Virtual Job Fair can be obtained at the Student Services Office.

ACADEMIC SUPPORT CENTER

The Academic Support Center provides educational support and resources to the College community. Our mission is to offer a friendly environment as we assist you in your college career. These supports include:

- **The Tutoring Center**—Tutoring is available to all students, free of charge. Tutoring is led by faculty members and peer tutors. One-on-one, group or drop-in tutoring takes place on campus and focuses on the needs of the student.
- **Disability Services**—Students who have documented disabilities may speak with the Disability Coordinator to set up reasonable accommodation plans. Many additional resources are available.
- **Computer Lab**—Students may use our computers to work on their assignments.
- **PLATO Online Tutorial**—Plato is an online, self-paced tutorial. Subjects range from the basics of Math and English to Sciences and Social Sciences.
- **Math Center**—Staffed by math faculty, the Math Center offers drop-in assistance to all students.
- **Workshops**—Workshops on a variety of subjects are held during the course of each semester.

THE WRITING CENTER

The Writing Center provides one-to-one tutoring and other writing tools and resources for students of all skill levels. Tutoring may involve helping students with paper topics, developing ideas, focusing arguments and theses, paper organization, assignments,

resumes, and college application essays. Students are encouraged to make an appointment with a writing tutor.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

The ESOL Department offers support for non-native speakers of English including language evaluations, advising, tutoring, and social activities - such as International Cafe. There are a variety of multi-level classes to choose from to improve English for social and academic purposes. Courses to choose from include: *conversation, pronunciation, grammar, vocabulary, and writing*. Contact Professor Elizabeth Berry at extension 1678.

DEPARTMENT OF FRESHMAN STUDIES

Freshman Seminar (LEXN101) is a one-credit course required for all matriculated students in a degree program. It is designed to introduce students to the college experience, to connect students to college resources, and to offer new strategies for improved skills, such as listening, note-taking, studying techniques, and time management.

ACADEMIC ADVISING CENTER

The Academic Advising Center, located in Room 105, is designed to help students with registration, course and program changes, transfer options, and other related college practices. Center advisors serve day, evening and weekend students. Hours and contact information are posted outside Room 105. Students can find their assigned advisor on the Student Information System.

WALTER R. PETERSON LIBRARY & MEDIA CENTER

The Walter R. Peterson Library and Media Center was dedicated in December 2000 in honor of the former Governor of New Hampshire. The 18,000 square foot facility provides traditional library services and a wide range of new media and information technologies. The library houses over 15,000 volumes, 2,000 videos, and 260 journals.

The Walter R. Peterson Library and Media Center contains a large reading room, three conference rooms, a serials room, an electronic classroom, and a faculty/staff instructional development room as well as work rooms and offices.

EVENING AND WEEKEND DIVISION

The Evening and Weekend Division reflects Nashua Community College's mission of valuing life-long learning, and striving to accommodate the needs of **all** students. By serving students bound by time and responsibility constraints, the Evening and Weekend Division can meet the needs of more and more students in the community.

Courses offered in the Evening and Weekend Division are identical in quality and content to courses offered in the Day Division and are taught by highly qualified and dedicated academics and professionals, many of whom teach in the Day division as well.

Evening and Weekend Division courses are scheduled in various formats to provide students with flexible options and the opportunity to complete their programs

of study by attending only on evenings and weekends. Course schedules include:

- Web courses;
- Hybrid courses that combine classroom instruction with online instruction;
- Traditional 16-week courses available on week-night evenings and weekends;
- 8-week courses and intensive courses available on evenings and weekends.
- Courses at the College's Academic Center at Crotched Mountain in Greenfield, NH.

Evening and Weekend course offerings are published in the Fall, Spring and Summer course brochures and may also be accessed online at the College's website, or in person at the Evening and Weekend Division offices at the College.



GENERAL EDUCATION REQUIREMENTS

MISSION OF GENERAL EDUCATION

Nashua Community College is dedicated to the principle that the most comprehensive education possible be offered to its students. Central to this philosophy is the belief that all students granted the associate degree should be required to study outside of their major fields to broaden their perspective of the world around them. Consistent with this philosophy, it is our intent to engage students in the various disciplines in such a way that graduates will desire to learn throughout their lives.

General Education at NCC is directly related to the objectives of the College's Mission Statement. As noted in the statement, "... each individual should be given a continuing opportunity for the development of skills and knowledge and an increasing awareness of his or her role in society." In addition, "The College believes it is important that the individual establish value as a person – in the eyes of that individual and in the eyes of the community. The value increases through an educational program geared to the continuous development of the human potential."

PHILOSOPHY OF GENERAL EDUCATION

General Education is characterized by a broad core of humanistic knowledge that develops the educated person. It demands the ability to read critically, write comprehensively, reason analytically, and utilize mathematical and scientific competencies at a college level.

General Education creates knowledge of self and a general understanding of the human condition, promotes respect for differences among people, imparts a sense of shared and unique cultural heritage, questions our capacity to function as responsible and ethical members of a complex society, and fosters a sense of intellectual curiosity.

Having only a limited amount of time for General Education in an associate degree granting institution, the College thus begins the process of helping a student become "an educated person."

GOALS OF THE GENERAL EDUCATION CORE

The College takes seriously its obligation to graduate individuals who will understand their responsibilities as citizens, as family members, as friends, and as employees. Additionally, the College strives to instill a firm belief in its graduates for the need for continuous development and lifelong learning.

Through its General Education core requirements, the

College expects its graduates to have developed:

- English language skills so they can communicate clearly, both orally and in writing, and can critically evaluate what they hear and read
- The ability to use technology to access information
- An appreciation and understanding of the scientific method, and the relationship between the sciences and other human activities
- An appreciation and understanding of the methods of inquiry used in the social and behavioral sciences, and of the ways people act and have acted in response to the conditions in their societies
- An appreciation for the logic of mathematical reasoning and the capacity to perform mathematical skills
- Aesthetic sensitivity and skills as well as an ability to make informed value judgments
- An appreciation and understanding of economics, history and government
- An emphasis on lifelong learning

General Education Graduation Requirements

Group A: English – 7 credits minimum

In this group, students demonstrate their ability to communicate effectively through the written and oral format. In literature courses, students demonstrate the ability to interpret and analyze selected works. The course ENGN101 is required for all students. Any one of the other courses listed below will satisfy the requirements for this group.

		Credits
ENGN101	College Composition	4
CMNN101	Introduction to	
	Mass Communications	3
CMNN102	Principles of Communications	3
CMNN110	Introduction to Journalism	3
CMNN201	News Writing	3
ENGN102	College Composition II	3
ENGN103	Professional Writing and Presentations	3
ENGN105	Introduction to Literature	3
ENGN109	Oral Communication	3
ENGN122	Technical Writing	3
ENGN206	Writing Short Stories	3
ENGN220	Contemporary Dramatic Literature	3
ENGN230	British Literature I	3
ENGN231	British Literature II	3
ENGN235	Poetry Workshop	3
ENGN240	American Literature I	3
ENGN241	American Literature II	3
RDGN107	Critical Reading	3

Group B: Science – 3 credits minimum

Through study in this group, students will investigate the laws, scientific methods of inquiry, and theories used to explain the universe, life forms within the universe, and natural phenomena.

		Credits
SCIN101	Biology I	4
SCIN102	Biology II	4
SCIN111	Basic Human Anatomy and Physiology	4
SCIN115	Astronomy	4
SCIN116	Meteorology	4
SCIN117	Environmental Science	4
SCIN120	Nutrition	3
SCIN130	Physics I	4
SCIN131	Physics II	4
SCIN134	Stereo Physics	4
SCIN150	Physical Science I	4
SCIN151	Physical Science II	4
SCIN201	Anatomy and Physiology I	4
SCIN202	Anatomy and Physiology II	4
SCIN205	Basic Pathophysiology	3
SCIN215	Microbiology	4
SCIN231	Calculus-Based Physics I	4
SCIN232	Calculus-Based Physics II	4

Group C: Social Sciences (Behavioral) – 3 credits minimum

In this group, students learn about the interrelationship of individuals with the larger society in which they live. Emphasis is placed on an understanding of the forces within society that help shape the individual.

Credits

PSYN101	Introduction to Psychology	3
PSYN130	Human Relations in Organizations	3
PSYN201	Human Growth and Development	3
PSYN202	Personality Psychology	3
PSYN205	Child Psychology	3
PSYN207	Social Psychology	3
PSYN210	Abnormal Psychology	3
PSYN211	Issues in the Psychology of	
	Grief and Loss	3
PSYN215	Cognitive Psychology	3
PSYN217	Psychology of Learning and Memory	3
PSYN220	Research Methods	3
PSYN240	Alcohol and Drugs	3
SOCN101	Introduction to Sociology	3
SOCN108	Introduction to Archaeology	3
SOCN110	Cultural Anthropology	3
SOCN201	Contemporary Social Problems	3
SOCN205	The Changing Family	3

Group D: Social Sciences (Non-Behavioral) – 3 credits minimum

Study in this group will help students understand and appreciate divergent views with respect to local, national and international issues. In addition, students will appreciate the nature of cultural and national identity within a growing multicultural setting.

Credits

ECON201	Microeconomics	3
ECON202	Macroeconomics	3
GEON101	Introduction to Geography	3
HISN101	Western Civilization from Ancient Times	
	through the 17th Century	3
HISN102	Western Civilization since the French	
	Revolution	3
HISN140	U.S. History from the Colonial Era	
	to Reconstruction	3
HISN141	U.S. History Since Reconstruction	3
HISN160	History of Aviation	3
HISN164	History of Technology	3
HISN230	China – A Survey	3
HISN240	The American Revolution	3
HISN241	American Constitutional History	3
HISN242	Civil War and Reconstruction	3
HISN245	The Coming of World War II	3
HISN246	Modern American	3
HISN250	American Economic History	3
HISN251	United States and Vietnam	3
HISN252	Contemporary American Foreign Policy	3
HISN260	History of Multiculturalism	3
HISN285	Essential Skills of the Historian:	
	A Capstone Experience	3
POLN101	Introduction to Political Science	3
POLN102	American Government and Politics	3

Group E: Mathematics – 3 credits minimum

Through study in this group, students will learn to appreciate logical reasoning, abstraction of ideas, and the analytical approach to problem solving.

		Credits
MTHN106	Elementary Statistics	4
MTHN108	Contemporary Mathematics	3
MTHN110	Algebra and Trigonometry	4
MTHN115	Finite Mathematics	4
MTHN120	Precalculus	4
MTHN170	Discrete Mathematics	3
MTHN210	Calculus I	4
MTHN211	Calculus II	4
MTHN212	Calculus III	4
MTHN215	Linear Algebra	4
MTHN216	Math Language, Logic, and Proof	4
MTHN217	Probability and Statistics	4
MTHN220	Elementary Differential Equations	4

Group F: The Humanities – 3 credits minimum

Students will explore art, music, and philosophy. Students will be exposed to creative expressions of the imagination and the human intellect.

		Credits
FARN101	Introduction to Drawing	3
FARN111	Photography and Digital Imaging I	3
FARN112	Photography and Digital Imaging II	3
FARN120	Graphic Design Theory	3
FARN200	Drawing II: Developing a Personal Approach to Drawing	3
HUMN101	Introduction to the Humanities	3
HUMN102	Art Appreciation	3
HUMN103	Music Appreciation	3
HUMN104	Jazz and Its Roots	3
HUMN107	World Religion	3
HUMN109	Introduction to Philosophy	3
HUMN110	Critical Thinking Skills	3
HUMN120	Introduction to Theatre	3
HUMN130	Music Composition	3
HUMN140	American Cinema	3
HUMN220	Classical Myths in Western Civilization	3
HUMN230	Ethics in the Workplace	3

Group G: World Languages – 3 credits minimum

Students will explore world languages. Students will be exposed to creative expressions of the imagination and the human intellect.

	Credits
LNGN101 French I	3
LNGN102 French II	3
LNGN105 Spanish I	3
LNGN106 Spanish II	3
LNGN115 German II	3
LNGN205 Spanish III	3
LNGN109 Italian I	3
LNGN110 Italian II	3
LNGN113 Basic German	6
LNGN114 German I	3
LNGN120 Sign Language I	3
LNGN121 Sign Language II	3
LNGN220 Sign Language III	3
LNGN221 Sign Language IV	3

SPECIAL NOTES:

While a minimum of 25 credits must be earned to meet the General Education Core Requirements, it is important to note that courses must be completed in Groups A – G as noted above.

With approval of the Vice President of Academic Affairs, other courses may be used to satisfy General Education Core Requirements. The most obvious example in this regard is the transfer of General Education courses from other institutions of higher education.



ASSOCIATE IN SCIENCE IN AUTOMOTIVE TECHNOLOGY

(Day Program)

Automotive Technology is a two-year Associate Degree program that is designed to combine automotive technical training and academic course work to provide the student with the skills and knowledge needed for an exciting and rewarding career in the automotive service industry. While enrolled in the program, students will study the theory of operation of the automotive systems including electrical, brakes, steering and suspension, automatic and manual transmissions, heating and cooling, engine performance, and engine repair. Engine repair is the capstone course for this degree program.

Each course includes an automotive lab that allows the students to apply and build their knowledge and skills by performing work on vehicles with “real life” problems in a “real shop” atmosphere. This high tech training combined with the academic course work and “hands-on” experience not only prepares the student to be employed in the automotive field, but also prepares the student to take the ASE (Automotive Service Excellence) technician certification exams.

Graduates of the program will satisfy an industry need for well educated and technically trained people.

The Automotive Program is certified by the National Automotive Technicians Education Foundation (NATEF).

- Highly trained ASE Master Certified Instructors
- Hands-on training on “real life” vehicles with “real life” problems
- Modern facility with state of the art equipment

In addition to the general admissions requirements, the Automotive Technology applicants should be aware of the following criteria:

1. A minimum of one year of high school Algebra I is recommended.
2. Basic skills in written English are required.
3. A basic automotive tool kit and roll cabinet are **required**. A copy of the required tool list is available on the college web site. The major tool manufacturers offer substantial discounts to enrolled students. The college hosts a “Tool Day” at the college in late August for students needing tools or tool kits. Depending on the tool manufacturer, approximate tool kit cost is between \$1,600.00 and \$3,500.00
4. Students are expected to possess a good work ethic and a strong desire to learn.
5. A clean, valid drivers license is required for employment in the automotive service industry (see Program Coordinator for details).

ASSOCIATE IN SCIENCE IN AUTOMOTIVE TECHNOLOGY FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
AUTN106	Internal Combustion Engine	2	3	3
AUTN113	Automotive Electricity and Wiring	2	3	3
AUTN121	Automotive Service and Maintenance	2	4	4
MTHN099*	Algebra I	3	0	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

AUTN114	Automotive Suspension and Steering	2	4	4
AUTN115	Advanced Automotive Electricity/Electronics	2	3	3
AUTN122	Automotive Brake Systems	2	4	4
General Education: Group E Elective		4	0	4
BCPN101	Introduction to Computers	2	2	3
General Education: Group A Elective		3	0	3
				21

SECOND YEAR - FALL SEMESTER

AUTN210	Engine Performance I	2	3	3
AUTN226	Automotive Power Trains	2	4	4
AUTN227	Automatic Transmissions	2	4	4
SCIN150	Physical Science I	3	2	4
General Education: Group D Elective		3	0	3
				18

SPRING SEMESTER

AUTN215	Engine Performance II	2	3	3
AUTN221	Automotive Heating and Air Conditioning	2	3	3
AUTN228	Automotive Engine Repair: A Capstone Course	2	4	3
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				15

Total 69 credits

**This course may be waived by Accuplacer test score or by Math Department placement exam.*

Upon the completion of the degree in **Automotive Technology**, graduates will be able to:

1. Evaluate, diagnose, and repair various automotive systems using NATEF guidelines.
2. Use technology and basic scientific principles for research and problem solving.
3. Employ effective written and oral communication skills.
4. Employ effective technical writing skills.
5. Utilize mathematical logic and analysis for problem solving.
6. Understand the connections between individuals and society.
7. Have the ability to achieve ASE Master Certification.
8. Perform reading skills at a college level.
9. Demonstrate effective interpersonal skills.

ASSOCIATE IN SCIENCE IN AVIATION TECHNOLOGY

(Airframe and Powerplant)

FAA Certificate Number NSUT025K

(Day Program)

The Associate in Science Degree in Aviation Technology prepares men and women for professional careers in aviation maintenance. Graduates may seek employment with airlines, fixed base operators, or aircraft manufacturers.

Nashua Community College is an FAA approved training facility. Students who complete this program will be prepared to apply for the FAA oral, written, and practical exams for the Airframe and Powerplant Technician License.

The Aviation Technology program places major emphasis on the study of actual aircraft, structures, and powerplants and related systems. The 21-month curriculum includes one summer session and covers a wide variety of subjects concerned with airplanes: reciprocating engines, turbines, fuel systems, propellers, ignition, electrical systems, and hydraulic systems. A great deal of reading is required, as well as the ability to interpret FAA regulations and manufacturers' technical specifications.

In addition to the general admission requirements, Aviation Technology applicants should be aware of the following criteria:

1. Excellent English skills in reading, writing, speaking and understanding are required.
2. High school courses such as physics, electronics, and computer programming are recommended.
3. Students will be required to purchase approximately \$1,300 of tools upon entrance to the program.

Upon completion of the degree in **Aviation Technology**, graduates will be able to:

1. Perform maintenance and inspections on aircraft using FAA and manufacturers' instructions.
2. Perform maintenance on aircraft structures using FAA and manufacturers' instructions.
3. Perform maintenance on aircraft powerplants using FAA and manufacturers' instructions.
4. Inspect and repair aircraft composite structures using FAA and manufacturers' instructions.
5. Communicate effectively both orally and in writing.
6. Demonstrate legal and moral judgment when supervising others.
7. Demonstrate positive work ethics, integrity, and knowledge of work skills.
8. Exercise a desire to continue professional development and lifelong learning.
9. Successfully pass the FAA airframe and powerplant certification examination.
10. Find employment directly related to the field of study.

ASSOCIATE IN SCIENCE IN AVIATION TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
AVTN101	Maintenance Forms and Records	2	3	3
AVTN102	Airframe Structures I	2	6	4
AVTN108	Aviation Drafting and Blueprint Reading	3	0	3
BCPN101	Introduction to Computers	2	2	3
LEXN101	Freshman Seminar	1	0	1
General Education: Group E Elective		4	0	4
		22		

SPRING SEMESTER

AVTN106	Aviation Electronics	2	2	3
AVTN104	Materials and Processes	2	3	3
AVTN103	Airframe Structures II	3	6	5
PSYN130	Human Relations	3	0	3
General Education: Group A Elective		3	0	3
		17		

SUMMER SEMESTER (9 WEEKS)

AVTN105	Aircraft Systems	3	3	4
AVTN202	Airframe Electrical Systems	2	4	3
AVTN203	Hydraulics and Pneumatics	3	5	5
		12		

SECOND YEAR - FALL SEMESTER

AVTN107	Digital Logic	2	2	3
AVTN204	Assembly and Rigging	2	6	4
AVTN206	Reciprocating Engines I*	3	6	5
AVTN208	Engine Systems*	2	3	3
AVTN209	Aircraft Propellers*	2	3	3
SCIN150	Physical Science I	3	2	4
		22		

SPRING SEMESTER

AVTN207	Reciprocating Engines II*	3	6	5
AVTN210	Turbine Engines and Systems*	3	3	4
AVTN211	Carburetion and Fuel Systems*	2	3	3
AVTN212	Engine Electrical Systems*	2	6	4
General Education: Group D Elective		3	0	3
General Education: Group F or G Elective		3	0	3
		22		

Total 95 credits

* A student must have completed all FAA General Section courses or possess an FAA Airframe Certificate to be eligible to take these courses.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION

CONCENTRATION: ACCOUNTING

(Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a specialization in Accounting offers a mix of both applied and theoretical courses. Specifically, the Accounting specialization program is designed to provide students with the accounting knowledge and skills required to confidently pursue a career in the accounting field.

Students enrolled in this program will participate in a comprehensive learning experience through the challenges of increasingly complex levels of accounting study. In addition, students will have the opportunity to further enhance and master their accounting skills by selecting an accounting elective or by gaining real world experience through participation in an accounting internship program. To ensure that students are exposed to, and familiar with, automated accounting software used in business, Accounting Information Systems is the capstone course for this degree program. Upon graduation, students will be well prepared for successful

employment in this dynamic profession. For the student planning to continue their education beyond the Associate degree, the Accounting specialization program is also designed to provide transferability to a college or university that offers a Bachelor's degree in Accounting, Accounting/Finance or Business Administration with a specialization in Accounting.

Upon the completion of the degree in **Business Administration with a concentration in Accounting**, graduates will be able to:

1. Describe the conceptual framework of accounting.
2. Identify and differentiate between alternative forms of business organizations, including how to journalize and report business transactions unique to each.
3. Demonstrate an understanding of accounting terminology, theory, and practice through the applications of Generally Accepted Accounting Principles and other authoritative technical bulletins, practice aids, and announcements.
4. Prepare, understand, analyze, and communicate all Financial Statements including disclosure notes, optional operating summaries and management discussion items required for complete, accurate, and timely reporting to both external and internal users.
5. Identify and account for specific regulations that differentiate FASB Financial Statement Reporting from IRS Tax Reporting.
6. Differentiate between Financial Accounting and Managerial Accounting.
7. Create, analyze, monitor, and control both static and dynamic budgets.
8. Explain the uses of Cost Accounting, its relationship to Financial Accounting, the concept of Standard Costs including variance analysis, and the types of cost systems used by business.
9. Apply fundamental accounting principles in a computerized environment using automated accounting software.
10. Demonstrate effective writing and communication skills through research of current accounting topics, and incorporate basic math skills to interpret and analyze both quantitative and qualitative data found in Financial Statements and other reporting summaries.
11. Demonstrate the ability to reason soundly and think critically as evidenced through successful completion of increasingly complex levels of accounting study and all other degree requirements.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION: ACCOUNTING

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
BUSN101	Introduction to Business	3	0	3
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

ACCN102	Financial Accounting II	4	0	4
BUSN110	Principles of Management	3	0	3
BCPN208	Spreadsheet: EXCEL	2	2	3
General Education: Group A Elective		3	0	3
General Education: Group E Elective*		4	0	4
				17

SECOND YEAR - FALL SEMESTER

ECON201	Microeconomics	3	0	3
ACCN201	Intermediate Accounting	4	0	4
ACCN206	Cost Accounting	4	0	4
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				17

SPRING SEMESTER

BUSN240	Business Law	3	0	3
ACCN202	Intermediate Accounting II	4	0	4
ACCN214	Accounting Information Systems	3	0	3
ACCN290	Internship	1	8	3
OR				
XXXX	Open Elective**	3	0	3
General Education: Group B Elective		4	0	4
				17

Total 66 credits

* MTHN 106, 110 or 115 is recommended.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION

CONCENTRATION: MANAGEMENT

(Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a specialization in Management offers a mix of applied and theoretical courses. The objective of the program is to provide the knowledge students will need for successful business careers.

The program has been designed to expose the student to broad business applications including; accounting, marketing, management, and comprehensive computer courses which give the management student valuable skills in this growing field.

Business Management graduates are prepared for immediate career entry into the challenging fields of:

- Wholesaling/distribution
- Retailing
- Sales
- Banking
- Insurance
- Management-trainee positions in business and industry
- Manufacturing

For the student looking to pursue an education beyond the Associate degree, this specialization is designed for easy transfer to Bachelor degree programs.

Upon the completion of the degree in **Business Administration with a concentration in Management**, graduates will be able to:

1. Use management skills and practices needed in today's competitive business environment to solve problems.
2. Understand the complexities of managing people and information to meet organizational objectives.
3. Use knowledge of labor law and federal and state rules and policies to effectively manage the workforce.
4. Utilize management theories in developing programs to motivate staff.
5. Apply financial management skills to meet organizational objectives, compete effectively, and organize data efficiently.
6. Use software systems along with management information systems to provide reports to senior level staff and to communicate to customers and staff effectively.
7. Develop clear and meaningful presentations and reports to communicate short and long-range objectives.
8. Use research and analysis skills to understand business problems and to develop clear problem-solving strategies.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION: MANAGEMENT

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
BUSN101	Introduction to Business	3	0	3
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

ACCN102	Financial Accounting II	4	0	4
BUSN110	Principles of Management	3	0	3
General Education: Group B Elective		4	0	4
General Education: Group C Elective		3	0	3
General Education: Group E Elective*		4	0	4
				18

SECOND YEAR - FALL SEMESTER

ECON201	Microeconomics	3	0	3
BUSN230	Introduction to MIS	3	0	3
ACCN210	Managerial Accounting	3	0	3
BCPN119	Software Applications	2	2	3
ENGN109	Oral Communication	3	0	3
General Education: Group F or G Elective		3	0	3
				18

SPRING SEMESTER

ECON202	Macroeconomics	3	0	3
BUSN240	Business Law	3	0	3
BUSN204	Small Business Management	3	0	3
BUSN201	Human Resources Management	3	0	3
BUSN290	Internship	1	8	3
OR				
XXXX	Open Elective**	3	0	3
				15

Total 66 credits

* MTHN106 or 110 is recommended

** Consult with advisor

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION:

CONCENTRATION: MARKETING (Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a specialization in Marketing offers a mix of applied and theoretical courses. The objective of the program is to provide the knowledge students will need for successful marketing careers.

The Marketing courses prepare students for entry-level jobs in marketing, for future advancement into marketing management and for entrepreneurial opportunities. The curriculum builds a broad knowledge base in business that includes the latest ideas in marketing thought and practice:

- Marketing research, analysis and application
- Marketing strategies
- Integrated Marketing Communications

Most important, marketing students learn critical people management skills to build solid relationships with their clients. Elective marketing courses also permit individual students to develop a program for their specific interests.

For students looking to pursue an education beyond the Associate degree, this program is designed to transfer to Bachelor degree programs.

Upon the completion of the degree in **Business Administration with a concentration in Marketing**, graduates will be able to:

1. Apply principles of marketing management to problem-solving activities within corporate and small business settings.
2. Research, analyze, develop, and execute a marketing plan.
3. Apply sales, promotion, merchandising, and selling techniques learned in the classroom to real-life scenarios.
4. Understand how integrated promotional efforts affect relationship opportunities in business and how they can provide a cost-effective means of marketing.
5. Utilize case analysis through team efforts to problem-solve business problems and to provide effective written and verbal support of one's ideas.
6. Use objective reasoning skills to understand business problems, to work on solutions, and to present facts and figures in a group setting.
7. Use time and reasoning to develop effective marketing strategies to be competitive and to aggressively promote a product line or service.
8. Understand ratio analysis, statistical modeling, and quantitative research methods used in creating scenarios that will help a business price products and services, compete effectively, and develop marketing campaigns.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION: MARKETING FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
BUSN101	Introduction to Business	3	0	3
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

BUSN104	Principles of Marketing	3	0	3
MTHN106	Elementary Statistics	4	0	4
BUSN213	Principles of Advertising	3	0	3
CPTN102	Website Development I	2	2	3
General Education: Group B Elective		4	0	4
				17

SECOND YEAR - FALL SEMESTER

ECON201	Microeconomics	3	0	3
BUSN207	Sales	3	0	3
BCPN216	Desktop Publishing	2	2	3
BCPN119	Software Applications	2	2	3
ENGN109	Oral Communication	3	0	3
BUSN215	Integrated Marketing Communications	3	0	3
				18

SPRING SEMESTER

BUSN240	Business Law	3	0	3
BUSN210	Marketing Strategies	3	0	3
SOCN101	Introduction to Sociology	3	0	3
BUSN294	Marketing Internship	1	8	3

OR

XXXX	Open Elective**	3	0	3
General Education: Group F or G Elective		3	0	3
				15

Total 65 credits

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION

CONCENTRATION: SMALL BUSINESS ENTREPRENEURSHIP (Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a specialization in Small Business Entrepreneurship offers a mix of applied and theoretical courses. The objective of the program is to provide the knowledge students will need for successful careers as owners of a small business.

This option should be considered by students who desire to learn the methods and processes of starting up a small business enterprise or by those individuals who seek to manage a small company or family-owned business.

Topics of study include:

- Developing the idea
- Describing the business to potential investors
- Preparing a comprehensive Business Plan
- Marketing the idea
- Critical cash flow analysis

For students looking to pursue an education beyond the Associate degree, this program is designed to transfer to Bachelor degree programs.

Upon the completion of the degree in **Business Administration with a concentration in Small Business Entrepreneurship**, graduates will be able to:

1. Demonstrate the capability and initiative to identify an entrepreneurial opportunity, assess and evaluate risk, and plan for and manage a small business venture.
2. Demonstrate the leadership and entrepreneurial competencies required to conceptualize, plan, finance, resource, manage, and grow a small business.
3. Use research and analysis skills to develop a comprehensive business plan for promoting individual strategies when starting a new venture and requesting additional funds for growth.
4. Determine market feasibility for a new venture and for projected business expansions.
5. Develop operational plans for short term, midrange, and long term goals.
6. Demonstrate an understanding of the importance of cash flow analysis using pro-forma financial statements and accepted accounting practices.
7. Develop sales strategies utilizing knowledge of marketing and public relations.
8. Apply management competencies and skills as learned in first year courses to help assess management strengths and weaknesses of an owner/operator.

ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION: SMALL BUSINESS ENTREPRENEURSHIP

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
General Education: Group C Elective		3	0	3
				15

SPRING SEMESTER

BUSN110	Principles of Management	3	0	3
ACCN102	Financial Accounting II	4	0	4
BUSN104	Principles of Marketing	3	0	3
General Education: Group A Elective		3	0	3
General Education: Group E Elective*		4	0	4
				17

SECOND YEAR - FALL SEMESTER

BUSN207	Sales	3	0	3
BCPN216	Desktop Publishing	2	2	3
BUSN213	Principles of Advertising	3	0	3
BCPN119	Software Applications	2	2	3
General Education: Group D Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				18

SPRING SEMESTER

BUSN201	Human Resources Management	3	0	3
CPTN102	Website Development I	2	2	3
BUSN204	Small Business Management Capstone	3	0	3
BUSN290	Internship	1	8	3
OR				
XXXX	Open Elective**	3	0	3
General Education: Group B Elective		4	0	4
				16

Total 66 credits

* MTHN106, 110 or 115 is recommended

** Consult with advisor

BUSINESS STUDIES CERTIFICATES

ACCOUNTING CERTIFICATE I

The Certificate programs are designed to provide the basic accounting skills required for clerical and entry-level positions, or to improve the existing accounting skills of individuals who seek promotional opportunities. Credits earned in the Certificate programs can be applied to the Associate in Science in Business Administration curriculum with a specialization in Accounting.

Fall Semester		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
BCPN101	Introduction to Computers	2	2	3
ACCN102	Financial Accounting II	4	0	4
BCPN208	Spreadsheets: EXCEL	2	2	3

Total 14 credits

ACCOUNTING CERTIFICATE II (Prerequisite: Completion of Accounting Certificate I)

Spring Semester		CL	LAB	CR
ACCN201	Intermediate Accounting I	4	0	4
ACCN214	Accounting Information Systems	3	0	3
ACCN202	Intermediate Accounting II	4	0	4
ACCN206	Cost Accounting	4	0	4

Total 15 credits

ACCOUNTING CERTIFICATE III

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
ACCN102	Financial Accounting II	4	0	4
BUSN110	Principles of Management	3	0	3
BCPN101	Introduction to Computers	2	2	3
BCPN208	Spreadsheet: EXCEL	2	2	3
ACCN201	Intermediate Accounting I	4	0	4
ACCN202	Intermediate Accounting II	4	0	4
ACCN206	Cost Accounting	4	0	4
General Education: Group E Elective*		4	0	4

Total 33 credits

* MTHN 106 or 115 is recommended.

COMPUTER INFORMATION SYSTEMS CERTIFICATE

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
BCPN204	Word Processing: WORD	2	2	3
BCPN208	Spreadsheets: EXCEL	2	2	3
BCPN213	Database Management: ACCESS	2	2	3
BCPN216	Desktop Publishing	2	2	3
CPTN102	Website Development I	2	2	3

Total 18 credits

HUMAN RESOURCES MANAGEMENT CERTIFICATE (Day/Evening Program)

		CL	LAB	CR
BUSN110	Principles of Management	3	0	3
BUSN240	Business Law	3	0	3
BUSN202	Labor Relations Management	3	0	3
BUSN201	Human Resource Management	3	0	3

Total 12 credits

MARKETING CERTIFICATE

		CL	LAB	CR
BUSN104	Principles of Marketing	3	0	3
BUSN213	Principles of Advertising	3	0	3
BUSN210	Marketing Strategies	3	0	3
BUSN207	Sales	3	0	3

Total 12 credits

SMALL BUSINESS MANAGEMENT CERTIFICATE

(Day/Evening Program)

Small business functions will be studied in detail including financial operations, personnel requirements, management, and marketing.

		CL	LAB	
CR				
ACCN101	Financial Accounting I	4	1	4
BUSN104	Principles of Marketing	3	0	3
BUSN110	Principles of Management	3	0	3
BCPN101	Introduction to Computers	2	2	3
CPTN102	Website Development I	2	2	3
BUSN201	Human Resources Management	3	0	3
BUSN204	Small Business Management	3	0	3

Total 22 credits

SPREADSHEET CERTIFICATE

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
ACCN101	Financial Accounting I	4	1	4
BCPN119	Software Applications	2	2	3
BCPN208	Spreadsheet: EXCEL	2	2	3
General Education: Group E Elective*		4	0	4

Total 17 credits

* MTHN 106 or 115 is recommended.

ASSOCIATE IN SCIENCE IN COLLISION REPAIR TECHNOLOGY

(Day Program)

The Collision Repair Technology Program is designed to provide students with the skills necessary to enter the collision repair industry. The Collision Repair student will study the theory of repair and actually perform each of the different types of repairs (panel replacement, frame straightening, refinishing, etc.) on damaged vehicles.

The students will work in a controlled, safe environment and have hands-on training on modern equipment including:

- A heated, down-draft spray booth
- A drive-on frame straightening machine and universal measuring system
- Urethane, basecoat/clearcoat paint mixing system
- HVLP Spray Equipment

This program is certified by the National Automotive Technicians Education Foundation (NATEF).

Graduates of this program will satisfy an industry need for well educated and technically trained people. Typical positions available in the collision industry include:

- Collision Repair Technician
- Refinish Technician
- Automotive Frame Technician
- Automobile Damage Estimator
- Shop Manager
- Sales Representative
- Automotive Detailer

In addition to the general admission requirements, Collision Repair Technology applicants should be aware of the following criteria:

1. A minimum of one year of high school Algebra I is recommended.
2. Basic skills in written English are required.
3. A basic automotive tool kit and roll cabinet are **required**. Accepted students needing tools may purchase tool kits at a college sponsored Tool Day in August at a substantial discount. Approximate tool kit cost to the student is between \$1600.00 and \$3500.00 depending on the manufacturer.
4. Students are expected to possess a good work ethic and a strong desire to learn.
5. A clean, valid drivers license is required for employment in the automotive repair industry. (See Program Coordinator for details)

ASSOCIATE IN SCIENCE IN COLLISION REPAIR TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
AUTN121	Automotive Service and Maintenance	2	4	4
CRTN101	Basic Collision Repair	2	6	4
*MTHN099	Algebra I	3	0	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				13

SPRING SEMESTER

AUTN114	Automotive Suspension and Steering	2	4	4
CRTN105	Basic Auto Body Refinishing	2	6	4
General Education: Group E Elective		4	0	4
BCPN101	Introduction to Computers	2	2	3
General Education: Group A Elective		3	0	3
				18

SECOND YEAR - FALL SEMESTER

AUTN113	Automotive Electricity and Wiring	2	3	3
CRTN201	Advanced Collision Repair	2	4	4
CRTN210	Structural Analysis & Repair	2	4	4
SCIN150	Physical Science I	3	2	4
CRTN235	Collision Mechanical and Electrical Systems	2	3	3
General Education: Group D Elective		3	0	3
				21

SPRING SEMESTER

AUTN221	Automotive Heating and Air Conditioning	2	3	3
CRTN225	Advanced Automotive Refinishing	2	8	5
CRTN230	Collision Estimating & Repair: Capstone Experience	2	6	4
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				18

Total 70 credits

* This course may be waived by Accuplacer test scores or by Math Department placement exam.

Upon the completion of the degree in **Collision Repair Technology**, graduates will be able to:

1. Evaluate, diagnose, and repair various automotive systems using NATEF guidelines.
2. Use technology and basic scientific principles for research and problem solving.
3. Employ effective written and oral communication skills.
4. Employ effective technical writing skills.
5. Utilize mathematical logic and analysis for problem solving.
6. Understand the connections between individuals and society.
7. Have the ability to achieve ASE Master Certification.
8. Perform reading skills at a college level.
9. Demonstrate effective interpersonal skills.

COMPLEMENTARY HEALTH AND WELLNESS CERTIFICATE

(Evening and Weekend Program)

Health is more than the absence of disease: it is the balance of the individual on a holistic level: mind, body and spirit. This certificate program embraces the theory that an individual must have their needs met on all levels: physically; mentally/emotionally; and spiritually/energetically. This approach is often identified with alternative treatments, many of which are very old if not ancient. Students learn to develop and provide services for themselves as well as others, and in general this certificate is meant to invite and guide the student to more concentrated study and professional service - in holistic counseling, massage, herbology, naturopathy, to name but a few. All electives in the program may be freely practiced within their specific scope and are exempt from specific State of NH regulation. This certificate is of particular interest to health professionals willing to expand their traditional protocols.



COMPLEMENTARY HEALTH AND WELLNESS STUDIES

FIRST SEMESTER

		CL	LAB	CR
SCIN111	Basic Anatomy and Physiology	3	2	4
PSYN101	Introduction to Psychology	3	0	3
CHWN101	Foundations of Health and Wellness	3	0	3
MSTNXXX	Massage/Wellness Elective	2	0	2
				12

SECOND SEMESTER

		CL	LAB	CR
MSTN141	Oriental Theory and Concepts*	3	0	3
CHWN102	Somatic Theory**	3	0	3
CHWN103	Ethics, Business and Marketing**	3	0	3
MSTNXXX	Massage/Wellness Elective (2)	4	0	4
				13

ELECTIVES

		CL	LAB	CR
MSTN124	Acupressure*	3	0	3
MSTN134	Self-Care and Stress Management	2	0	2
MSTN145	Aromatherapy	2	0	2
CHWN105	Guided Meditation and Imagery*	2	0	2
CHWN110	Introduction to Homeopathy	2	0	2
CHWN115	Introduction to Herbology	3	0	3
CHWN120	Introduction to Reiki Healing	2	0	2
CHWN125	Yoga, Breath and Movement	2	0	2
SCIN120	Nutrition	3	0	3

Total 25 credits

* Please check course descriptions for prerequisites.

** Available online, hybrid or classroom.

ASSOCIATE IN ENGINEERING TECHNOLOGY IN COMPUTER ENGINEERING

(Day/Evening Program)*

The Computer Engineering Technology program combines the study of analog and digital circuitry, microprocessors and computer hardware with training in machine and assembly language as well as high-level languages and operating systems. Training in computer hardware and software prepares students for the dramatically growing job market in computer technology.

Graduates work on such tasks as repairing computers and other electronic equipment including industrial controls, computer peripherals and power supplies. They are capable of building and programming computers to perform specific functions or installing and maintaining computers and related electronic devices.

In addition to the general admission requirements, Computer Engineering Technology applicants should be aware of the following criteria:

1. Completion of high school Algebra I is required.
2. Other high school courses such as Algebra II, physics, electronics, and computer programming are recommended.
3. Basic skills in written English are required.
4. Accepted students will be required to possess or purchase about \$50 of minor accessories.

The educational objectives of the Computer Engineering Technology Associate Degree Program are to provide students with:

- A broad understanding of fundamental engineering knowledge and technical skills.
- A depth of knowledge in the areas of computer-related hardware, software, digital electronics, networking technology, and mathematics/physics applications.
- The skills needed to achieve competitively compensated entry-level positions or admission into programs of advanced study.
- A desire to develop professionally and personally through a commitment to life-long learning.

To meet the technical and general education objectives of the Computer Engineering Technology Program, graduates must successfully complete eleven outcomes:

- Mastery of the knowledge, techniques, skills, and modern tools of their discipline.
- Apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology.
- Conduct, analyze, and interpret experiments and apply experimental results to improve processes.
- Ability to apply creativity in the design of systems, components, or processes appropriate to program objectives.
- Ability to function effectively on teams.
- Ability to identify, analyze, and solve technical problems.
- Ability to communicate effectively.
- Recognition of the need for and an ability to engage in lifelong learning.
- Ability to understand professional, ethical, and social responsibilities.
- Respect for diversity and a knowledge of contemporary professional, societal, and global issues.
- Commitment to quality, timeliness, and continuous improvement.



ASSOCIATE IN ENGINEERING TECHNOLOGY IN COMPUTER ENGINEERING

FIRST YEAR - FALL SEMESTER

		CL	LAB	
CR				
EETN121	Digital Circuits I	2	2	3
EETN131	Circuit Analysis I	3	3	4
ENGN101	College Composition	4	0	4
MTHN110	Algebra and Trigonometry	4	0	4
EETN175	Intro. to Object Oriented Programming Using C++	2	3	3
LEXN101	Freshman Seminar	1	0	1
				19

SPRING SEMESTER

EETN122	Digital Circuits II	2	3	3
EETN132	Circuit Analysis II	3	3	4
EETN230	Advanced Object Oriented Programming Using C++	2	2	3
ENGN103	Professional Writing and Presentations	3	0	3
MTHN120	Precalculus	4	0	4
				17

SECOND YEAR - FALL SEMESTER

EETN251	Micro-Processors	2	3	3
CPTN101	PC Assembly/Operating Systems	2	3	3
EETN	Elective			3
SCIN130	Physics I	3	2	4
HISN260	History of Multiculturalism	3	0	3
				16

SPRING SEMESTER

EETN202	Data Communication	2	2	3
CPTN205	Networking Basics	2	2	3
CPTN204	Admin. Windows Servers	2	2	3
SOCN101	Introduction to Sociology	3	0	3
HUMN230	Ethics in the Workplace	3	0	3
EETN288	Capstone Experience	1	0	1
				16

Total 68 credits

**Accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET), 11 Market Place, Suite 1050, Baltimore, MD 21202-4012. Telephone (410) 347-7700.*

Accreditation applies to both the Day and Evening Computer Engineering Technology Degree.

Upon the completion of the degree in **Computer Engineering Technology**, graduates will be able to

1. Utilize computer skills to develop, operate, interface and maintain electronic equipment safely and within industrial settings.
2. Utilize electrical/electronic skills to develop, operate, analyze, interface and maintain electronic circuits and systems safely and competently within the industrial setting.
3. Incorporate principles and theories from math, physics and the humanities when working on technical problems.
4. Utilize intellectual, interpersonal and psychomotor competence when working in a laboratory with co-workers.
5. Demonstrate legal and moral judgment when involved in the design, repair and evaluation of electronic equipment for clients.
6. Show positive work ethics, good work habits, integrity, knowledge and communication skills.
7. Reveal emotional balance, motivation, insight, job and human relationship skills.
8. Exercise a desire to continue professional development and lifelong learning.
9. Find employment in the field of study.



ASSOCIATE IN SCIENCE IN COMPUTER NETWORKING

(Day/Evening Program)

The Computer Networking degree prepares students for employment in the field of Information Technology. The curriculum teaches all of the basic skills required to build the components of the Internet. Students learn to design, implement, and troubleshoot computers and the telecommunication networking systems that tie them together.

The program includes a broad range of hands-on training including the Cisco, Windows, and Linux platforms. Graduates are prepared for positions as PC support specialists, network administrators, and Internet/intranet support staff. Alternatively, graduates may continue on to a Bachelor degree program.

Upon the completion of the degree in **Computer Networking**, graduates will be able to:

1. Assemble the components of a PC and install one or more operating systems resulting in a functioning PC.
2. Identify major telecommunications media types, including coaxial cable, UTP and fiber optic cable.
3. Design a small or medium sized computer network including media types, end devices and interconnecting devices.
4. Design basic wide area networks and work with a number of WAN encapsulations.
5. Perform basic configuration on routers and Ethernet switches.
6. Perform basic tasks expected of a Network Administrator, including management of user accounts, shared resources and network security.
7. Work in a UNIX environment and successfully create and manage files.
8. Create a database, query a database, and output reports from a database in a database program.
9. Write a sample program in at least one programming language.
10. Effectively use the Internet for learning and tech support.
11. Have a basic understanding of TCP/IP.

COMPUTER NETWORKING

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
CPTN101	PC Assembly/Operating Systems	2	3	3
TELN101	Telecommunications Media	2	2	3
CPTN161	Introduction to Programming Using Visual BASIC	2	2	3
LEXN101	Freshman Seminar	1	0	1
	General Education: Group D Elective	3	0	3
				17

SPRING SEMESTER

CPTN205	Networking Basics	2	2	3
	General Education: Group A Elective	3	0	3
	General Education: Group B Elective*	4	0	4
	General Education Group E Elective*	4	0	4
	Elective in Major***	3	0	3
				17

SECOND YEAR - FALL SEMESTER

		CL	LAB	CR
CPTN203	Introduction to UNIX	2	2	3
CPTN204	Administering Windows Servers	2	2	3
CPTN215	Routing Fundamentals	2	2	3
	General Education: Group C Elective***	3	0	3
CPTN207	Database Design and Management	2	2	3

OR

BCPN213	Database Management: ACCESS	2	2	3
				15

SPRING SEMESTER

CPTN210	Advanced Windows Servers	2	2	3
CPTN225	Intermediate Networking	3	3	4
	Elective in the Major***	3	0	3
	General Education: Group F or G Elective	3	0	3
CPTN290	Computer Science Internship	1	8	3

OR

CPTN286	Networking Capstone Project	3	0	3
				16

Total 65 credits

* SCIN 150 or SCIN 134 recommended

** MTHN 106, 110, or 115 required

*** Electives in Major: CPTN, TELN, EETN, BCPN, EMTN

ASSOCIATE IN SCIENCE IN WEBSITE DEVELOPMENT

(Day/Evening Program)

The explosive growth of the Internet and the World Wide Web has changed the way people communicate, conduct business, acquire education and manage their daily lives. The world's acceptance of these technologies has made the Internet and Web a basic requirement for most businesses and industries resulting in a widely acknowledged need for professionals having a strong education in Internet related areas.

This program combines numerous facets of traditional software engineering skills with a graphical user interface design, client server architecture thus producing a broad knowledge base in these areas:

- Problem Solving
- Several Programming Languages
- Database Design
- SQL
- XHTML/CSS

Graduates of this program can either seek entry level positions or continue their education.

Upon the completion of the degree in **Website Development**, graduates will be able to:

1. Assemble the components of a PC and install one or more operating systems resulting in a functioning PC.
2. Use a multimeter to measure voltage to determine if a power supply is working correctly or not, and to measure continuity to determine if any wires or connections are working correctly or not.
3. Identify major telecommunications media types, including coaxial cable, UTP and fiber optics cable.
4. Work in a UNIX environment and successfully create and manage files.
5. Effectively use the Internet for research to complete written assignments and technical support to resolve issues encountered during laboratory exercises.
6. Effectively comprehend and present in written form concepts learned throughout the program of study.
7. Effectively comprehend and present in oral form concepts learned throughout the program of study.
8. Follow a systematic progression of software development and refinement when designing and developing computer programs in one of several languages to solve specific problems.
9. Design and manage an effective website, using basic tools.
10. Incorporate active content into their websites
11. Develop programs in a high level language that store data in a database and retrieve data using SQL.
12. Demonstrate understanding of three-tier architecture by developing a web page that uses a script to implement the business logic and store the data in a database.

WEBSITE DEVELOPMENT

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
CPTN101	PC Assembly/Operating Systems	2	3	3
CPTN102	Website Development I	2	2	3
CPTN161	Introduction to Programming Using Visual Basic	2	2	3
MTHN110	Algebra and Trigonometry	4	0	4
LEXN101	Freshman Seminar	1	0	1
				18

SPRING SEMESTER

CPTN103	Website Development II	2	2	3
CPTN140	Essentials of Systems Analysis and Design	2	2	3
CPTN175	Intermediate Programming: Using C++	2	2	3
CPTN205	Networking Basics	2	2	3
General Education: Group A Elective		3	0	3
General Education: Group C Elective		3	0	3
				18

SECOND YEAR - FALL SEMESTER

CPTN201	Client-Side Scripting	2	2	3
CPTN203	Introduction to UNIX	2	2	3
CPTN207	Database Design and Management	2	2	3
General Education: Group B Elective***		4	0	4
General Education: Group D Elective		3	0	3
				16

SPRING SEMESTER

CPTN202	Introduction to JAVA	2	2	3
CPTN206	Internet Scripting/Active Server	2	2	3
CPTN290	Computer Science Internship	1	8	3

OR

CPTN285	Senior Software Development Lab: A Capstone Experience	1	4	3
Elective in Major**		2	2	3
General Education: Group F or G Elective		3	0	3
				15

Total 67 credits

** Includes: CPTN, EETN, TELN, EMTN, BCPN

*** Science must be 4 credits

ASSOCIATE IN SCIENCE IN SOFTWARE DEVELOPMENT

(Day/Evening Program)

The Software Development curriculum provides a strong foundation for students interested in pursuing a bachelor's degree in either software development or computer science. The curriculum utilizes a combination of theoretical and applied courses to teach the design and programming skills a software developer needs. Students completing this curriculum will have a working knowledge of the following competencies:

- Two programming languages
- Concepts of data structures
- Object oriented programming
- Windows programming using VB.net
- Database design and management
- Overview of basic networking
- Ability to think critically
- Ability to solve problems
- Ability to effectively work as a member of a team

Upon the completion of the degree in **Software Development**, graduates will be able to:

1. Assemble the components of a PC and install one or more operating systems resulting in a functioning PC.
2. Use a multimeter to measure voltage to determine if a power supply is working correctly or not, and to measure continuity to determine if any wires or connections are working correctly or not.
3. Identify major telecommunications media types, including coaxial cable, UTP and fiber optics cable.
4. Work in a UNIX environment and successfully create and manage files.
5. Effectively use the Internet for research to complete written assignments and for technical support to resolve issues encountered during laboratory exercises.
6. Effectively comprehend and present in written form concepts learned throughout the program of study.
7. Effectively comprehend and present in oral form concepts learned throughout the program of study.
8. Follow a systematic progression of software development and refinement when designing and developing computer programs in one of several languages to solve specific problems.
9. Develop programs in a high level language that store data in a database and retrieve data using SQL.

SOFTWARE DEVELOPMENT

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
CPTN101	PC Assembly/Operating Systems	2	3	3
CPTN102	Website Development I	2	2	3
CPTN161	Introduction to Programming: Using Visual Basic	2	2	3
LEXN101	Freshman Seminar	1	0	1
MTHN110	Algebra and Trigonometry	4	0	4
				18

SPRING SEMESTER

CPTN140	Essentials of Systems Analysis	2	2	3
CPTN175	Intermediate Programming: Using C++	2	2	3
CPTN205	Networking Basics	2	2	3
General Education: Group A Elective		3	0	3
General Education: Group C Elective		3	0	3
Elective in Major**		2	2	3
				18

SECOND YEAR - FALL SEMESTER

CPTN203	Introduction to UNIX	2	2	3
CPTN207	Database Design and Management	2	2	3
CPTN230	Advanced Programming: Using C++	2	2	3
General Education: Group B Elective***		4	0	4
General Education: Group D Elective		3	0	3
				16

SPRING SEMESTER

CPTN278	Data Structures: Using C++	2	2	3
Elective in Major**		2	2	3
Elective in Major**		2	2	3
CPTN290	Computer Science Internship	1	8	3
OR				
CPTN285	Senior Software Development Lab: A Capstone Experience	1	4	3
General Education: Group F or G Elective		3	0	3
				15

Total 67 credits

* MTHN106, 110 or 115 is required.

** Includes: CPTN, EETN, TELN, EMTN, BCPN

*** Science must be 4 credits

COMPUTER SCIENCE CERTIFICATES

COMPUTER NETWORKING CERTIFICATE

(Day/Evening Program)

After computer networks are designed and built, they need to be administered. This certification builds on the Cisco Networking Academy by teaching the skills necessary to be a network administrator. Since one of the most important uses of networks today is to provide access to Web pages, Internet Server Management is included. UNIX is included because it is a critical component of many corporate networks.

		CL	LAB	CR
CPTN101	PC Assembly/Operating Systems	2	3	3
CPTN205	Networking Basics	2	2	3
CPTN215	Routing Fundamentals	2	2	3
CPTN225	Intermediate Networking	3	3	4
CPTN105	Internet Server Management	2	2	3
*CPTN203	Introduction to UNIX	2	2	3
CPTN204	Administering Windows Servers	2	2	3

Total 22 credits

**Please check course description for prerequisites for this course.*

WEBSITE DESIGN CERTIFICATE

(Day/Evening Program)

The Website Design Certificate program is designed to teach the fundamental information needed to develop and maintain a website. Common web development tools, including HTML, graphics and multimedia are introduced as well as use of web servers and browsers. UNIX and its use and impact on the Internet will also be covered.

		CL	LAB	CR
CPTN101	PC Assembly & Operating Systems	2	3	3
CPTN102	Website Development I	2	2	3
CPTN103	Website Development II	2	2	3
CPTN161	Introduction to Programming Using Visual Basic	2	2	3
CPTN175	Intermediate Programming Using C++	2	2	3
CPTN202	Introduction to JAVA	2	2	3
CPTN203	Introduction to UNIX	2	2	3
CPTN206	Internet Scripting/Active Server	2	2	3

Total 24 credits

** Please check course description for prerequisites for these courses.*

INTERNET DEVELOPER CERTIFICATE

(Day/Evening Program)

The Internet Developer Certificate program is designed to equip students with the basic skills necessary to develop applications that are used on the Internet. This program focuses on the programming languages and tools necessary to develop Object Oriented programs. This program also concentrates on linking databases and applications with the World Wide Web. Intranet/Internet development skills are in demand by corporations and Internet consulting firms. The target group for this program is software engineers and programmers needing to interact with Internet and Java programming.

		CL	LAB	CR
CPTN101	PC Assembly & Operating Systems	2	2	3
CPTN102	Website Development I	2	2	3
CPTN103	Website Development II	2	2	3
CPTN161	Introduction to Programming Using Visual Basics	2	2	3
CPTN175	Intermediate Programming: Using C++	2	2	3
CPTN202	Introduction to JAVA	2	2	3
CPTN203	Introduction to UNIX	2	2	3
CPTN206	Internet Scripting/Active Server	2	2	3
CPTN230	Advanced Programming: Using C++	2	2	3

Total 27 credits

** Please check course description for prerequisites for these courses.*

FIBER OPTICS CERTIFICATE

(Day/Evening)

This program will provide students with hands-on training in procedures and applications utilized by fiber optic and telecommunications companies. Labs are equipped to test fiber optic lines and practice wiring and splicing techniques. Graduates are prepared for positions as installation and service technicians. Grade of C or better required in both courses.

FALL SEMESTER		CL	LAB	CR
TELN101	Telecommunications Media	2	2	3
SPRING SEMESTER				
TELN207	Fiber Optics	2	2	3

Total 6 credits

ASSOCIATE IN SCIENCE IN EARLY CHILDHOOD EDUCATION

(Day/Evening Program)

The Associate Degree and Certificate in Early Childhood Education provide the theoretical studies and practical experiences that prepare the graduate to care for and teach children from infancy through age eight in a variety of early childhood education and care settings. Graduates may be qualified for employment opportunities in child development and child care programs, pre-schools, nurseries, head start, after school programs, and private kindergartens. Graduates may be eligible for employment as lead teachers, associate and assistant teachers, or directors of these programs. Degree graduates may also be eligible for employment as a paraprofessional in the public school setting in grades kindergarten through third grade. For students looking to pursue an education beyond the Associate Degree, the degree program is designed to provide transferability to bachelor degree programs in Early Childhood Education. Students work closely with their academic advisor for proper course selection and sequencing to prepare for transferability.

The Early Childhood Education degree and certificate course curriculum follows the standards of the National Association of the Education of the Young Child Degree Standards for Preparing Early Childhood Professionals. The degree also provides general education courses that offer the student the opportunity to develop an understanding and knowledge of concepts and skills that support the development of the educated person. Supervised practicum field experiences provide direct experience with the young child in an early childhood setting. Future early childhood teachers are encouraged to gain extended practical experience with young children by completing Service Learning opportunities offered in many of the courses.

Early Childhood Education degree and certificate students are advised that to participate in the practicum field experience, and to gain employment working with young children, they must be free of criminal convictions as required by the NH Bureau of Child Care Licensing and the NH Department of Education. Candidates must also have a current health form in order to participate in the ECE practicum field experience. The student may incur fees in meeting these requirements.

The college must insure that students in the program do not put themselves or children in jeopardy during the practicum field experience. Students must demonstrate sufficient emotional and physical stability to withstand the stresses of ever changing circumstances and have the ability to respond quickly and appropriately to unexpected child related events. Students will be required to adhere to the NAEYC Ethical Code of Professional Conduct in regards to interpersonal relationships with teachers, fellow students, children and their families.

An interview with the Early Childhood Education Pro-

gram Coordinator or the Education Department Chair is required for admission into the program.

ASSOCIATE IN SCIENCE IN EARLY CHILDHOOD EDUCATION FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
EDUN101	Foundations of Early Childhood Education	3	0	3
EDUN102	Growth and Development of the Young Child	3	0	3
BCPN101	Introduction to Computers	3	0	3
LEXN101	Freshman Seminar	1	0	1
General Education: Group E Elective*		3	0	3/4
				17/18

SPRING SEMESTER

EDUN103	Safe Healthy ECE Programs	3	0	3
EDUN104	Curriculum for Early Childhood Care and Education	3	0	3
EDUN105	Children with Special Needs and Their Families	3	0	3
PSYN101	Introduction to Psychology	3	0	3
General Education: Group B Elective		3	2	4
				16

SECOND YEAR - FALL SEMESTER

EDUN190	Early Childhood Education Practicum I	1	8	3
EDUN200	Programs for Infants and Toddlers	3	0	3
EDUN204	Behavior Guidance and Classroom Management	3	0	3
EDUN215	Creativity and the Young Child	3	0	3
General Education: Group A Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				18

SPRING SEMESTER

EDUN203	Emerging Literacy in Early Childhood Education	3	0	3
EDUN290	Early Childhood Education: Capstone Course	1	8	3
EDUN230	The ECE Professional and the ECE Portfolio	1	0	1
*EDUN201	Organization and Management in Early Childhood Education	3	0	3

OR

General Education: Group C Elective		3	0	3
*General Education: Group D Elective		3	0	3
*General Education: Group F or G Elective		3	0	3

Total 67/68 credits

Meets requirements for State of New Hampshire DHHS Child Development Bureau credential of Lead Teacher Level 2.

** Students are advised to meet with their advisor to make appropriate elective selections based on their career goals and to facilitate the broadest range of transferability.*

ASSOCIATE IN SCIENCE IN EARLY CHILDHOOD EDUCATION CONT. (Day/Evening Program)

Upon the completion of the degree in **Early Childhood Education**, graduates will be able to:

1. Use their knowledge and understanding of the young children's development, individual and exceptional needs, and culture to provide opportunities and environments that support the physical, social, emotional, language, cognitive, and creative development and learning of children birth through age eight.
2. Understand, respect, and value, the characteristics and needs of families and their communities as they establish and maintain positive, collaborative, supportive relationships with the families of young children in relationship to the child's development and learning.
3. Understand and mindfully use informal and formal observation, documentation and assessment strategies and techniques, to plan and individualize the learning environment, curriculum and teacher interactions and practices for young children
4. Establish and maintain positive and supportive relationships with young children in an environment that has been designed to be a physically, cognitively, emotionally and psychologically respectful, safe and healthy learning environment for all young children.
5. Conduct themselves in a mindful, ethical, and professional manner as they reflect on and implement their practices, articulate a philosophy, advocate for and present a rationale for their actions, interactions and decisions involving young children, parents, other professionals and self.
6. Demonstrate college level proficiency in the skills of written and verbal communication and technological literacy that support the effective use and application of the knowledge, skills and dispositions required in the degree program.
7. Demonstrate an understanding and knowledge of foundational concepts in the general education areas including science, mathematics, literature and the behavioral and social sciences in relationship to the development of the educated self and enrich early childhood programs for young children.
8. Demonstrate a commitment to and an awareness of the need for life long professional growth, learning, community involvement and advocacy in regards to current early childhood research, practices



EARLY CHILDHOOD EDUCATION CERTIFICATE

This certificate will prepare the student to work directly in the early childhood child care and education environment. The courses in the certificate meet NH Child Care Licensing Requirements as well as provide knowledge in the Core Knowledge areas required for by NHDHHS, Child Care Bureau Credential. The course curriculum follows the standards of the National Association of the Education of the Young Child Degree Standards for Preparing Early Childhood Professionals.

Upon completion of the ECE certificate, students may enter NH Child Care and Early Childhood Education programs as: lead teachers, associate level teacher, assistant level teacher.

EARLY CHILDHOOD EDUCATION CERTIFICATE

		CL	LAB	CR
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
EDUN101	Foundations of Early Childhood Education	3	0	3
EDUN102	Growth and Development of the Young Child	3	0	3
EDUN103	Safe and Healthy Programs in Early Childhood Education	3	0	3
EDUN104	Curriculum for Early Childhood Care and Education	3	0	3
*EDUN200	Dev. App. Programs for Infants and Toddlers	3	0	3
OR				
*EDUN105	Children with Special Needs and their Families	3	0	3
OR				
*EDUN204	Guidance and Classroom Management	3	0	3
EDUN190	Early Childhood Education Practicum I	1	8	3
SOCN230	The ECE Profession and Professional Portfolio	1	0	1

Total 24 Credits

Meets requirements for State of New Hampshire credential of Associate Level 4 Teacher.

** Students are advised to meet with their advisor and choose appropriate courses depending on their goals and work requirements.*

Upon the completion of the **ECE Certificate**, graduates will be able to:

1. Use their knowledge and understanding of the young child's development to provide opportunities and environments that support the physical, social, emotional, language, cognitive, and creative development and learning of children birth through age eight.
2. Understand, respect, and value the need for supportive relationships with the families of young children in relationship to the child's development and learning.
3. Understand and mindfully assist in and use informal and formal observation, documentation and assessment strategies and techniques to plan and individualize the learning environment, curriculum and teacher interactions and practices for young children.
4. Assist in the establishment and maintenance of positive and supportive relationships with young children in an environment that has been designed to be a physically, cognitively, emotionally, and psychologically respectful and healthy learning environment for all young children.
5. Demonstrate college level proficiency in the skills of written and verbal communication.

FAMILY CHILD CARE PROVIDER CERTIFICATE (Online)

		CL	LAB	CR
EDUN102	Growth and Development of the Young Child	3	0	3
EDUN120	Family Child Care Business Management	3	0	3
EDUN103	Health, Safety and Nutrition for the Young Child	3	0	3
EDUN124	Family Child Care Curriculum and Education	3	0	3

Total 12 Credits



ASSOCIATE IN SCIENCE IN ELECTRONIC ENGINEERING TECHNOLOGY

(Day/Evening Program)*

The Electronic Engineering Technology Program concentrates on traditional electronic subjects such as analog circuits, microprocessor hardware and software development tools for automation in assembling and manufacturing environments, plus communication theory in modulation techniques, applications in RF devices and high speed data communications.

Graduates work on such tasks as repairing electronics equipment including industrial controls and peripheral interfaces. Graduates are capable of setting up and interfacing computers with both analog and digital equipment in the production environment.

In addition to the general admission requirements, Electronics Engineering Technology applicants should be aware of the following criteria:

1. Completion of high school Algebra I is required.
2. Other high school courses such as Algebra II, physics, electronics, and computer programming are recommended.
3. Basic written skills in English are required.
4. Accepted students will be required to possess or purchase approximately \$50 of minor accessories.

At the completion of the degree in **Electronic Engineering Technology**, graduates must demonstrate that they will be able to:

1. Utilize computer skills to develop, operate, interface and maintain electronic equipment safely and within industrial settings.
2. Utilize electrical/electronic skills to develop, operate, analyze, interface and maintain electronic circuits and systems safely and competently within the industrial setting.
3. Incorporate principles and theories from math, physics and the humanities when working on technical problems.
4. Utilize intellectual, interpersonal and psychomotor competence when working in a laboratory with co-workers.
5. Demonstrate legal and moral judgment when involved in the design, repair and evaluation of electronic equipment for clients.
6. Show positive work ethics, good work habits, integrity, knowledge and communication skills.
7. Reveal emotional balance, motivation, insight, job and human relationship skills.
8. Exercise a desire to continue professional development and lifelong learning.
9. Find employment in the field of study.

ASSOCIATE IN SCIENCE IN ELECTRONIC ENGINEERING TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
EETN121	Digital Circuits I	2	2	3
EETN131	Circuit Analysis I	3	3	4
ENGN101	College Composition	4	0	4
MTHN110	Algebra and Trigonometry	4	0	4
EETN175	Introduction to Object Oriented Programming Using C++	2	2	3
LEXN101	Freshman Seminar	1	0	1
				19

SPRING SEMESTER

EETN122	Digital Circuits II	2	3	3
EETN132	Circuit Analysis II	3	3	4
EETN142	Analog Circuits I	2	2	3
EETN230	Advanced Object Oriented Programming with C++	2	2	3
ENGN103	Professional Writing and Presentations	3	0	3
MTHN120	Precalculus	4	0	4
				20

SECOND YEAR - FALL SEMESTER

EETN251	Micro-Processors	2	3	3
CPTN101	PC Assembly/Operating Systems	2	3	3
EETN243	Analog Circuits II	2	2	3
SCIN130	Physics I	3	2	4
General Education: Group D Elective		3	0	3
				16

SPRING SEMESTER

EETN245	Communication Theory	2	2	3
CPTN205	Networking Basics	2	2	3
EETN274	EETN Capstone Project	0	3	1
PSYN130	Human Relations	3	0	3

OR

General Education: Group C Elective				
General Education: Group F or G Elective		3	0	3
				13

Total 68 credits

* Please note: EETN142, EETN243, EETN245, EETN246 and EETN274 are offered only in the evening.

CERTIFICATES

EQUINE BODYWORK CERTIFICATE

(Evening and Weekend Program)

The Equine Bodywork Certificate program is intensive in nature, but covers the full spectrum of training needed to conduct a successful practice of equine bodywork. This program meets or exceeds all National Standards, and Nashua Community College is proud to be the first college in the nation to offer such a proprietary program. It is assumed individuals who enroll in the program are sufficiently familiar and comfortable with horses for hands-on work. Completion of the program enables individuals to begin in this exciting field.

EQUINE BODYWORK		CL	LAB	CR
EQMN101	Equine Bodywork I	3	0	3
EQMN110	Equine Anatomy, Physiology and Kinesiology	4	0	4
EQMN119	Equine Bodywork Business and Marketing	3	0	3
EQMN 121	Equine Bodywork II	3	0	3
EQMN190	Equine Clinical Practicum	0	2	1
EQMNxxx	Electives	2	0	2
Total 16 credits				
ELECTIVES		CL	LAB	CR
EQMN125	Equine Accupressure and Aromatherapy	2	0	2
EQMN130	Equine Handling	2	0	2
EQMN135	Equestrian Bodywork	2	0	2
EQMN140	Equine Sports Bodywork*	2	0	2

* on-site training

MEDICAL CODING CERTIFICATE

(Evening Program)

The health care industry continues to be a high need field. As the demand for quality health care grows, the need for qualified coders and billers in hospitals, physicians offices, ambulatory care centers and specialty clinics will increase. Training in coding, billing, reimbursement and collections will be included. Instruction in this field will provide the necessary preparation to fulfill this demanding role in the medical arena. Graduates will be prepared for entry level positions in medical coding.

The Certificate program will prepare students for the American Association of Professional Coders Exam.

MEDICAL CODING CERTIFICATE		CL	LAB	CR
SCIN111	Basic Human Anatomy and Physiology	3	2	4
SCIN205	Basic Pathophysiology	3	0	3
AHLN102	Medical Terminology	3	0	3
BCPN101	Introduction to Computers	2	2	3
AHLN117	Medical Coding I	2	3	3
AHLN119	Advanced Medical Coding and Applications	4	3	5
Total 21 credits				

SIGN LANGUAGE STUDIES CERTIFICATE

(Evening Program)

This program is designed to prepare individuals for jobs providing support services to the hearing impaired. Emphasis will be on using American Sign Language (ASL). To be accepted to the program, applicants must meet the requirements for admission listed in this catalog.

SIGN LANGUAGE CERTIFICATE		CL	LAB	CR
SNLN100	Introduction to ASL	1	0	1
ENGN101	College Composition	4	0	4
LNGN120	Sign Language I	3	0	3
SNLN101	Deaf Culture I	3	0	3
LNGN121	Sign Language II	3	0	3
LNGN220	Sign Language III	3	0	3
LNGN221	Sign Language IV	3	0	3
SNLN102	Deaf Culture II	3	0	3
Total 23 credits				

ASSOCIATE IN SCIENCE IN GENERAL STUDIES

(Day/Evening Program)

The Associate in Science in General Studies degree program is designed for students who wish to pursue a flexible degree plan tailored to their specific educational or career goals. Unlike other degree programs, this program affords students the opportunity to gain credit for what they know regardless of how that learning took place. By offering a mechanism to gain prior learning assessment credit and through flexible degree plans, students can pursue a college degree to acquire new skills or to upgrade their current occupational skills.

The purpose of the program is three-fold:

1. To offer a flexible curriculum that may be tailored to students' professional needs
2. To provide a program wherein credit may be granted for significant prior learning assessment in an occupational/technical specialty
3. To provide a program where students are also allowed to transfer acceptable credit earned at other colleges or earned in the military.

Since the General Studies degree plan is developed around individual career goals, prospective students must meet with the General Studies Program Coordinator to establish a program of study. To earn prior learning assessment credit, students must register for GSTN101 Assessment of Prior Learning and prepare a comprehensive portfolio which is evaluated by the General Studies Program Coordinator and appropriate faculty. Please note that a maximum of 24 credits may be earned through prior learning assessment credit.

At the completion of the degree in **General Studies**, graduates will be able to:

1. Formulate a plan for personal and occupational growth.
2. Articulate an understanding of the importance of life-long learning.
3. Find, interpret and evaluate information from a variety of sources and apply that knowledge through reasoned judgment and positive action.
4. Express oneself clearly and cogently, formally and informally, individually and in groups.
5. Employ both quantitative and qualitative reasoning to describe and solve problems.
6. Demonstrate an understanding of complex issues and systems that affect how we live and manage our daily lives in the workplace and at home.
7. Apply logical, critical, ethical, and creative processes and information to identify problems, evaluate alternative solutions, and make decisions.
8. Integrate and apply the fundamental principles of scientific inquiry, social sciences, and arts and humanities.

Graduation Requirements

A minimum of 65 credits is required for graduation to be distributed in the following manner:

	CREDITS
Specialty and Support courses	32
General Education as follows:	26
Group A: Written Composition/ Oral Communication	7
Group B: The Scientific World	3
Group C: Social Sciences (Behavioral)	3
Group D: Social Sciences (Non-Behavioral)	3
Group E: Mathematical Reasoning	4
Group F: The Humanities OR	
Group G: World Languages	3
Minimum of an additional 3 credits from Groups A - G.	3
Open Electives	6
LEXN101 Freshman Seminar	1
GSTN101 Assessment of Prior Learning [if student chooses to develop a portfolio]	1

Please note: 8 credits of course work in the program must be completed at the "200" level

Residency Requirements

At least 16 semester credits must be taken at Nashua Community College not including prior learning assessment credit awarded.

Admission Requirements

Applicants must:

1. Be high school graduates or have the GED equivalent.
2. Submit an application for admission and have official transcripts forwarded to Nashua Community College by secondary and post-secondary institutions previously attended.
3. Participate in a personal interview if required.
4. Participate in Accuplacer Placement Assessment when appropriate.

ASSOCIATE IN SCIENCE IN GENERAL STUDIES

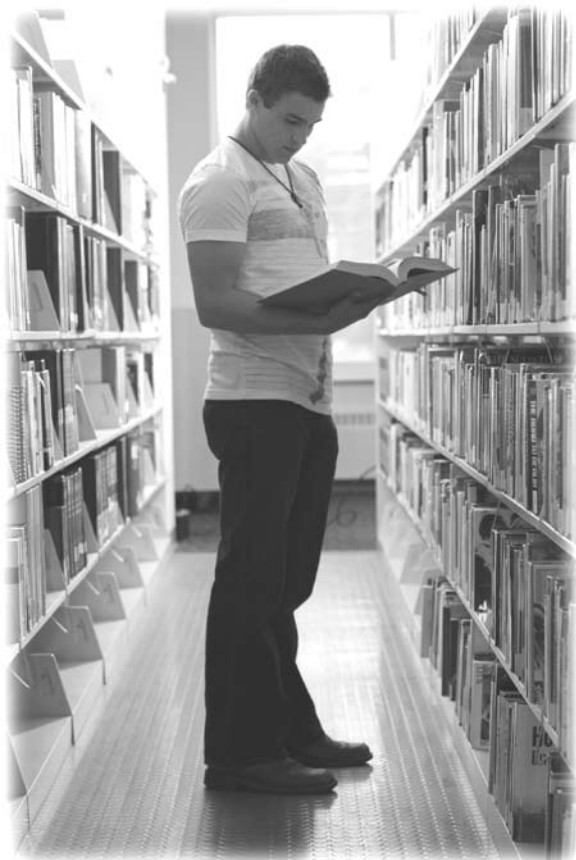
Health Concentration (Day/Evening Program)

The Health Concentration within the General Studies Program has been designed for several groups of students:

- Students who have a desire to work in the health care industry, but who have not yet chosen a specific health field
- Students who view their local community college as a convenient, less expensive way to complete a four-year degree program.

With careful planning, students will be able to earn credits that will fit their intended health major field of study. Matriculated students will work with a faculty advisor to design a program of study that meet individuals needs.

Because of potentially heavy demand for health programs, students are advised that acceptance into the Associate in Science in General Studies Degree does not guarantee acceptance in or give preferential treatment to an applicant to a specific health program at a later date.



ASSOCIATE IN SCIENCE IN GENERAL STUDIES

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
PSYN101	Introduction to Psychology	3	0	3
SCIN201	Anatomy and Physiology I**	3	3	4
LEXN101	Freshman Seminar	1	0	1
				12

FIRST YEAR - SPRING SEMESTER

SCIN202	Anatomy and Physiology II	3	3	4
General Education: Group A Elective		3	0	3
General Education: Group E Elective*		4	0	4
General Education: Group F or G Elective		3	0	3
				14

FIRST YEAR - SUMMER SEMESTER

SCIN215	Microbiology	3	3	4
General Education		3	0	3
(as appropriate to student's career plans)				7

* MTHN106 is recommended.

** Anatomy and Physiology I has a prerequisite of high school chemistry with a grade of C or better. Please see course description. In order to be considered for the nursing program, a grade of B- or better must be earned in Anatomy and Physiology I.

SECOND YEAR

Students who do not enter a health field will be able to earn an Associate in Science in General Studies Degree upon completion of all required courses. (See previous page for degree completion)

ASSOCIATE IN SCIENCE IN HONDA AUTOMOTIVE TECHNOLOGY

Professional Automotive Career Training (PACT) (Day Program)

The Honda Automotive Technology program, otherwise known as PACT (Professional Automotive Career Training) is a partnership between Nashua Community College, American Honda Motor Co., Inc. and Honda/Acura Dealers. This is an associate degree program designed to train students for employment in Honda/Acura dealerships and prepare them for ASE Master certification. The training includes classroom theory, hands-on lab work, internship at a dealer and general education components. The technical instruction at the college is conducted in a professionally equipped, modern facility. American Honda supplies the program with vehicles, special tools, and access to technical data.

Graduates of the PACT program will have received more than 50% of the required training to become a Honda/Acura Master Technician in addition to being prepared for ASE Master certification. This is a significant head start into a career with job security and high income potential.

In addition to the general admission requirements, the PACT Program applicants should be aware of the following criteria:

1. A minimum of one year of high school algebra is recommended. Basic skills in written English are required.
2. Required interview with the Program Coordinator.
3. A basic automotive tool kit and roll cabinet are **required**. A copy of the required tool kit list is available on the college web site. The major tool manufacturers offer substantial discounts to enrolled PACT students. The college hosts a "Tool Day" at the college in late August for enrolled students needing tools or tool kits. Depending on the tool manufacturer, approximate tool kit cost is between \$1600.00 and \$3000.00.
4. After successfully completing all coursework in the first semester with a 2.0 GPA, students are then qualified for an internship. Students must maintain a CGPA of 2.0 to remain on internship.
5. All PACT students are required to complete the internship.
6. All PACT internships carry a per credit tuition charge.
7. Students must be matriculated into the PACT program to take HATN courses.
8. A copy of a valid drivers license and clean driving record are **required** for admission to the PACT program. (See PACT Program Coordinator for details.)

Upon the completion of the degree in **Honda Automotive Technology**, graduates will be able to:

1. Evaluate, diagnose, and repair various automotive systems using NATEF guidelines.
2. Use technology and basic scientific principles for research and problem solving.
3. Employ effective written and oral communication skills.
4. Employ effective technical writing skills.
5. Utilize mathematical logic and analysis for problem solving.
6. Understand the connections between individuals and society.
7. Have the ability to achieve ASE Master Certification.
8. Complete the training modules of the PACT Core Curriculum.
9. Demonstrate effective interpersonal skills.
10. Perform reading skills at a college level.

ASSOCIATE IN SCIENCE IN HONDA AUTOMOTIVE TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
HATN106	Honda Engines and Measurements	2	3	3
HATN121	Honda Service and Maintenance	2	4	4
HATN113	Honda Electricity and Wiring	2	3	3
ENGN101	College Composition	4	0	4
MTHN099*	Algebra I	3	0	3
BCPN101	Introduction to Computers	2	2	3
LEXN101	Freshman Seminar	1	0	1
				18

SPRING SEMESTER

HATN114	Honda Suspension and Steering	2	4	4
HATN115	Honda Advanced Electrical and Electronic Systems	2	3	3
HATN122	Honda Brakes and Stability Systems	2	4	4
HATN190	Honda Dealer Internship: Capstone Experience I**	0	8	2
General Education: Group A Elective		3	0	3
General Education: Group E Elective		4	0	4
				18/20

SUMMER SEMESTER

HATN195	Honda Dealer Internship: Capstone Experience II***	0	24	6
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SECOND YEAR - FALL SEMESTER

		CL	LAB	CR
HATN210	Honda Engine Performance I	2	3	3
HATN226	Honda Manual Drive Lines	2	3	3
HATN227	Honda Automatic Transmissions	2	3	3
HATN191	Honda Dealer Internship: Capstone Experience III**	0	8	2
SCIN150	Physical Science I	3	2	4
General Education: Group C Elective		3	0	3
General Education: Group D. Elective		3	0	3
				19/21

SPRING SEMESTER

HATN215	Honda Engine Performance II	2	3	3
HATN228	Honda Engine Repair	2	4	4
HATN221	Honda Heating and AC Systems	2	3	3
HATN225	Honda Advanced Vehicle System	3	0	3
HATN192	Honda Dealer Internship: Capstone Experience IV**	0	8	2
General Education: Group F or G Elective		3	0	3
				16/18

Total 77 credits

* This course may be waived by Accuplacer test score or by Math Department placement exam.

** A minimum of six internship credit hours must be earned in order to graduate.

*** Required if not earning credits in HATN190, 191, 192 credits based on a 15 week semester.

ASSOCIATE IN SCIENCE IN HUMAN SERVICES

(Day/Evening Program)

The Associate in Science Degree program in Human Services prepares students to work with individuals who are consumers of the human services delivery system, providing them with direct services and linking them with other community services and resources. Graduates of the Human Services program may be employed in human services agencies which deal with developmental disabilities, mental health, residential treatment, hospice care, abuse prevention and substance abuse. Graduates will be prepared for employment in positions such as service coordinator, group home manager, job coach, vocational instructor and trainer, residential living counselor, community living instructor, program manager, site supervisor, supported or independent living specialist, and family support coordinator.

All candidates are required to have a personal interview with a department faculty member.

The College also offers a Certificate program in Human Services, providing students with the major courses required for entry level position, as well as providing them with an entry point for the continuation of studies. All Certificate courses have been incorporated into the first year of the Degree Program.

A State Police criminal check is the responsibility of students and may be required for clinical fieldwork and/or employment upon request of an agency.

Applicants who have had difficulty with the law depending upon the nature of the problem may not be employable or even eligible for fieldwork. Applicants need to discuss these matters in an interview with the department chair to determine future direction.

Technical Standards have been established as guidance tools to inform program applicants of skills and standards necessary for successful completion of the Human Service programs. Any applicant who has concerns or questions regarding the Technical Standards is encouraged to contact the Department Chair to discuss their individual issues. Students in the Human Service programs must be able to demonstrate:

- Ability to communicate verbally as a student in classes, and later as a professional in individual and group counseling situations;
- Sufficient verbal skills and language to: collaborate with a wide variety of helping professionals in clinical, societal and professional areas; deliver

accurate and required information; and to search for information, e.g., questioning;

- Sufficient writing ability to formulate written assessment, charting notes, and reports, etc.;
- Ability to sustain cognitive integrity in areas of short- and long-term memory, areas of written documentation and follow-through of responsibilities;
- Ability to concentrate on the execution of treatment plans, assigned skills and tasks as well as the integration and communication of this work for both short and long term periods of time;
- Ability to work in settings that may lend themselves to frequent interruptions, immediate crisis response and role responsibility exchange;
- Ability to cope with a variety of stressors, including people-place occurrences, and demonstrate safe and required care for individuals and the workplace as a whole;
- Ability to secure transportation to practicum sites and classes;
- Ability to consistently attend and participate in classes;
- Ability to demonstrate and maintain organizational skills, time management and professional respect and conduct as a human service student, either at a practicum site, or in the community.
- Ability to adhere to and practice the Human Service Department's ethical guidelines.



ASSOCIATE IN SCIENCE IN HUMAN SERVICES

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
BCPN101	Introduction to Computers	2	2	3
PSYN201	Human Growth and Development	3	0	3
HSV111	Introduction to Human Services	3	0	3
HSV120	Learning and Behavior	3	0	3
LEXN101	Freshman Seminar	1	0	1
				17

SPRING SEMESTER

HSV123	Supportive Communication Skills	3	0	3
HSV125	Individual Assessment and Planning	3	0	3
HSV126	Issues in Developmental Disabilities and Mental Health	3	0	3
HSV190	Fieldwork I	1	8	3
MTHN104	Topics in Mathematics	3	0	3
				15

SECOND YEAR - FALL SEMESTER

ENGN103	Professional Writing and Presentations	3	0	3
General Education: Group B Elective		3	0	3
HSV212	Individual Counseling: Theory and Practice	3	0	3
PSYN240	Alcohol and Drugs	3	0	3
HSV290	Fieldwork II	1	8	3
General Education: Group C Elective		3	0	3
				18

SPRING SEMESTER

HSV225	Family Supports	3	0	3
HSV220	Group Dynamics and Counseling	3	0	3
HISN260	History of Multiculturalism	3	0	3
HSV291	Capstone Experience	1	8	3
General Education: Group F or G Elective*		3	0	3
				15

Total 65 credits

* Department recommendation: Spanish, American Sign Language, or Ethics in the Workplace

Upon the completion of the degree in **Human Services**, graduates will be able to:

1. Communicate effectively, including speaking, writing, and listening in order to express, transmit and interpret knowledge and ideas.
2. Research and plan in order to search for specific knowledge and the ability to conceptualize future needs and solutions for meeting those needs.
3. Use interpersonal skills for resolving conflict, relating to and helping people, such as empathy, genuineness, self-awareness, patience etc.
4. Be competent in formal/informal assessment practices in order to understand the needs and interests of the participant.
5. Be competent in defining, discussing and performing the five basic case management functions: assessment, planning, linking, monitoring and advocacy.
6. Identify both personal and professional strengths and weaknesses and engage in appropriate self-development activities.
7. Describe roles of the various human service professionals in providing services.
8. Summarize the history of human services in America and identify important persons and movements
9. Conduct both directed and non-directed interviews for the purposes of obtaining personal historical information, determining eligibility for services and conducting a mental status evaluation.
10. Be able to demonstrate an understanding of ethical principles and apply them to professional practice.
11. Knowledgeable of the requirements for documentation in the organization and be able to manage these requirements efficiently.
12. Understand theoretical bases for different interventions as well as to initiate, develop and terminate interventions in a manner that enables continuous client growth.

HUMAN SERVICES CERTIFICATE (Day/Evening Program)

		CL	LAB	CR
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
BCPN101	Introduction to Computers	2	2	3
PSYN201	Human Growth and Development	3	0	3
HSV111	Introduction to Human Services	3	0	3
HSV120	Learning and Behavior	3	0	3
HSV123	Supportive Communication Skills	3	0	3
*HSV125	Individual Assessment and Planning	3	0	3
HSV190	Fieldwork I	1	8	3

Total 26 credits

* Please check course description for prerequisites for this course.

ASSOCIATE IN ARTS IN LIBERAL ARTS

(Day/Evening Program)

The mission of the Associate in Arts in Liberal Arts Degree Program is to encourage students to develop an understanding of self and to enrich their knowledge and skills to enjoy life in a changing global environment. To achieve this purpose, the liberal arts program provides students with a broad academic experience in fundamental areas of human knowledge, and it endeavors to orient them to the intellectual, social, and natural world. In the degree program students will study a coherent and substantive balance of English, mathematics, the sciences, the arts and humanities, and the social sciences. To graduate, students must successfully complete the College's requirements for all associate degree programs and a minimum of 64 credits of coursework in the distribution areas described below.

The Liberal Arts Program is representative of the first two years in a four-year baccalaureate degree program. By identifying early the four-year college to which they wish to transfer, and with the assistance of academic advisors, students will develop a program of study that meets their future plans. Requirements of the four-year college will guide some of the course selections chosen by students, but future plans and areas of personal interest will also contribute to students' program design.

In addition to the transfer function of the Liberal Arts Program, the liberal arts have a practical application by providing specific skills and abilities needed by students to be effective in their professional lives and in their

communities: 1) the ability to communicate effectively orally and in writing; 2) the ability to think critically; 3) the ability to analyze, apply, and synthesize ideas; 4) the ability to use technology as an information resource; 5) the ability to research and solve problems; and 6) the ability to work effectively as a member of a team.

Upon the completion of the degree in **Liberal Arts**, graduates will be able to:

1. Communicate clearly, both orally and in writing, and evaluate critically what they hear and read.
2. Demonstrate comprehension and skill with research methods and scientific inquiry.
3. Apply the logic of mathematical reasoning and demonstrate proficiency in computational methods and mathematical concepts and applications.
4. Apply critical thinking skills to solve problems, to evaluate arguments and chains of reasoning, and to interpret information.
5. Demonstrate the ability to use contemporary information technology to gather information resources for personal and professional obligations.
6. Demonstrate an understanding of and reasoning ability about contemporary ethical issues and values.

ASSOCIATE IN ARTS IN LIBERAL ARTS

FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
General Education: Group C Elective		3	0	3
General Education: Group E Elective		4	0	4
				15

SPRING SEMESTER

ENGN xxx	English Elective (ENGN 105 recommended)	3	0	3
General Education: Group F or G Elective		3	0	3
General Education: Group E Elective		4	0	4
General Education: Group D Elective		3	0	3
LIBN101	Liberal Arts and Career Preparation	1	0	1
XXXX xxx	Open Elective	3/4	0	3/4
				17/18

SECOND YEAR – FALL SEMESTER

General Education: Group B Elective		3	2	4
General Education: Group F or G Elective		3	0	3
General Education: Group C or D Elective		3	0	3
General Education: Group A – G Elective		3	0	3
XXXX xxx	Open Elective	3/4	0	3/4
				16/17

SPRING SEMESTER

General Education: Group B Elective		3	2	4
General Education: Group F or G Elective		3	0	3
LIBN295	Liberal Arts Portfolio: A Capstone Experience	3	0	3
OR				
LIBN290	Liberal Arts Internship: A Capstone Experience	1	8	3
General Education: Group A – G Elective		3/4	0	3/4
General Education: Group A – G Elective		3/4	0	3/4
				16/18

Total Credits 64/68

ASSOCIATE IN ARTS IN LIBERAL ARTS ENGLISH CONCENTRATION

(Day and Evening Program)

The mission of the Liberal Arts Degree Program with an English Concentration is to provide the first two years of preparation for students desiring to complete a bachelor degree that requires a strong background in English. The English Concentration provides an appropriate foundation for students who wish to transfer to four-year colleges and universities to continue their education in English, literature, communications, or related areas.

**Students may select electives from the following list:*

CMNN101	Introduction to Mass Communication
CMNN102	Principles of Communication
CMNN110	Introduction to Journalism
CMNN201	News Writing
ENGN102	College Composition II
ENGN103	Professional Writing and Presentations**
ENGN105	Introduction to Literature
ENGN109	Oral Communication
ENGN122	Technical Writing**
ENGN206	Writing Short Stories
ENGN220	Contemporary Dramatic Literature
ENGN235	Poetry Workshop
ENGN240	American Literature I
ENGN241	American Literature II
ENGN230	British Literature I
ENGN231	British Literature II
RDGN107	Critical Reading

*** This course may be too technical in nature to transfer into a pure English major of study.*

ASSOCIATE IN ARTS ENGLISH CONCENTRATION FIRST YEAR – FALL SEMESTER

	CL	LAB	CR
BCPN 101 Introduction to Computers	2	2	3
ENGN 101 College Composition	4	0	4
General Education: Group C Elective	3	0	3
General Education: Group E Elective	4	0	4
LEXN 101 Freshman Seminar	1	0	1
			15

SPRING SEMESTER

ENGN xxx English Elective*			
(see list below)	3	0	3
General Education: Group F or G Elective	3	0	3
General Education: Group E Elective	4	0	4
General Education: Group D Elective	3	0	3
ENGN xxx Open Elective	3	0	3
			16

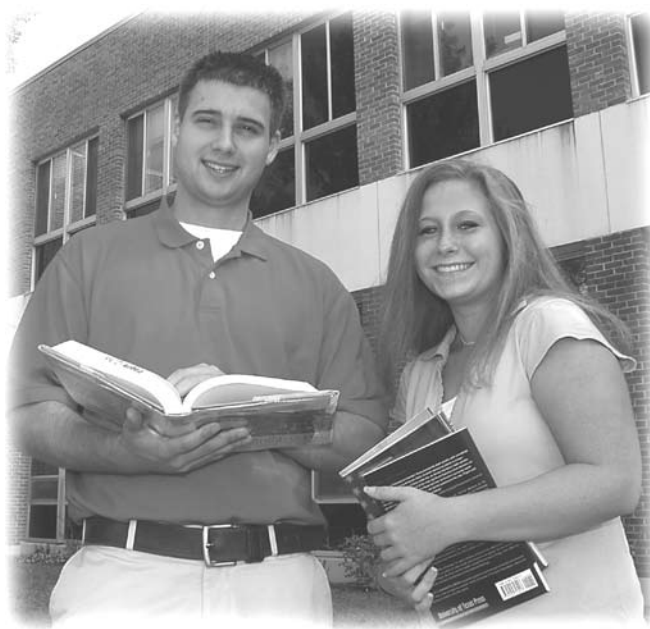
SECOND YEAR – FALL SEMESTER

General Education: Group B Elective	3	2	4
General Education: Group F or G Elective	3	0	3
General Education: Group C or D Elective	3	0	3
ENGN xxx English Elective*			
(see list below)	3	0	3
ENGN xxx English Elective*			
(see list below)	3	0	3
XXXX xxx Open Elective	3	0	3
			19

SPRING SEMESTER

General Education: Group B Elective	3	2	4
General Education: Group F or G Elective	3	0	3
ENGN xxx English Elective*			
(see list below)	3	0	3
ENGN xxx English Elective*			
(see list below)	3	0	3
ENGN xxx English Elective*			
(see list below)	3	0	3
			16

Total Credits 66



ASSOCIATE IN ARTS IN LIBERAL ARTS HISTORY CONCENTRATION

(Day and Evening Program)

The study of history is essential because it equips students with the historical perspective and the analytic skills needed to assess the complex issues facing today's society. All history courses at Nashua Community College are designed to accomplish three goals:

1. To provide students with knowledge of the past so they will have an historical context for making informed decisions about contemporary issues.
2. To cultivate essential analytical and communication skills.
3. To demonstrate the relevance of history in the lives of today's students.

For those students who intend to continue their study of history at a four-year college or university, the Liberal Arts (transfer degree) with a concentration in History offers the first two years of a bachelor of arts degree with a major in history.

The Liberal Arts Degree with a Concentration in History may be especially appropriate for students who plan to pursue careers in the fields of education, government, historic preservation, public history, or law.

An academic advisor will work with each student to design a specific program of courses that best meets the needs of the student. An early decision by a student as to the four-year college/university to which he/she plans to transfer will make the advising process more effective.

PLEASE NOTE:

Students should understand the history requirement expected by the four-year college to which they plan to transfer. For example, some institutions require two semesters of US history and two semesters of Western Civilization while other may be more flexible.

Students should be clear as to the world language requirement expected by the four-year college to which they plan to transfer. Some institutions require intermediate level - two years of study - in one world language.

ASSOCIATE IN ARTS HISTORY CONCENTRATION FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
BUSN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
HISN101	Western Civilization from Ancient Times through the 17th Century	3	0	3
MTHN106	Elementary Statistics	4	0	4
General Education: Group G Elective		3	0	3
LEXN 101	Freshman Seminar	1	0	1
				18

SPRING SEMESTER

ENGN xxx	English Elective* (see list below)	3	0	3
HISN102	Western Civilization Since the French Revolution	3	0	3
General Education: Group E Elective		3/4	0	3/4
General Education: Group F or G Elective		3	0	3
GEON101	Introduction to Geography	3	0	3
				15/16

SECOND YEAR – FALL SEMESTER

ECON201	Microeconomics OR	3	0	3
ECON202	Macroeconomics	3	0	3
POLN101	Introduction to Political Science OR	3	0	3
POLN102	American Government & Politics	3	0	3
HISN140	United States History from the Colonial Era to Reconstruction OR	3	0	3
HISNxxx	History Elective	3	0	3
General Education: Group B Elective		3	2	4
General Education: Group F or G Elective		3	0	3
				16

SPRING SEMESTER

HISN141	United States History Since Reconstruction OR	3	0	3
HISNxxx	History Elective	3	0	3
HISN285	Essential Skills of the Historian: A Capstone Experience**	3	0	3
General Education: Group C Elective		3	0	3
General Education: Group B Elective		3	0	3
Open Elective		3	0	3
				16

Minimum Credits 66

* Recommended courses include ENGN102, ENGN105, ENGN109.

** This course will be an introduction to historical writing and research methods. The summative assessment will require students to apply the historical method of inquiry to a topic of their choosing. They will then be asked to share their findings in a formal research paper.

ASSOCIATE IN ARTS IN LIBERAL ARTS MATHEMATICS CONCENTRATION

(Day/Evening Program)

The Associate in Arts with a Mathematics Concentration has been developed to provide the first two years of preparation for a student wishing to complete a bachelor degree with a major in mathematics or mathematics education.

In addition, the Mathematics Concentration provides a strong foundation for a student who wishes to transfer to a four-year institution to study engineering, physics, or related fields.

Calculus-based Physics I and Calculus-based Physics II are recommended as laboratory science courses to meet General Education requirements at Nashua Community College. Mathematics electives should be selected to meet the graduation requirements of the four-year institution to which a student plans to transfer.



ASSOCIATE IN ARTS MATHEMATICS CONCENTRATION

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
MTHN210	Calculus I	4	0	4
ENGN101	College Composition	4	0	4
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
BCPN101	Introduction to Computers	2	2	3
LEXN101	Freshman Seminar	1	0	1
				18

SPRING SEMESTER

MTHN211	Calculus II	4	0	4
General Education: Group A Elective		3	0	3
General Education: Group D Elective		3	0	3
General Education: Group A – G Elective		3/4		3/4
General Education: Group F or G		3	0	3
				16/17

SECOND YEAR - FALL SEMESTER

Group E: Math Elective above MTHN211*		4	0	4
Group E: Math Elective above MTHN211*		4	0	4
General Elective: Group B Elective**		3	2	4
General Education: Group C or D Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				18

SPRING SEMESTER

Group E: Math Elective above MTHN211*		4	0	4
General Education: Group B Elective**		3	2	4
General Education: Group C or D Elective		3	0	3
General Education: Group A – G Elective		3	0	3
				14

Total Credits 66/67

* *Multivariate Calculus; Linear Algebra; Differential Equations; Probability and Statistics; or Math Language, Logic and Proof.*

** *Recommended Lab Science is Calculus-Based Physics I and Calculus-Based Physics II.*

ASSOCIATE IN ARTS IN LIBERAL ARTS PEACE & JUSTICE STUDIES CONCENTRATION

(Proposed Program for Fall 2009)

Nashua Community College proposes to offer a Peace and Justice Studies Concentration within the Liberal Arts degree program. As a community college, this program will offer a direct link to make the community a safer and more livable place. Unlike other peace and justice programs, the proposed program will be community-based.

The Peace and Justice Studies Concentration has four major aims:

1. To prepare community members and program graduates to relate interdisciplinary theories and practices of peace and justice to their own lives and to real-world problem-solving;
2. To promote the development of peace and justice efforts at NCC, as well as to "reach out" to the community and larger society;
3. To recognize the potential of conflict as an opportunity for possible constructive outcomes, and to develop alternative structures to everyday violence through education, research, and action; and
4. To encourage academic exploration of the growing field of Peace and Justice Studies throughout the nation and the world.

Upon the completion of the degree in **Liberal Arts with a concentration in Peace and Justice Studies**, graduates will be able to:

1. Explore in an interdisciplinary manner the obstacles, conditions, and paths to achieve peace in a variety of settings.
2. Apply critical thinking, analytical, and creative skills in the resolution of situations of conflict.
3. Apply intellectual and experiential inquiry to the fundamental concerns about violence in our society.
4. Demonstrate entry-level skills for conflict resolution and mediation in community settings.

PLEASE NOTE:

Students should be clear as to the world language requirement expected by the four-year college to which they plan to transfer. Some institutions require intermediate level - two years of study - in one world language.

Students should be clear as to the science requirement expected by the four-year college to which they plan to transfer. Many institutions require at least one semester of a laboratory science course. Liberal arts students must have eight credits of science to graduate.

While ENGN105, Introduction to Literature, is the recommended second English course in the program, the academic advisor may approve a substitution if the substitution will satisfy the requirements of the four-year college to which the student wishes to transfer.

ASSOCIATE IN ARTS IN LIBERAL ARTS PEACE & JUSTICE CONCENTRATION FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
BUSN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
General Education: Group E Elective		4	0	4
General Education: Group F or G Elective		3	0	3
PJSN101	Introduction to Peace and Justice Studies	3	0	3
LEXN101	Freshman Seminar	1	0	1
				18

SPRING SEMESTER

ENGN105	Introduction to Literature	3	0	3
OR				
ENGNxxx	English Elective	3	0	3
General Education: Group E Elective		4	0	4
General Education: Group F or G Elective		3	0	3
General Education: Group D Elective		3	0	3
PJSN105	Foundations of Conflict Resolution	3	0	3
				16

SECOND YEAR - FALL SEMESTER

General Elective: Group B Elective		3	2	4
General Education: Group F or G Elective		3	0	3
PSJN108	Theories of Conflict and Conflict Resolution	3	0	3
PJSN201	Group Facilitation Theory and Practice	3	0	3
SOCN101	Introduction to Sociology	3	0	3
				16

SPRING SEMESTER

General Education: Group B Elective		3	2	4
General Education: Group C or D Elective		3	0	3
PSJNxxx	Peace and Justice Studies Elective	3	0	3
PJSN210	Theory and Practice of Mediation	3	0	3
PJSN290	Peace and Justice Internship: A Capstone Experience	3	0	3
				16

Total 66 Credits

ASSOCIATE IN ARTS IN LIBERAL ARTS PSYCHOLOGY CONCENTRATION

(Day and Evening Program)

The Associate in Arts with a Psychology Concentration has been developed to provide the first two years of preparation for a student wishing to complete a bachelor degree with a major in psychology.

ASSOCIATE DEGREE IN LIBERAL ARTS PSYCHOLOGY CONCENTRATION

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN 101	College Composition	4	0	4
BCPN 101	Introduction to Computers	2	2	3
PSYN 101	Introduction to Psychology	3	0	3
MTHN 106	Elementary Statistics	4	0	4
LEXN 101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

PSYN 201	Human Growth and Development	3	0	3
PSYN 202	Personality Psychology	3	0	3
HUMN 101	Introduction to Humanities	3	0	3
XXXXxxx	Open Elective	3	0	3
General Education: Group F or G Elective		3	0	3
General Education: Group A Elective		3	0	3
				18

SECOND YEAR - FALL SEMESTER

PSYN 210	Abnormal Psychology	3	0	3
General Education: Group E Elective		4	0	4
SCIN 101	Biology I	3	1	4
PSYNxxx	Psychology Elective	3	0	3
XXXXxxx	Open Elective	3	0	3
				17

SPRING SEMESTER

PSYN 220	Research Methods	3	0	3
PSYN 207	Social Psychology	3	0	3
General Education: Group F or G Elective		3	0	3
General Education: Group D Elective		3	0	3
General Education: Group B Elective (must have a lab)		3	2	4
				16

Total 66 Credits



ASSOCIATE IN SCIENCE IN MACHINE TOOL TECHNOLOGY

(Day/Evening Program)

At the heart of our mechanized world is the Machine Tool industry requiring skilled technicians to carry out new ideas and plans in the production of all types of manufactured parts. Many of these skilled technicians can earn more than \$50,000 a year depending on experience and ability.

Machine Tool students receive applied training in basic concepts of machine tool processes during the first year.

In the second year, students will receive training in such specialized areas as tool and cutter grinding, production machining and Computer Aided Manufacturing (CAM), Computer Numerical Control (CNC) programming, setup and operation.

Upon the completion of the degree in **Machine Tool Technology**, the graduate will be able to:

1. Analyze and interpret drawings using ANSI Y 14.5M (1994) standards of Geometric Dimensioning and Tolerancing (GDT).
2. Accurately measure parts using precision measuring tools to maintain quality control of machined parts.
3. Explain casting, forging, welding, molding, heat treatment, powdered metal, and stamping manufacturing methods.
4. Set-up and operate surface grinders, manual millers and manual lathes to produce parts to specifications.
5. Identify and explain positioning systems, program formats and machine axes used on CNC machines.
6. Set-up and operate CNC lathes and CNC millers necessary to produce parts to specification.
7. Write programs and machine parts through the use of CAD-CAM software.
8. Manually write basic CNC programs using G and M codes.
9. Set up and operate: a cylindrical grinder and a ram type electrical discharge machine (EDM)
10. Calculate stock requirements and specify and order materials and tools,
11. Conduct oneself appropriately in a job interview.
12. Manage a project involving machining, assembly and timely completion.
13. Work cooperatively on a team project.
14. Interpret Material Safety Data Sheets (MSDS) used in machining fluids and materials.
15. Apply safety procedures appropriate to running a modern machine shop.
16. Explain Statistical Process Control (SPS) and apply it appropriately.
17. Design work holding fixtures and vise jaws to machine parts.
18. Heat-treat tool steels and alloy steels to a specified Rockwell hardness
19. Appropriately identify and use collets, chucks and work-holding devices.
20. Identify and use appropriate cutting tool materials for a given application.
21. Solve practical trigonometric problems related to the geometry of parts.
22. Communicate effectively about machining problems and issues involved in the production of parts.
24. Utilize principles of physics related to machines and machining.

Employment opportunities include CNC specialists, tool and die makers, mold makers, technical support technicians, field service representatives, and general machinists.

For students looking to pursue an education beyond the Associate Degree, this program may transfer to selected Bachelor Degree programs.

In addition to the general admission requirements, applicants should be aware of the following criteria:

1. A minimum of high school Algebra I is recommended.
2. Good skills in written English are required.
3. Other high school courses such as physics and computer programming are recommended.
4. It is recommended that senior students purchase a basic machinist tool kit at an approximate cost of \$600 - \$800.

ASSOCIATE IN SCIENCE IN MACHINE TOOL TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
MTTN101	Manufacturing Processes	3	0	3
MTTN111	Machine Tool Processes and Theory I	3	9	6
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
General Education: Group E		4	0	4
				18

SPRING SEMESTER

MTTN122	MTP and Theory II	3	9	6
CADN131	Technical Drawing	2	3	3
BCPN101	Introduction to Computers	2	2	3
MTTN211	Principles of Numerical Control	2	3	3
General Education: Group B Elective		4	0	4
				19

SECOND YEAR - FALL SEMESTER

MTTN231	Advanced MTP and Theory I	3	12	7
MTTN223	Computer Aided Manufacturing (CAM)	2	3	3
General Education: Group B Elective		3	0	3
General Education: Group C Elective		3	0	3
				16

SPRING SEMESTER

MTTN232	Advanced MTP and Theory II	3	12	7
General Education: Group A Elective		3	0	3
General Education: Group D Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				16

Total 69 Credits

COMPUTER NUMERICAL CONTROL (CNC) CERTIFICATE

(Day/Evening Program)

This program is designed to prepare a student with the basic skills necessary to begin a career in the NC or CNC operations area. Courses in this program can be transferred into the Associate in Science Degree in Machine Tool Technology.

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
MTTN101	Manufacturing Processes	3	0	3
CADN131	Technical Drawing	2	3	3
MTTN111	Machine Tool Processes and Theory I	3	9	6
MTTN122	Machine Tool Processes and Theory II	3	9	6
MTTN211	Principles of Numerical Control	2	3	3
NUCN103	CNC Programming and Operation	2	2	3
MTTN223	Computer Aided Manufacturing	2	3	3
General Education: Group B Elective		4	0	4
General Education: Group E Elective*		4	0	4

Total 38 credits

* MTHN106, 110, 115 or 120 is recommended

MACHINE TOOL TECHNOLOGY CERTIFICATE

(Day/Evening Program)

This certificate will prepare students to become machine operators in the machine tool industry. The courses involved in this certificate program can be applied to the CNC diploma or the Associate Degree in Machine Tool Technology.

Prerequisite: Placement Test Score equivalent to MTHN099 or successful completion MTHN097.

In addition to the general admission requirements, the applicant should be aware of the following criteria:

1. An aptitude in mathematics is beneficial.
2. Good skills in written English are required.

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
MTTN101	Manufacturing Processes	3	0	3
CADN131	Technical Drawing	2	3	3
MTTN111	Machine Tool Processes and Theory I	3	9	6
MTTN211	Principles of Numerical Control	2	3	3
MTTN122	Machine Tool Processes and Theory II	3	9	6

Total 24 Credits



MASSAGE THERAPY CERTIFICATE

(Evening Program)*

The Massage Therapy Certificate Program is designed to prepare the student to enter the profession of therapeutic massage. It meets all State of New Hampshire requirements for licensure. Students gain a basic understanding of anatomy and physiology, as well as various massage interventions for general health and well-being. Electives are provided to make Nashua Community College massage graduates unique and versatile.

Completion of the program will prepare graduates to take both the National Certification Examination for Massage and Bodywork and the State of NH practical (demonstration) exam required for licensure as a Massage Therapist. Students may complete the program in one year (three semesters) or longer.

Students must be matriculated in the Massage Therapy Certificate program at NCC to register for any MSTN course. The following exceptions will be considered based on space availability: Students enrolled at another educational institution in Massage Therapy; Licensed or Certified Massage Therapists.

The applicants for Massage Therapy must meet the College requirements for admission. They must also complete Standard First Aid and CPR courses at their own expense prior to their internship.

National and State of New Hampshire licensing exams require a felony free background over the ten years preceding license application. For the first quarter of 2008, our graduates have an 87% pass rate in obtaining their licenses.

In order to satisfy certification requirements, two electives are required within the program.

The program is subject to constant review in an effort to meet current and future requirements of this quickly growing field of study.

**Some courses are offered during the day.*



MASSAGE THERAPY CERTIFICATE

FIRST SEMESTER

		CL	LAB	CR
SCIN111	Basic Human Anatomy and Physiology	3	2	4
*MSTN101	Swedish Massage I	2	3	3
MSTN119	Massage Business Practices	3	0	3
MSTNXXX	Elective **			2/3
				12/13

SECOND SEMESTER

MSTN111	Musculo-Skeletal Study	1	2	2
MSTN121	Swedish Massage II	2	3	3
MSTN131	Pathology	3	0	3
MSTN141	Oriental Theory and Concepts	3	0	3
MSTNXXX	Elective **			2/3
				13/14

THIRD SEMESTER

AHLN123	Kinesiology	2	3	3
MSTN126	Massage Rules and Ethics	1	0	1
MSTN133	Clinical Evaluation and Treatment	2	3	3
MSTN135	Deep Tissue Massage	1	3	2
MSTN190	Clinical Internship	0	3	1
MSTNXXX	Elective **			2/3
				12/13

Minimum of 35 credits

Massage Electives (Choose two):

(Students may choose one elective from Complementary Health and Wellness)

		CL	LAB	CR
*MSTN105	Spa Techniques	2	0	2
*MSTN124	Acupressure	3	0	3
*MSTN132	Sports Massage	2	0	2
MSTN134	Self-Care and Stress Management	2	0	2
*MSTN136	Shiatsu	2	0	2
*MSTN137	Pre/Post Natal Massage	2	0	2
*MSTN139	Reflexology	2	0	2
*MSTN143	Chair Massage	2	0	2
MSTN145	Aromatherapy	2	0	2
*MSTN147	Elder Massage	2	0	2
*MSTN148	Somatic Massage	2	0	2
*MSTN149	Russian Massage	2	0	2
*MSTN153	Trigger Point Therapy and Myofascial Release	2	0	2
SCIN120	Nutrition	3	0	3

* Please check course descriptions for prerequisites and corequisites.

** Students must take a minimum of two (2) electives.

ASSOCIATE IN SCIENCE IN MECHANICAL DESIGN TECHNOLOGY

(Day/Evening Program)

Mechanical Design Technology responds to industry needs for trained individuals who can follow the design process from inspiration to the final production design of manufactured products. The Mechanical Design Technology program prepares specialists who are capable of integrating all the steps of the design process.

The mechanical designer requires knowledge in many areas including Computer Aided Drafting and Design, Machine Shop, Robotics and Machine Components.

Foundation courses will provide knowledge of physics, mathematics, machine shop practices, machine theory and robot automation programming. Subsequent courses build upon this basic knowledge to develop applications related to modern machine design.

To prepare students for the rapid pace of technological changes in the workplace, the Mechanical Design Technology program seeks to develop long-term sustainable design and problem-solving capabilities.

Mechanical design jobs are expected to increase by nearly one-third from 2000 - 2010 according to the U.S. Department of Labor. While manufacturing has had its struggles in recent years, demand is expected to be strong for mechanical designers as companies emphasize high-quality and safe products that are easy to use. High technology products in medicine, transportation, and other fields, and growing global competition among businesses are expected to keep designers busy.

Upon the completion of the degree in **Mechanical Design Technology**, graduates will be able to:

1. Evaluate and apply information technology effectively.
2. Generate engineering drawings that conform to industry drafting standards.
3. create 3D CAD models of parts and assemblies that meet design requirements.
4. Use 3D CAD models for strength analysis, animation, motion analysis, machining, and rapid prototyping.
5. Specify and evaluate manufacturing processes and materials used for product development.
6. Produce complete drawing packages.
7. Design and manufacture an industrial product.
8. Develop the organizational skills required to meet design and production deadlines.

ASSOCIATE IN SCIENCE IN MECHANICAL DESIGN TECHNOLOGY

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
CADN111	CADD I**	3	6	5
MTTN101	Manufacturing Processes	3	0	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				13

SPRING SEMESTER

CADN112	CADD II	3	6	5
MTTN118	Machining Technology	2	3	3
MTHN110	Algebra and Trigonometry	4	0	4
MDTN110	Automation Programming	3	1	3
SCIN150	Physical Science	3	2	4
				19

PROPOSED SECOND YEAR - FALL SEMESTER

MDTN280	Capstone Preparation	3	0	3
EMTN101	Electronics	2	2	3
EMTN203	Applied Mechanics I	3	1	3
General Education: Group A Elective		3	0	3
General Education: Group D Elective		3	0	3
				15

SPRING SEMESTER

MDTN285	Design Capstone Project	3	2	4
EMTN204	Fluid Power Design	2	1	2
EMTN210	Applied Mechanics II	2	1	2
Open Elective		3	0	3
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				17

Total 64 credits

* This course may be waived by Accuplacer test score or by Math Department placement exam.

** Students must earn a satisfactory score on the Credit by Exam or they must enroll in BCPN101.

CADD CERTIFICATE

(Day/Evening Program)

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
CADN111	CADD I	3	6	5
CADN112	CADD II	3	6	5
CADN215	CADD III	3	6	5
CADN216	CADD IV	3	6	5

Total 23 credits

ASSOCIATE IN SCIENCE IN NURSING

(Day Program)

The Department of Nursing offers the opportunity to earn an Associate of Science degree in Nursing, in preparation for the licensing exam (NCLEX-RN) to become a Registered Nurse. The program has Initial Approval of the New Hampshire Board of Nursing and Initial Accreditation from the National League of Nursing Accrediting Commission, Inc. (NLNAC), 61 Broadway, 33rd Floor, New York, NY 10006, 1-800-669-1656 x153, www.nlnac.org.

Upon completion of the degree in **Nursing**, graduates will be able to:

1. Plan and deliver safe, goal-oriented individualized nursing care to patients and families by integrating the nursing process with contemporary nursing knowledge and skills.
2. Communicate clearly in goal-oriented, culturally-sensitive, caring, concise, and timely ways using written, oral, non-verbal, and electronic modalities.
3. Apply principles of teaching/learning to assist patients with primary, secondary, and tertiary prevention of health problems
4. Use time, resources, and technology to deliver nursing care in a way that is safe, effective, and efficient.
5. Practice collaboratively on the health care team within the ethical, legal, and regulatory frameworks of professional nursing.

2007 graduates had an 87% first time pass rate on the New Hampshire Licensure Examination for Registered Nurses.

All Applicants for Admission to the Associate of Science in Nursing Program

Applicants seeking admission to the Associate of Science in Nursing Program must meet all general admission requirements of the College, as well as provide evidence of the following:

- High school or college credits in biology, algebra, chemistry, and English with grade of C or better.
- High performance on the Test of Essential Academic Skills (TEAS) of the Assessment Technologies Institute (www.atitesting.com) relative to the applicant pool.
- Completion of SCIN201 with a grade B- or higher.
- Two letters of professional reference on forms provided by the College.
- Ability to meet the Health, Character, and Technical Standards for the ASN Program*.
- An applicant who has attended another nursing program within the past five years must submit a reference from the director of the nursing program at the previous school.

- Submit all application materials by December 31 of the year preceding entry to the program. Incomplete applications will not be considered.

General Admission Requirements

- High school transcript or GED
- Application form with \$10.00
- Take Accuplacer if required

ESOL Applicants

ESOL applicants must attain a minimum score of 83 on the Test of English as a Foreign Language (TOEFL iBT) as advised by the National Council of State Boards of Nursing (www.ncsbn.org).

Interview

Applicants demonstrating the above requirements will be invited for a personal interview.

Selection Criteria

Preference will be given to applicants who:

- Are New Hampshire residents
- Have a greater number of non-nursing courses completed relative to the applicant pool.
- Attain higher scores relative to the applicant pool on the TEAS and TOEFL iBT (if required) relative to the applicant pool.
- Demonstrate balanced strengths in Reading, Math, Science, and English on the TEAS.
- Have a history of academic and / or work success.
- Submit a satisfactory background check when directed by a letter of conditional acceptance to the nursing program.

Admission decisions will be made by the Vice President of Student Services and the Chairperson of the Department of Nursing. Enrollment capacity is limited and admission is competitive. Qualified students who are not accepted in the initial selection process may be assigned to a prioritized waiting list based on the above criteria. They may be subsequently admitted if an opening becomes available prior to the beginning of the fall semester. The waiting list will be discarded once classes begin. Students still desiring admission must then reapply following the above procedure. Highly qualified students who have taken few or no non-nursing courses may be offered admission to a three-year program of study.

ASSOCIATE DEGREE NURSING, Con't.

(Day Program)

Transfer Credit

Transcripts of previous college credits may be submitted to be evaluated for transferability. Science, Nursing, and Introduction to Psychology credits must be no more than five years old with a minimum grade of B-.

*Health, Character, and Technical Standards for the Associate of Science in Nursing Program

Technical standards have been established to inform the student of minimum standards needed to satisfactorily function in the program and ultimately in the profession. Applicants who feel they may not be able to meet one or more of the technical standards listed below should contact program officials to discuss individual cases. All academically qualified candidates will be considered for admission provided the technical standards can be met with reasonable accommodations.

The College must ensure that patients/clients of clinical affiliates are not placed in jeopardy by students during learning experiences. Therefore, students in service learning and clinical experiences must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and rapidly changing circumstances that characterize the responsibilities of patient/client care. Furthermore, the student is expected to have the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with patients, their families, agency staff, faculty, and classmates.

Applicants must be in good physical and mental health to meet program objectives. Attendance at classes and clinical experiences is expected. Technical standards are listed below:

1. Sufficient hearing to assess patient needs, physiological signs, understand instructions, identify emergency signals, assess body functions, and engage in telephone conversation.
2. Sufficient visual acuity to observe patients, manipulate equipment, interpret data, ensure a safe environment, identify color changes, read fine print/writing, and do fine calibrations.
3. Sufficient speech and language ability to express, comprehend, and exchange information and ideas in English verbally, non-verbally, and in writing, and to interact clearly and logically with patients, family members, physicians, nurses, faculty, peers, and other ancillary medical personnel.

4. Sufficient tactile ability to assess pressure, temperature, position, vibration, and movement.
5. Ability to work with frequent interruptions, to respond appropriately in emergencies or unexpected situations, and to cope with extreme variations in workload and stress levels.
6. Sufficient emotional intelligence to exhibit empathy and compassion, to maintain productive relationships in classroom and clinical settings, and to integrate direction, instruction, and criticism into behavior.
7. Sufficient strength, endurance, and motor coordination to perform the following physical activities: participation in lengthy classroom activities; fine and gross motor skills to carry out procedures; ability to safely and frequently handle, lift, and/or carry equipment and patients up to fifty pounds; stamina to complete an eight to twelve hour work shift; and ability to perform CPR.

Upon Acceptance

It is understood that acceptance is conditional upon submission of satisfactory evidence in the form of the following documents no later than two weeks prior to beginning the first class.

- Evidence of current health status (physical exam form).
- Immunity or immunization against measles, mumps, rubella (MMR), varicella, and hepatitis B.
- Two-year certification in cardiopulmonary resuscitation (CPR) at the healthcare provider level (American Red Cross, CPR for the Professional Rescuer).
- Mantoux testing to assess for prior tuberculosis exposure.
- Personal medical insurance.
- A fee for nursing liability insurance must accompany tuition prior to the first clinical course.
- Applicants with latex allergies are advised to seek professional medical consultation.
- Additional requirements include uniform, stethoscope, watch with a second hand, text books, and testing materials.
- The Background Check is due within thirty days of receipt of conditional acceptance. Instructions will be provided.

ASSOCIATE DEGREE NURSING, Con't.

Criminal / Legal Records

Licensing regulations differ among states and may restrict licensure of applicants who have been involved in civil or criminal legal proceedings. Questions about licensing restrictions should be addressed to the New Hampshire Board of Nursing, 21 South Fruit Street, Suite 16, Concord, NH 03301 or to the Board of Nursing in the state in which licensure is desired. An annual Background Check may be required prior to attendance at clinical agencies. Please contact the Board of Nursing in the state in which practice is planned regarding licensure requirements, since there are differences among states. Completion of the program does not guarantee RN licensure.

Criteria for Progression in the Program

The curriculum includes a general education component that supports courses in nursing. Students must earn a minimum grade of B- in Anatomy and Physiology I and II, Microbiology, Introduction to Psychology and in all nursing courses in order to progress in the program. Courses in nursing are taken sequentially and most of them include a clinical component. Degree requirements must be completed within five years of entering the first nursing course. Students must anticipate a schedule of three or four days a week for the nursing courses with a possibility of evening clinical assignments. Employment of more than twenty hours per week is discouraged due to the commitment required for success in the program. Many students choose to take most or all of the non-nursing courses prior to beginning the first course in nursing. Students who do not meet criteria for progression may seek re-entry at the point of last success on a space-available basis. A student may be granted only one opportunity to re-enter the program.

Continuing Education

Graduates of the program are encouraged to earn the Bachelor and/or Master of Science in Nursing. Articulation agreements are maintained with the University of New Hampshire and Franklin Pierce University. Students planning to continue their education toward the Bachelor's or Masters of Science in Nursing should plan their program of study with an academic advisor from the Department of Nursing. Further information can be obtained from the respective programs or from the Chair of the Department of Nursing.

ASSOCIATE IN SCIENCE IN NURSING (TWO YEAR PLAN)

PREREQUISITE

		CL	LAB	CR
SCIN201	Anatomy and Physiology I	3	3	4
				<u>4</u>

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
SCIN202	Anatomy and Physiology II	3	3	4
PSYN101	Introduction to Psychology	3	0	3
NURN112	Foundations for Nursing Practice	4	12	8
				<u>15</u>

SPRING SEMESTER

MTHNxxx	Elective Group E (MTHN106 suggested)	4	0	4
ENGN101	College Composition	4	0	4
NURN114	Medical-Surgical Nursing I*	6	12	5
NURN115	Behavioral Health Nursing*	4	6	3
				<u>16</u>

SECOND YEAR - FALL SEMESTER

General Education: Group A Elective		3	0	3
SCIN215	Microbiology	3	4	4
NURN212	Medical-Surgical Nursing II	4	18	10
				<u>17</u>

SPRING SEMESTER

*NURN221	Maternal-Child Health Nursing	6	15	6
*NURN222	Medical-Surgical Nursing III	4	18	5
NURN229	Issues, Trends and Management	1	0	1
General Education: Group F or H Elective		3	0	3
				<u>15</u>

Total 67 credits

* 8 week course

ASSOCIATE DEGREE NURSING, Con't.

ASSOCIATE DEGREE NURSING THREE-YEAR PLAN (Day Program)

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
SCIN201	Anatomy and Physiology I	3	3	4
ENGN101	College Composition	4	0	4
General Education: Group E Elective*		4	0	4
				12

SPRING SEMESTER

SCIN202	Anatomy and Physiology II	3	3	4
PSYN101	Introduction to Psychology	3	0	3
General Education: Group A Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				13

SUMMER SESSION

SCIN215	Microbiology	3	3	4
				4

SECOND YEAR - FALL SEMESTER

NURN112	Foundations for Nursing Practice	4	12	8
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SPRING SEMESTER

**NURN114	Medical-Surgical Nursing I	6	12	5
**NURN115	Behavioral Health Nursing	4	6	3
				8

THIRD YEAR - FALL SEMESTER

NURN212	Medical-Surgical Nursing II	4	18	10
				10

SPRING SEMESTER

**NURN221	Maternal-Child Health Nursing	6	15	6
**NURN222	Medical Surgical Nursing III	4	18	5
NURN229	Issues, Trends and Management	1	0	1
				12

Total 67 credits

* MTHN 106 suggested

** Eight week course



Advanced Placement for Licensed Practical Nurses

Licensed Practice Nurses

- Licensed Practical Nurses (LPN) with college credits in nursing taken in the past five years and current nursing practice may be able to transfer up to eight credits in nursing in lieu of NURN112.
- NLN ACE exam with a minimum score of 80 may be taken in lieu of NURN112 if the basic practical nurse program did not grant college credit.
- A three-credit transition course to bridge the LPN - RN programs, NURN118, is required for those who receive credit in lieu of NURN112.
- Graduates of practical nursing programs who meet admission criteria and have not yet taken NCLEX-PN may be considered.
- All general admission requirements of the College and admission requirements to the nursing program must be met, including scores from the Test of Essential Academic Skills.
- College credits in Anatomy and Physiology I (4 credits) and Introduction to Psychology (3 credits) with minimum grades of B- are required as pre-requisites to NURN114.



ADVANCED PLACEMENT PROGRAM FOR LPNs

PRE-REQUISITES (Transfer credit or NLN ACE score of 80 or higher in lieu of NURN112)

		CL	LAB	CR
SCIN201	Anatomy & Physiology I	3	3	4
PSYN101	Introduction to Psychology	3	0	3
Transfer Credit in lieu of NURN112				8
				15

FIRST YEAR–FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
NURN118	LPN to RN Transition	3	0	3
SCIN202	Anatomy & Physiology II	3	3	4
				11

FIRST YEAR–SPRING SEMESTER

		CL	LAB	CR
General Education: Group E Elective*		4	0	4
NURN114	Medical-Surgical Nursing I**	6	12	5
NURN115	Behavioral Health Nursing**	4	6	3
				12

SECOND YEAR–FALL SEMESTER

		CL	LAB	CR
General Education: Group A Elective		3	0	3
SCIN215	Microbiology	3	4	4
NURN212	Medical-Surgical Nursing II	4	18	10
				17

SECOND YEAR–SPRING SEMESTER

		CL	LAB	CR
General Education: Group F or H Elective		3	0	3
NURN221	Maternal-Child Health Nursing**	6	15	6
NURN222	Medical Surgical Nursing IV**	4	18	5
NURN229	Issues, Trends and Management	1	0	1
				15

Total 70 credits

* MTHN106 suggested

** Eight (8) week course

ASSOCIATE IN SCIENCE IN PARALEGAL STUDIES

(Day/Evening Program)

The Paralegal Studies Program provides students with the training necessary to seek and begin a career as a paralegal. Under the supervision of a lawyer, paralegals will: Gather background information, interview clients and witnesses; perform legal research and writing; draft legal documents and contracts; and assist attorneys in preparing for court and at trial.*

All paralegal courses are offered in both day and evening sessions during the year. For the student looking to pursue an education beyond the Associate degree, this program is designed to provide transferability to Bachelor degree programs.

All paralegal courses at Nashua Community College are taught by *experienced attorneys*.

For the Mission Statement, Goals and Objectives of the Paralegal Studies Program of Nashua Community College, go to the Paralegal Studies Program web page on the College website at www.nashuacc.edu.

Nashua Community College is an Institutional Member of the American Association for Paralegal Education and a Sustaining Member of the Paralegal Association of New Hampshire.

A criminal conviction may preclude employment as a paralegal. A criminal record check may be required for the Paralegal Internship and/or employment by the organization, law firm, or government agency, and which is the sole responsibility of the student.

* Paralegals may not provide legal services directly to the public except as permitted by law.



All faculty teaching in the NCC Paralegal Program are experienced attorneys.

Upon the completion of the degree in **Paralegal Studies**, graduates will:

1. Possess the knowledge, skills, values and attitudes necessary to work effectively, competently, ethically and successfully as a paralegal/legal assistant in a law office/firm, corporation/business entity, government agency, or the public sector.
2. Understand their role as paralegals and how law is practiced in the various settings in which paralegals work, as well as the ethical duties and responsibilities of lawyers and paralegals for ethical conduct, ethical decision making, competence, and professionalism in the delivery of legal services.
3. Be adequately educated in the fundamental and necessary principles of law in each of the specialty law courses, in the ethical rules and professional responsibility governing attorneys; as well as in the practical knowledge necessary for paralegals to work successfully in the field under the supervision of an attorney.
4. Have been provided a well-rounded education which includes communication, quantitative, and analytical skills in addition to the knowledge of the law and legal field.
5. Possess the basic and necessary organizational skills and time management skills as they are applied in the legal profession, including filing, organizing, and categorizing documents and client files, calendaring, billing, prioritizing work, and using checklists for work done and to be done;
6. Be prepared to engage in proper legal analysis and legal reasoning; then apply same to effective and thorough legal research using traditional and technology based research tools; and then to be able to effectively communicate the results of same in professional oral presentations and written legal work product.
7. Be prepared to draft legal documents, forms, and follow legal procedures.
8. Have a working understanding of the purposes and functions of state and federal governments and court systems, and civil litigation and criminal procedures from inception of a case, through trial, judgment, and appeal.
9. Be prepared to perform proper and thorough investigation and interviewing of clients and witnesses in legal matters and cases they are assigned as paralegals.
10. Possess effective written and oral communication skills necessary in dealing with other persons and entities with whom the paralegal will have contact in the legal profession work environment.
11. Have an understanding of the alternatives to litigation and court proceedings (ADR) including mediation, and all forms of voluntary, mandatory, binding and non-binding arbitration.
12. Possess computer skills and demonstrate a working knowledge of integrated software applications, and be aware of technology utilized in the legal field, including the use of computers, databases, and software for word processing, office systems, case management, case/trial presentations, and legal research.
13. Understand and apply basic bookkeeping and accounting terminology and methods.
14. Be trained in the job search process, from job research, through resume and cover letter preparation, interview preparation and skills, and interview follow-up.
15. Understand and have an appreciation of different cultures, backgrounds, and traditions among different groups of people, and inculcate values of, respect for, and a real sensitivity to persons of backgrounds other than their own.

ASSOCIATE IN SCIENCE IN PARALEGAL STUDIES

FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ACCN101	Financial Accounting I	4	1	4
PLSN101	Basic Legal Studies	3	0	3
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshman Seminar	1	0	1
				15

SPRING SEMESTER

ENGN103	Professional Writing and Presentations	3	0	3
PLSN102	Legal Research and Writing	3	0	3
PSYN130	Human Relations	3	0	3
PLSN230	Contracts and Business Organizations	3	0	3
General Education: Group E Elective*		4	0	4
				16

SECOND YEAR - FALL SEMESTER

ENGN109	Oral Communication	3	0	3
PLSN210	Litigation & Trial Preparation	3	0	3
PLSN220	Real Estate Law	3	0	3
HISN241	American Constitutional History	3	0	3
BCPN119	Software Applications	2	2	3
General Education: Group F or G Elective		3	0	3
				18

SPRING SEMESTER

PLSN240	Probate, Estates and Trusts	3	0	3
PLSN250	Family Law	3	0	3
PLSN260	Criminal Law	3	0	3
PLSN290	Paralegal Internship and Seminar	1	8	3
OR				
PLSN280	Paralegal Capstone	3	0	3
General Education: Group B Elective		3	0	3
				18

Total 67 credits

In all paralegal specialty courses, the students will not only be taught the essential knowledge of the law, but will be also given the practical knowledge necessary for employment and success as a paralegal.

Personalized advising and career counseling are always available to all our paralegal students. The Program Coordinator also actively assists our qualified students and graduates (both Degree and Certificate) in obtaining full-time career positions through the Paralegal Internship program, or through contacts in the legal community.

To be successful in the Paralegal Studies Program, students should have an interest in the law, must be diligent and committed to their studies, be dependable, have good communication skills, be well-organized; or be willing and able to develop all these skills and qualities.

PARALEGAL CERTIFICATE (Day/Evening Program)

		CL	LAB	CR
ENGN101	College Composition	4	0	4
PLSN101	Basic Legal Studies	3	0	3
PLSN102	Legal Research & Writing	3	0	3
PLSN230	Contracts and Business Organizations	3	0	3
PLSN220	Real Estate Law	3	0	3
PLSN210	Litigation & Trial Preparation	3	0	3
PLSN240	Probate, Estates and Trusts	3	0	3
PLSN250	Family Law	3	0	3
PLSN260	Criminal Law	3	0	3

Total 28 Credits

NCC Paralegal Studies Club

The Paralegal Club of Nashua Community College is an officially sanctioned student organization at the College. The Paralegal Club has elected student officers and an elected student representative to the NCC Student Senate- the official student government body at the College. The Paralegal Program Coordinator serves as the Club's Faculty Advisor

The Paralegal Club is made up of students interested in the paralegal profession, regardless of their program of study; and it meets bi-weekly over lunch during the academic year.

The purpose of the NCC Paralegal Club is to allow student members to gain exposure to the field of law, while conveying important practical information for pursuing a career in the paralegal profession. Paralegal Club activities have included field trips, guest speakers, information sessions, and charitable fund-raising events.

With a monetary allowance from the College, there have been many individual benefits for the student members of the NCC Paralegal Club, including: complimentary student membership in the Paralegal Association of New Hampshire, a pocket law dictionary, a professional briefcase, and fees for obtaining Notary Public Certification in N.H., among other benefits previously voted on by the student members.

ASSOCIATE IN SCIENCE IN RESTAURANT MANAGEMENT

(Day Program)

This program is designed to prepare students for management positions in the field of restaurant and hospitality management. With a wide range of opportunities, graduates will find employment in free-standing restaurants, hotels, resorts, casinos, catering firms, and other venues. Regardless of the work venue, the restaurant and hospitality industry needs professionals with special skills and knowledge of food, business, service, and human relations.

As a unique educational program, the Restaurant Management Program has been developed as a joint effort between Nashua Community College and Les Roches International School of Hotel Management in Crans-Montana, Switzerland. The first and last part of the program will be held in New Hampshire; the middle part of the program will be offered in Switzerland. English is the language of instruction for the program.

Upon completion of all program requirements – including the six-month internship in Switzerland – graduates will be awarded a joint Associate in Science Degree from Nashua Community College and Les Roches International School of Hotel Management

Approved by the Swiss Hotel Association (now Hotel-lerie Suisse), the world's leader in setting standards for the hospitality industry, Les Roches is accredited by the New England Association of Schools and Colleges, Inc. With state-of-the-art teaching facilities, Les Roches offers a modern campus located in a safe and exciting sport/tourist resort in the heart of the majestic Swiss Alps.

Les Roches is considered to be among the finest hotel management schools in the world. Its graduates are sought by the world's top hotels and restaurants, and they occupy influential positions in the hospitality industry.

The major advantages of this program include training in European standards of service and food preparation; learning from European-trained chefs, servers, restaurant owners, and managers within the hospitality industry; working in a paid internship in Switzerland; living and studying abroad at Les Roches; developing a network of friends and business associates internationally; and linkage with the hospitality industry around the globe through the Les Roches alumni network.

All courses in Semester One must be successfully completed as a condition for attendance at Les Roches in Semester Two. Please note that an im-

mersion study of German is required in preparation for Pre-Intermediate German. There is no exemption from the study of German; the language is needed for successful placement in the internship part of the program.

For students who desire more time to complete program requirements, a three-year option is available.

Upon the completion of the degree in **Restaurant Management**, graduates will be able to:

1. Discuss the scope of the hospitality industry.
2. Apply an understanding of basic food cookery, industry terminology, product identification, and the use and care of foodservice equipment.
3. Exhibit knowledge of food purchasing, receiving, and issuing; the elements of proper table service and wine service; and front-of-the-house management controls.
4. Demonstrate an understanding of the menu as a major management tool for food service operations, including its role as a merchandising mechanism and vehicle for the presentation of food and beverage products.
5. Demonstrate knowledge of basic sanitation principles and ways to apply them in practical situations.
6. Understand the principles of operating a restaurant, cooking food to order, providing excellent service, purchasing food products, and utilizing contemporary managerial skills.
7. Exhibit knowledge of traditional management theory, leadership and management roles, organizational structure and change, decision-making, empowerment, and ethical behavior.
8. Understand how functions and forms of human resource management are applied to the hospitality industry.
9. Understand and apply basic marketing principles to the hospitality industry.
10. Apply principles of accounting to sales, food, beverage, and labor costs, including preparation of financial statements.
11. Utilize skills in written and oral communications, apply contemporary interpersonal behaviors, foster support for a diverse workforce, and utilize effective information technology skills.
12. Display a broad understanding of the restaurant industry acquired through the required six month internship.

**ASSOCIATE IN SCIENCE IN
RESTAURANT MANAGEMENT
FIRST YEAR – FALL SEMESTER
(in New Hampshire)**

		CL	LAB	CR
ENGN101	College Composition	4	0	4
BCPN101	Introduction to Computers	2	2	3
BUSN110	Principles of Management	3	0	3
LNGN113	Basic German	6	0	6
General Education: Group E Elective (Finite Mathematics or Elementary Statistics Recommended)		4	0	4
				20

SPRING SEMESTER (in Switzerland)

TRMN1186	Introduction to the World of Hospitality	3	0	3
CULN2122	Culinary Concepts	3	0	3
FBMN3196	Food and Beverage Management	3	0	3
FBSN1102	Principles of Bar and Beverage Operation	3	0	3
CULN2116	Culinary Craft Based Learning	2	8	3
FBSN1101	Craft Based Learning: Food and Beverage Service Techniques	2	8	3
GENN2150	Pre-Intermediate German	3	0	3
				21

SUMMER/FALL SEMESTER (in Switzerland)

INTN1108	Internship: A Capstone Experience	0	40	2
				2

SECOND YEAR - SPRING (in New Hampshire)

ACCN101	Financial Accounting I	4	1	4
BUSN104	Principles of Marketing	3	0	3
BUSN201	Human Resource Management	3	0	3
General Education: Group A Elective		3	0	3
General Education: Group B Elective		3	2	4
				17

SUMMER SEMESTER (in New Hampshire)

ACCN102	Financial Accounting II	4	0	4
ECON202	Macroeconomics	3	0	3
				7

Total 67 Credits



ASSOCIATE IN SCIENCE IN SPEECH-LANGUAGE PATHOLOGY ASSISTANT (Evening Program)

Communication is one of the most critical elements of human existence. The profession of Speech-Language Pathology is comprised of specialists involved in the diagnosis and treatment of individuals with communication disorders.

Job opportunities for Speech-Language Pathology Assistants (SLPAs) are growing with the increased demand for Speech-Language Pathologists. Most current positions in New Hampshire are within school districts, although the opportunity for employment in health care settings is growing.

The Nashua Community College Speech-Language Pathology Assistant Program developed out of a regional need for quality personnel who can provide paraprofessional speech and/or language therapy.

The role of Speech-Language Pathology has expanded beyond service provision to include administrative, managerial, and supervisory responsibilities. The appropriate use of Speech-Language Pathology Assistants is one means to meet the demands and to extend service delivery to persons with communication disorders in a cost-efficient fashion.

The mission of the Speech-Language Pathology Assistant Program is:

- To prepare post-secondary students to ethically and competently assist in the practice of speech-language pathology under the direction and supervision of a state-licensed, ASHA-certified Speech-Language Pathologist.
- To provide a base in scientific and cultural foundations of a liberal education.
- To help students be productive and contributing members of society.
- To promote life-long learning through the acquisition of values, skills, and attitudes beneficial to both themselves and others.

Applicants to the program must meet the general requirements for admission to the College and maintain a C or above in all Speech-Language Pathology Assistant courses in order to enroll in SLPN293 Fieldwork or SLPN290 Seminar.

Upon the completion of the degree in **Speech-Language Pathology Assistant**, graduates will be able to:

1. Communicate effectively and professionally with students/patients/clients and their families, as well as colleagues, supervisors, and other professionals, while always directing inquiries for clinical information to the supervising speech-language pathologist.
2. Describe developmental patterns of the acquisition of sounds, words, grammatical and syntactical forms, semantics, the receptive and expressive use of language and pragmatic skills.
3. Demonstrate understanding of the basic etiology and symptomology of communication disorders, including developmental delays, voice, language, articulation, phonology, fluency, neurological impairment and hearing impairment.
4. Identify various language diversities and demonstrate awareness of student/patient/client needs and cultural values.
5. Describe the general principles of therapeutic intervention and identify the scope, the roles, and major issues of therapy in a variety of settings, age/grade levels, types of treatment, and supervision models used as related to speech and language therapy.
6. Follow documented individual education plans or protocols (IEPs, IFSPs) developed by the supervising speech-language pathologist as well as plan and implement therapy for specific, common problems under the direct supervision of a speech-language pathologist.
7. Document student/patient/client performance (e.g., tallying data for the speech-language pathologist to use; preparing charts, records, and graphs) and report this information to the supervising speech-language pathologist. Write clear and concise reports of treatment sessions.
8. Exhibit compliance with regulations, reimbursement requirements, and the speech-language pathology assistant's job responsibilities.



**ASSOCIATE IN SCIENCE IN
SPEECH LANGUAGE
PATHOLOGY ASSISTANT
(Evening Program)**

FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
BCPN101	Introduction to Computers	2	2	3
SLPN110	Introduction to Speech and Language Pathology	3	0	3
SLPN111	Speech and Language Development	3	0	3
LEXN101	Freshman Seminar	1	0	1
General Education: Group B Elective		4	0	4
				18

SPRING SEMESTER

PSYN101	Introduction to Psychology	3	0	3
XXXX	Open Elective	3	0	3
HSVN120	Learning and Behavior	3	0	3
SLPN112	Anatomy and Physiology of Speech and Hearing Mechanism	3	0	3
SLPN121	Language Disorders	3	0	3
General Education: Group A Elective		3	0	3
				18

SUMMER SEMESTER

SLPN115	Phonetics	3	0	3
SLPN123	Articulation and Phonological Disorders	3	0	3
				6

SECOND YEAR – FALL SEMESTER

PSYN250	Cognitive Psychology	3	0	3
OR				
PSYN201	Human Growth and Development	3	0	3
SLPN220	Advanced Communication Disorders	3	0	3
SLPN221	Clinical Procedures in Speech-Language Pathology	3	0	3
General Education: Group F or G Elective		3	0	3
General Education: Group D Elective		3	0	3
				15

SPRING SEMESTER

SLPN290	Capstone Seminar in Communication Disorders	2	0	2
SLPN293*	Practicum III	0	3	3
General Education Elective		3	0	3
General Education: Group E Elective		4	0	4
				12

Total 69 credits

* *Practicum I and Practicum II may be taken in place of Practicum III.*



ASSOCIATE IN ARTS IN TEACHER EDUCATION

(Day and Evening Program)

The Associate in Arts Degree with a concentration in Teacher Education offered by Nashua Community College is designed to transfer to Teacher Education Programs at four-year colleges and universities.

The Teacher Education program at NCC has been designed using the NH Department of Education Professional Preparation Programs model and an interdisciplinary curriculum approach. The degree requirements include three categories: 1) general education; 2) education; and 3) and a major concentration within the Liberal Arts.

The General Education component is a coherent and substantive balance in English and literature, science, mathematics, social science and humanities/fine arts/world language. The Education courses are identified and designed to transfer to most four-year colleges as well as provide the student with a beginning introduction to and understanding of the teaching profession. The Liberal Arts concentration will provide an in-depth study in a particular area based on the students' chosen teaching field.

The Teacher Education Program includes academic study and experiences to meet both our Associate in Arts Degree requirements and the first two years of Bachelor Degree requirements in Teacher Education. Students should be aware that most four year colleges require the successful completion of the Praxis I examination as a condition of admission to their programs as well as a minimum grade point average, which is usually 2.5 or better. The student works closely with their academic advisor to design a choice and sequence of courses that best meets the specific requirements of their chosen teaching fields and transfer institution. Future teachers are encouraged to gain practical experiences with children in public school settings. In addition to completing the required observations and classroom experiences in the Education courses, it is recommended that students participate in the Service Learning opportunities that are offered in some of the Liberal Arts and General Education courses.

Students are advised that public schools require those participating in a public school setting be free of criminal convictions as required by the NH Department of Education. The student may incur fees in meeting this requirement. The college must ensure that students in the program do not put themselves or children in jeopardy during classroom observations, participation or Service Learning experiences. Students must demonstrate sufficient emotional and physical ability to

respond quickly and appropriately to unexpected child and classroom related events. An interview with the Education Department Chair is required for admission into the program.

Upon the completion of the degree in **Teacher Education**, graduates will be able to:

1. Demonstrate an awareness of and a beginning understanding of the teaching profession in regard to its historical context, the implications of the profession, and the role played by public education in contemporary society.
2. Articulate a beginning philosophy of education that incorporates an understanding of relevant theories and models of education.
3. Demonstrate a comprehensive knowledge and appreciation of the general education areas of literature, science, mathematics, social sciences, and humanities/fine arts/world language.
4. Demonstrate college level proficiency in written and oral communication, and analytical, mathematical, and scientific reasoning that support the effective use and application of the knowledge, skills, and dispositions required in the program and needed for transfer to a four-year degree institution.
5. Demonstrate knowledge of self and a general understanding of the human condition that promotes an appreciation for diversity, historical context, exceptionalities, and aesthetic sensitivity.
6. Demonstrate the ability to make informed decisions in regard to an in-depth study in a particular area based on the student's chosen goals, teaching field, and the need for continued learning.



ASSOCIATE IN ARTS TEACHER EDUCATION CONCENTRATION

FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
EDUN 130	Foundations of Education	3	0	3
ENGN101	College Composition	4	0	4
PSYN101	Introduction to Psychology	3	0	3
BCPN 101	Introduction to Computers	2	2	3
General Education: Group F or G Elective		3	0	3
LEXN 101	Freshman Seminar	1	0	1
				17

SPRING SEMESTER

EDUN 132	Introduction to Exceptionalities	3	0	3
General Education: Group A Elective (ENGN 105 Intro. To Lit. Recommended)		3	0	3
General Education: Group E Elective		4	0	4
POLN 102	American Government and Politics	3	0	3
SOCN 110	Cultural Anthropology	3	0	3
				16

SECOND YEAR – FALL SEMESTER

PSYN 201	Human Growth and Development	3	0	3
General Education: Group B Elective *		3	2	4
General Education: Group F or G		3	0	3
General Education: Group E Elective		4	0	4
xxxx	Open Elective **	3/4	0	3/4
				17/18

SPRING SEMESTER

General Education: Groups A-F		3/4	0	3/4
General Education: Group D Elective		3	0	3
General Education: Group B Elective *		3	2	4
xxxx	Open Elective **	3/4	0	3/4
General Education: Group F or G Elective		3	0	3
EDUN295	Teacher Education: A Capstone Experience	1	0	1
				17/19

Total 67/70 total credits

Students are advised to contact transfer institutions in order to make appropriate elective course selections. Please check with academic advisor prior to registering.

* Sciences with a laboratory component must be elected. In some transfer programs sequential science courses may be required. Other transfer programs require courses be taken from a variety of science disciplines.

** Students will select concentration courses as recommended by their academic advisor and transfer institution to prepare the student for a major focus after transfer.



COURSE DESCRIPTIONS

ACCOUNTING

ACCN101 Financial Accounting I 4 Credits

This course provides a foundation for a thorough understanding of basic accounting procedures and principles through the study of the accounting cycle and financial statements. Additionally, current assets, cash and receivables will be studied. The use of computers in accounting is introduced.

ACCN102 Financial Accounting II 4 Credits

This course is a continuation of ACCN101. Current and long-term assets are studied along with liabilities and owners' equity items. Accounting for corporations and bonds are also discussed. The course concludes with preparation of the Statement of Cash Flows and financial statement analysis. Prerequisite: ACCN101. Placement score equivalent to MTHN099.

ACCN201 Intermediate Accounting I 4 Credits

A study of the development of accounting begins this course. A review of the fundamental processes of accounting precedes a detailed study of the financial statements and assets on the balance sheet. Debt and equity financing is also discussed. Prerequisite: ACCN102

ACCN202 Intermediate Accounting II 4 Credits

This course is a continuation of Intermediate Accounting I. Topics include long-term assets, leases, and pensions. An in-depth look at financial reporting issues will complete the course. This course contains a service learning option. Prerequisite: ACCN201

ACCN204 Introduction to Finance 3 Credits

This course is designed to acquaint the student with the manner in which the financial system functions and with the techniques used to reach financial decisions. Major topics to be studied include financial markets, financial performance, securities valuation, capital budgeting, and asset management. A conceptual understanding of the financial decision-making process is developed. Prerequisites: ACCN102, math elective

ACCN206 Cost Accounting 4 Credits

A study of the basic concepts and procedures of cost accounting and their application to the job-order and process cost systems and to standard costs. Prerequisite: ACCN102

ACCN208 Investments 3 Credits

The successful completion of this course will provide the student with a working knowledge of various investment alternatives including but not limited to stocks, bonds, mutual funds, options, and real estate. Investing is focused on long term issues. What should we invest our resources in, when should we make the investment, and why is the investment a sound idea are concepts which will be explored in the course. Prerequisites: ACCN101, math elective

ACCN210 Managerial Accounting 3 Credits

Financial accounting information is used in planning, evaluating, and controlling business operations. Topics include product costing, cost behavior, cost-volume-profit analysis, budgeting, performance evaluation, and capital investment analysis. Prerequisites: MTHN099, ACCN102

ACCN214 Accounting Information Systems: Accounting Program Capstone Course 3 Credits

The utilization of a computerized accounting system for the effective control and audit of service and merchandising businesses.

Advanced techniques of customizing and designing forms and importing and exporting data will be introduced. Prerequisites: ACCN201, ACCN206

ACCN290 Accounting Internship 3 Credits

An internship program in Accounting is a hands-on learning experience at a for-profit or not-for-profit organization which allows the student to practice competencies and skills learned in the classroom under the direct supervision of an on-site internship supervisor. Prerequisite: Completion of all catalog-listed courses for the first three semesters in a business student's respective program of study.

MEDICAL CODING

AHLN102 Medical Terminology 3 Credits

The study of medical terminology including word components, definitions, spelling, pronunciation, and the use of medical references and resources for research and practice.

AHLN117 Medical Coding I 3 Credits

This course is designed to prepare a student to enter the medical coding field in hospitals, physicians offices, and insurance companies. It will cover the foundations of data collection, nomenclature, classification systems and the fundamentals of coding procedures. Instruction will include lecture, demonstration, and hands-on practice. Prerequisites: SCIN111, SCIN205, BCPN101, AHLN102

AHLN119 Advanced Medical Coding and Applications 5 Credits

This course will make use of the knowledge and skills presented in Medical Coding I. Using this background, it will cover Current Procedural Terminology (CPT) coding, diagnostic coding (ICD-9-CM) systems, and the applications of medical coding practices and procedures using current computer software required for entry level positions. Instruction will include lecture and hands-on practice in the computer lab. Prerequisite: Completion of all courses listed in the Medical Coding Certificate profile.

AHLN123 Kinesiology 3 Credits

This course is designed to give the student a basic understanding of normal human body movement as related to skeletal, articular and muscular systems. Anatomical palpations, human gait analysis, and biochemical principles are also included. Prerequisite: SCIN111

AHLN166 Legal and Ethical Issues in Health Care 3 Credits

This course addresses the legal and ethical principles of health care provision. The purpose is to provide a framework that enables the student to reason clearly and effectively about the ethical and legal issues involved in medical science and technology. Emphasis will be placed on understanding the ethical and legal environment of health care, making appropriate ethical and legal choices in practice, and developing skills necessary to promote ethical and legal leadership in a health care setting.

AUTOMOTIVE

AUTN106 Internal Combustion Engine 3 Credits

This course examines the basic principles of automotive engines, their operating systems, and related physical properties. This basic engine theory is the foundation for many of the more advanced automotive subjects. The lab element of this course exposes the students to the construction methods, precision measurements, and tolerances related to engine design.

AUTN113 Automotive Electricity and Wiring**3 Credits**

This course will cover the theory of automotive electrical systems and the diagnosis and troubleshooting of these systems. Wiring procedures, reading wiring diagrams, and repair techniques for electrical harness and components will be covered.

AUTN114 Automotive Suspension and Steering**4 Credits**

An introduction to automotive suspension systems, front-end alignment and wheel balance. The course includes the repair of suspension systems and the development of skills in front-end alignment, wheel balancing, and SRS system service. Prerequisites: AUTN121

AUTN115 Advanced Automotive Electricity and Electronics**3 Credits**

The course includes operating principles and troubleshooting of various systems, including charging systems, body computers, multiplexing, keyless entry, etc. On-board diagnostics related to these systems will be covered. Prerequisite: AUTN113

AUTN121 Automotive Service and Maintenance**4 Credits**

The study and development of skills in automotive maintenance and preventive maintenance procedures such as engine lubrication, exhaust systems, automatic and manual transmission service, cooling systems, front and rear differential service, tire rotation and balance, and NH state motor vehicle inspection procedures, engine drive belt and timing belt service, accessory installation and automotive welding fundamentals. This course contains a service learning opportunity.

AUTN122 Automotive Brake Systems**4 Credits**

The study of manual, power, disc and drum braking systems with an emphasis on the diagnosis and repair procedures of master cylinders, wheel cylinders, calipers and the machining of drum and disc rotors. Prerequisites: AUTN106, AUTN113, AUTN121

AUTN210 Engine Performance I**3 Credits**

The principles of automotive ignition systems from distributor-controlled through electronic and computer-controlled systems are covered. Emphasis is placed on on-board diagnostic systems and the use of portable test equipment. The theory and operation of computer control of other vehicle functions are also discussed. Prerequisites: AUTN106, AUTN113, AUTN115, AUTN121

AUTN215 Engine Performance II**3 Credits**

A study of automotive fuel injection, computerized engine management and emission control systems beginning with the fundamentals of engine fuel requirements progressing to OBD-II multi-port injection systems. An emphasis on diagnosis and testing of the various systems using scan tools, lab scopes and on-board testing systems are covered. Prerequisites: AUTN106, AUTN113, AUTN115, AUTN121, AUTN210

AUTN221 Automotive Heating and Air Conditioning**3 Credits**

The theory and operation of automotive heating, ventilation and air conditioning systems will be covered including safety, maintenance, adjustment, diagnosis and repair. Major areas of study will include automotive ventilation systems, heating systems, heating and air conditioning theory, R12 and R134 air conditioning systems, automatic climate control systems, air conditioning

component repair and replacement procedures, refrigerant safety, recovery, recycling and recharge, R12 and R134 retrofit, manual and automatic heating, ventilation and air conditioning controls and add-on air conditioning installation. Prerequisites: AUTN121, AUTN113. Corequisite: SCIN150

AUTN226 Automotive Power Trains**4 Credits**

The study of principles employed in the transference of engine power through transmission to final drive units on both front and rear wheel drive cars. It includes the maintenance and repair of clutches, manual transmissions, drive shaft assemblies and differentials. Prerequisites: AUTN106, AUTN121

AUTN227 Automatic Transmissions**4 Credits**

The theory of operation and overhaul of automatic transmissions. The course includes the diagnosis, disassembly and repair, adjustment and reassembly of automatic transmission units. Prerequisites: AUTN106, AUTN113, AUTN121

AUTN228 Automotive Engine Repair: A Capstone Course**4 Credits**

This course is a study of the practical application of skills learned throughout the student's studies to a cumulative capstone project. The students will use previously learned skills to remove, diagnose, rebuild and reassemble a complete automotive engine. The final project will encompass all previously learned skills and apply them to demonstrate a complete knowledge of proper shop procedures and operations. This course involves a capstone exercise. Prerequisites: AUTN106, AUTN115, AUTN121, AUTN215, SCIN150

AVIATION TECHNOLOGY

AVTN101 Maintenance Forms and Records**3 Credits**

This course is a study of selection and use of FAA technical and legal publications in order to perform the duties of an aircraft maintenance technician. Maintenance publications, forms and records, mechanic privileges, weight and balance problem solving, aircraft weighing procedures and establishing an aircraft equipment list will be covered.

AVTN102 Airframe Structures I**4 Credits**

This course is a study of repair procedures on aircraft fabric surfaces and wood structural members in accordance with FAA and manufacturer's instructions, as well as an introduction to sheet metal repairs using correct repair procedures, tools and materials. The application of aircraft finishing including enamel, lacquer and dope for fabric covered surfaces will also be discussed.

AVTN103 Airframe Structures II**5 Credits**

The various materials and processes used in constructing aircraft are covered in this course. The proper use and selection of materials, rivets, fasteners for structural and non-structural applications and welding are covered. In addition the following materials and their repair procedures will be covered: honeycomb, fiberglass, plastic and laminated surfaces. Prerequisites: AVTN102, AVTN108

AVTN104 Materials and Processes**3 Credits**

This course is a study of identification, selection and inspection of aircraft hardware and materials; use of precision measurement equipment and related tools; identification and performance of nondestructive tests and interpretation of the results. Ground operation and servicing as well as corrosion control will be presented.

AVTN105 Aircraft Systems**4 Credits**

This course incorporates aircraft instruments and aircraft systems. Topics include basic airframe instruments, correct handling and installation procedures for instruments, ice and rain control systems, fire protection systems, position and warning

systems, cabin atmosphere and control systems, fuel systems, inspection, checks, servicing and repair of the various systems and their components.

AVTN106 Aviation Electronics 3 Credits
An introduction to DC and AC electricity, including their disassembly and maintenance. This course will also include generators and alternators. Emphasis will be placed on understanding control elements: electrical, hydraulic and pneumatic. The capstone of the course will be the ability to troubleshoot electromechanical problems.

AVTN107 Digital Logic 3 Credits
Digital logic gates, flip-flops, PLAs and memory are studied as microprocessor support chips. Gate reduction techniques are introduced. Logic and control circuits using relay logic are a part of this course. Prerequisite: AVTN106

AVTN108 Aviation Drafting and Blueprint Reading 3 Credits
The study of the fundamentals of drafting and blueprint reading. This course will enable students enrolled in the Aircraft Maintenance Training program to develop the required skills to meet the FAA basic drafting and blueprint reading standards.

AVTN202 Airframe Electrical Systems 3 Credits
The application and use of the principles of basic electricity to troubleshoot and repair aircraft electrical systems in accordance with the manufacturers' service instructions, fundamentals of navigation-communication equipment, antenna installation and theory, as well as the operation of the auto pilot systems will be covered in the course. Prerequisite: AVTN106

AVTN203 Hydraulics and Pneumatics 5 Credits
This course is a study of the theory of operation, maintenance requirements and adjustment of various hydraulic and pneumatic components. Testing, inspecting, troubleshooting and servicing hydraulic and pneumatic system components in accordance with FAA and manufacturers' specifications as well as troubleshooting and repairing wheel and brake systems in accordance with manufacturers' specifications will be covered.

AVTN204 Assembly and Rigging 4 Credits
Assembly and rigging of fixed and rotary winged aircraft are introduced, including the checking and alignment of structures, balancing and rigging of movable control surfaces, jacking aircraft and the final assembly and inspection of the aircraft. Students also receive instruction in airworthiness inspection procedures. Prerequisites: AVTN101, AVTN203

AVTN206 Reciprocating Engines I 5 Credits
This course is a study of construction, operation and timing mechanisms associated with aircraft reciprocating powerplants. Disassembly, cleaning, measuring, inspecting and reassembly of a powerplant in accordance with appropriate FAA and manufacturers' regulations and practices will be covered. Additionally, engine oil systems and oil system maintenance practices will be studied. Prerequisites: AVTN104, AVTN203

AVTN207 Reciprocating Engines II 5 Credits
More advanced areas of internal combustion engines are presented including inspections, troubleshooting techniques, servicing and repairing opposed aircraft engines. Powerplant conformity and airworthiness inspections will also be accomplished. Prerequisite: AVTN206

AVTN208 Engine Systems 3 Credits
Lubrication, induction, cooling and exhaust systems, identifying and selecting lubricants are covered. Inspecting, checking,

servicing, troubleshooting and repairing engine, lubrication, induction, cooling and exhaust systems, fire detection and extinguishing systems are presented. Corequisite: AVTN206

AVTN209 Aircraft Propellers 3 Credits
This course is a study of the physical laws and design characteristics governing propeller operation. Students receive instruction on propeller theory and maintenance, propeller control system components, types of propellers and propeller installations, identification and selection of propeller lubricants, inspecting, servicing and repairing of fixed pitch, constant speed and feathering propellers, propeller governing systems, propeller synchronizing and ice control systems.

AVTN210 Turbine Engine and Systems 4 Credits
The theory and maintenance of gas turbine engine systems and installation are covered in this course. Topics include theory of operation, operating characteristics, axial and centrifugal flow compressors, combustion chambers, exhaust sections, fan and bypass turbine engines, thrust reversing systems, turbine section and turbine blade design. Inspection and adjustment of gas turbine engines are included. Prerequisite: AVTN208

AVTN211 Carburetion and Fuel Systems 3 Credits
This course is a study of the accessory systems used in aircraft powerplants. Carburetion; engine fuel systems; fuel metering systems; inspection, checking; servicing, troubleshooting and repair of reciprocating and turbine engine fuel metering systems are covered.

AVTN212 Engine Electrical Systems 4 Credits
This course covers additional powerplant accessory systems including magnetos, high and low tension systems, reciprocating and turbine engine ignition systems, and engine electrical systems and components. Engine fire protection systems will also be discussed. Prerequisites: AVTN202, AVTN206

BUSINESS COMPUTERS

BCPN101 Introduction to Computers 3 Credits
Essential computer concepts, common terminology, and basic components of the computer are introduced. The student will be introduced to word processing concepts and applications. Use of the Windows operating system environment will be studied and applied.

BCPN119 Software Applications 3 Credits
Students are instructed in intermediate applications of end-user productivity software, including office suites. Emphasis is on data sharing and integration, desktop information management, as well as interacting in each application with the Internet. Any major Integrated Software Suite may be implemented in this course to meet the needs of the learner or business environment. Prerequisite: BCPN101

BCPN204 Word Processing: WORD 3 Credits
Intermediate and advanced word processing concepts, theory and applications will be studied and applied. Students perform activities in creating styles, outlines, tables, table of contents, mail merge, on-screen forms and managing multi-page documents. Integrating WORD with other applications and the World Wide Web as well as customizing WORD are studied. (This course helps prepare students to take the Microsoft Expert Level Certification Exam). Prerequisite: BCPN101

BCPN208 Spreadsheet: EXCEL 3 Credits
This course provides students with knowledge of EXCEL, a spreadsheet program for managing and presenting data in the

Microsoft Windows environment. EXCEL offers spreadsheets, charting, drawing, scenario, data maps, and macros. (This course helps prepare students to take the Microsoft Expert Level Certification Exam). Prerequisite: BCPN101

BCPN213 Database Management: ACCESS 3 Credits

A study of the uses of data and files, database design, and the physical utilization of database access systems. Topics include database design, terminology, and the creation of tables, forms, queries, reports and macros and Structured Query Language (SQL). The lab component will include the development of applications using MS Access, a relational database. (This course helps prepare students to take the Microsoft Expert Level Certification Exam.) Prerequisite: BCPN101 or CPTN101 for Computer Science majors.

BCPN216 Desktop Publishing 3 Credits

InDesign a desktop publishing software is used to create and publish computer-generated digital publications. Students learn to produce advertisements, newsletters, brochures and business forms. Emphasis is placed on the understanding and application of graphic design principles to create and produce high quality digital publications. Prerequisite: BCPN101

BCPN225 Advanced Software Applications 3 Credits

This course covers advanced applications of end-user productivity software, including office suites. It emphasizes the use of combinations of application software tools to design solutions for moderately complex problems. Hands-on activities provide problem-solving experience with the use of an office suite and the Internet. Developing a portfolio of completed projects will be encouraged. Prerequisite: BCPN119

BUSINESS

BUSN101 Introduction to Business 3 Credits

An introductory course designed to explain the functions of business while exploring current trends and learning about business career opportunities. Topical discussions include the economics of business, our multicultural society and its implications for business, global business and social responsibility and business ethics. Included is a study of business structures such as the forms of business organizations and entrepreneurship.

BUSN104 Principles of Marketing 3 Credits

Emphasis on product, price, promotion, and distribution as well as planning, research and organization of the marketing function. Students will examine marketing of consumer and industrial products in public and private institutions.

BUSN110 Principles of Management 3 Credits

A survey course designed to expose the student to the nature of the organizational environment and the major activities performed by its managers. Consideration is given to planning, organizing, directing, and controlling, thus making it possible to use the techniques of management in a systematic way. Case studies are used to exemplify the principles of management.

BUSN201 Human Resources Management 3 Credits

The purpose of this course is to familiarize the student with the scope and content of the personnel function. Through case analyses and lectures, this course studies the relationship between operating and personnel managers in employment planning, staff recruitment and selection, management training and development, performance appraisal and compensation, and the promotion of equal employment opportunity. Prerequisite: BUSN110

BUSN202 Labor Relations Management 3 Credits

The overall objective of this course is to introduce the student

to labor and industrial relations both in the private and public sectors. We will review the history of unions which is important in understanding the development, structure and functions of organized labor. The course will also familiarize the student with the collective bargaining process, negotiations, dispute settlement, grievance, and arbitration procedures. No Labor Relations would be complete without studying the future of unions in the United States and being able to make comparisons of industrial relation systems in other countries in the world economy.

Important specific topics of discussion will include employee representation; the collective bargaining process; strikes, boycotts, and lockouts; mediation, arbitration and alternate forms of dispute resolution; and the administration of the collective bargaining agreement. Prerequisite: BUSN201 or Permission of the Instructor

BUSN204 Small Business Management: A Capstone Course 3 Credits

The use of accounting, management, marketing principles in launching a new venture and managing an ongoing business. Topics covered include business plan development, computer applications, human resources, purchasing, marketing, taxation, risk management and control procedures. Requires students to develop a comprehensive business plan for a new venture of their choosing which is presented as an oral and written proposal. Prerequisites: ACCN101, BUSN110 and permission of Department Chair or Program Coordinator.

BUSN206 Consumer Behavior 3 Credits

A study of how the field of marketing influences the actions of consumers and also how markets influence the retailing process. This course provides the student with an understanding of what makes the consumer tick. It also highlights the importance of the study of the merchandising affect on the consumer decision making process. Prerequisite: BUSN104

BUSN207 Sales 3 Credits

Discusses the planning, direction, organization, and control of the personal selling effort. Emphasis is placed on the relationships between sales activities and other marketing functions.

BUSN208 Retailing 3 Credits

A study of the ways education, communications, technology, life-style patterns, and economic considerations impact retailing. Emphasis on the emerging trends in retailing enterprise and their implications for retail management.

BUSN210 Marketing Strategies 3 Credits

This course integrates other marketing courses, emphasizing the development and application of creative analytical problem solving techniques to a wide range of marketing problems. Prerequisite: BUSN104

BUSN213 Principles of Advertising 3 Credits

An introduction to the field of advertising covering the procedures of creating and using advertisements. It also focuses on the marketing manager's role in designing the firm's advertising program.

BUSN215 Integrated Marketing Communication 3 Credits

An overview of marketing communications methods such as advertising, public relations, personal selling, sales promotion and their usefulness for direct marketing campaigns. Relationship selling is emphasized. The student will then learn how to develop these methods into an integrated marketing communications plan. The objective is to create an effective professional marketing plan that works for both the individual and the organization. This course assumes some basic knowledge of marketing communication and promotion theory and practice

on the part of students but does not require any specific work experience. Prerequisite: BUSN104

BUSN218 Dynamics of Organizational Behavior 3 Credits

A focus on performance within a work setting. The student will examine the way individuals and groups, as well as organizations themselves, create outputs, such as products and services. It also highlights the importance of international similarities, differences and applications of behavioral thinking and practice. The course provides managers with theories and research in the field of organizational behavior to deal with problems involving people.

BUSN230 Introduction to Management of Information Systems 3 Credits

This course is designed to provide a description and functional definition of management information concepts. The organization will be viewed as a total system with three subsystems: management, operations and information. The student will examine the interactions and procedures of the information subsystem, scheduling, production, inventory, sales, purchasing, planning, finance, accounting, and personnel. The student will become familiar with information requirements of an organization and the interaction of systems hardware, software, and data management.

BUSN240 Business Law 3 Credits

An introduction to the origin of law and the federal and state court systems. A thorough study of the law of contracts, property, bailment and agency. The case approach will be emphasized.

BUSN290 Management/Small Business Entrepreneurship Internship 3 Credits

An internship program in the Business Department is a hands-on learning experience at a for-profit or not-for-profit organization which allows the student to practice competencies and skills learned in the classroom under the direct supervision of an on-site internship supervisor. Prerequisite: Completion of all catalog-listed courses for the first three semesters in a business student's respective program of study.

BUSN294 Marketing Internship 3 Credits

An internship program in the Business Department is a hands-on learning experience at a for-profit or not-for-profit organization which allows the student to practice competencies and skills learned in the classroom under the direct supervision of an on-site internship supervisor. Prerequisite: Completion of all catalog-listed courses for the first three semesters in a business student's respective program of study.

COMPUTER AIDED DRAFTING

CADN105 CNC for Artists 5 Credits

This course is designed to introduce students to CNC (Computer Numerical Control) software in more of an artistic approach. Students will learn sign making, wood carving and kinetic sculptor designs utilizing the CNC router.

CADN111 CADD I 5 Credits

CADD I is the study of graphical communication. The drafting fundamentals studied in this course will include 3D Solid Modeling, blue print reading, measurement, geometric construction, orthographic projection, section views, dimensioning, threads and fasteners. CAM (Computer Aided Manufacturing) software will be introduced. All work is performed using current CAD software (Solidworks) on personal computers. Prerequisite or Corequisite: BCPN101

CADN112 CADD II 5 Credits

CADD II will continue the study of graphical communication exploring advanced 3D Solid Modeling, geometric dimensioning and tolerancing, manufacturing methods, spring and cam design. Students will learn all of the components necessary to design in a 3D environment including solids, surfaces, parts and assemblies, applying materials, and creating animated assemblies. 3 axis CAM (Computer Aided Manufacturing) software will be introduced. This course offers a service learning component. Prerequisite: CADN111 or Permission of the Instructor

CADN131 Technical Drawing 3 Credits

This course covers the basics of drafting fundamentals including blueprint reading, measurement, geometric construction, orthographic projection, section views, auxiliary views, dimensioning and tolerancing, threads and fasteners. All work is performed using current CAD software (Solidworks) on personal computers. Prerequisite or Corequisite: BCPN101

CADN215 CADD III 5 Credits

CADD III will continue advanced 3D graphic communications using Pro Engineer (Pro-E) solid modeling software. Students will learn advanced 3D solid design, tolerancing, detail and assembly drawings, mass properties and advanced manufacturing techniques. Communications between different CAD programs will be introduced. CAM software will be explored further. Students will create photo realistic renderings and animations. Prerequisites: CADN112, MTTN118, or Permission of the Instructor.

CADN216 CADD IV 5 Credits

This course is designed as a final project approach to CADD. Students will be allowed to create larger, more complex, time consuming drawing and design packages, similar to industry requirements. Students will design a 3D assembly and fabricate their parts utilizing CNC equipment. This course contains a Service Learning option. Prerequisite: CADN215

COMPLEMENTARY HEALTH AND WELLNESS

CHWN101 Foundations of Health and Wellness 3 Credits

This survey course familiarizes the student with the broad and varied methods and techniques currently recognized in the field of Alternative Health and Wellness. Most frequently used options for treatment of self and others will be explored at some depth. Emphasized will be both Eastern and Western modalities. Further, this course assists the student in choosing one or more areas of focus within the overall program.

CHWN102 Somatic Theory 3 Credits

This survey course will detail the development, through various models and concepts, of somatic theory in the areas of bodywork, psychology and human growth and development. Of major emphasis will be the work of Wilhelm Reich and his follower, Alexander Lowen (Bioenergetics). Also noted will be such psychology leaders as Abraham Maslow (Self-Actualization); Moshe Feldenkrais (Awareness through Movement); Ida Rolf; and Dr. Candice Pert. The course will encourage individual conceptualization about the "mind-body" connection and its relationship to complementary health and wellness.

CHWN103 Ethics, Business and Marketing 3 Credits

This course will in general familiarize the student of the Complementary Health and Wellness program with the ethics and business of practicing techniques within that spectrum. Emphasis

will be on defining scope of practice and noting obvious and subtle “flags” of ethical and boundary problems in that practice. Special attention will also be given to the marketing of skills learned within the certificate program.

CHWN105 Guided Meditation and Imagery 2 Credits

In this course the student will become familiar with a broad and varied range of techniques for guiding a person in meditative thought and image. Student will gain a thorough understanding of theories of and practice with these modalities: from traditional hypnosis to NLP and Ericksonian Technique. Metaphor and indirect structure will be emphasized, as well as analogy and arch-types. Breath and physical relaxation are also included topics. Prerequisite: PSYN101

CHWN110 Introduction to Homeopathy 3 Credits

This exploratory course shall familiarize the student with an overview of the science and art of Homeopathy –“like curing like”- as it is applied in wholistic self care and family first aid. Understand the foundation of Homeopathy and its healing philosophy as infinitesimal amounts of natural substances are identified as remedies to common ailments.

CHWN115 Introduction to Herbology 3 Credits

This survey course will familiarize the student with the properties and the usage of herbs from around the world. At least 12 herbs will be studied in depth, with the students developing monographs of the herbs studied in class. At the conclusion of this course the student will have developed a Materia Medica and will be able to create herbal products for their own use.

CHWN120 Introduction to Reiki Healing 2 Credits

Reiki is “universal energy” that can be channeled through an individual for specific, positive and healing purposes. Reiki is currently recognized as a viable alternative or complementary modality in most hospitals throughout the United States. This course familiarizes the student with the traditional Usui method of Reiki and its varied techniques, traditions and beliefs. Student will learn traditional hand positions and participate in actual hands-on practice. Corequisite: CHWN101

CHWN125 Yoga, Breath and Movement 2 Credits

This survey course introduces the student to yogic philosophy, breath work and “slow” body movements to help rebalance body-mind and spirit. Through “movement with intent”, the student will learn how to release and transform physical/emotional tension brought about from our modern life stressors.

COMMUNICATIONS

CMNN101 Introduction to Mass Communication 3 Credits

This course studies the mass media in historical and contemporary contexts, focusing on the structure, function, audiences and effects of the news and entertainment industries. Issues such as legal, economic, social, and psychological implications within society will be analyzed. This course contains a service learning option. Prerequisite: ENGN101

CMNN102 Principles of Communication 3 Credits

A survey of the basic theories and principles of human communication by first exploring the fundamental processes central to communication (e.g. listening, verbal and non-verbal communication, message, channel, medium) and then applying those processes to various communication contexts including interpersonal, intrapersonal, small group, public, organizational, and mass communication. Prerequisite: ENGN101

CMNN110 Introduction to Journalism 3 Credits

In this introductory journalism course, students will learn the basics of journalistic research, writing, news gathering, and reporting using Internet, human, and print sources and by drafting, critiquing, revising, and preparing stories for publication. Prerequisites: ENGN101

CMNN201 News Writing 3 Credits

An introduction to news writing for print journalism, this course examines principles of composition and style, reporter integrity and responsibility, news values, and news writing strategies. Basic techniques in news gathering and writing will be studied with an emphasis on accuracy, conciseness and organization. Throughout the course, students apply these skills to writing news stories for newspaper and magazine. Prerequisite: ENGN101, CMNN101

COMPUTER SCIENCE

CPTN101 PC Assembly and Operating Systems 3 Credits

This course is designed to teach the student Personal Computer architecture, the operation and interrelation of its internal components and peripheral devices, its memory organization, the Basic I/O (BIOS) system, and current Windows Operating Systems. The content of this course is intended to reflect the objectives of the industry recognized A+ Certification. This course offers an optional service learning component.

CPTN102 Website Development I 3 Credits

This is the first course in the website development sequence. The student is introduced to fundamental concepts needed to design and build a website. Topics introduced include purpose definition, audience definition, content planning, structure design, elementary page design, and typography/color considerations. Students are required to develop and present a final project using a web authoring tool and concepts learned in the course.

CPTN103 Website Development II 3 Credits

This course is the second course in the website development sequence. The web page and website design principles will be reinforced while the student studies the syntax and semantics of XHTML and CSS tags. Students will explore World Wide Web concepts such as client/server, and search engine optimization. Students are required to develop and present a final hand coded project. The course also contains an optional service learning component or assignment. Prerequisite: CPTN102

CPTN105 Internet Server Management 3 Credits

The student will learn how to set up and maintain internet servers on the Microsoft platform. The course will include setup and configuration of web, ftp, email, and SSL servers. The student will also learn to set up user accounts, utilize NTFS security, monitor network transmissions, manage DNS, and utilize log files. Prerequisite: CPTN101

CPTN140 Essentials of System Analysis and Design 3 Credits

This course provides an introduction to systems analysis and design. Students will be introduced to the basic principles and concepts of software engineering thereby providing the necessary foundation for subsequent software engineering courses. Topics include basic terminology and core software engineering concepts; the Software Development Life Cycle (SDLC); systems requirements gathering and selection; modeling systems using Data Flow Diagrams (DFD) and the Unified Modeling

Language (UML); project scheduling using GANTT charts; database environment; and an introduction to a relational model. Prerequisites: CPTN101, CPTN161

CPTN161 Introduction to Programming Using Visual Basic 3 Credits

This course serves as the first computer programming course. It introduces students to the concepts of; problem solving, code development and code organization. Students learn how to; define a problem, develop a solution, translate the solution into code, compile it, link it and run the program.

Students learn basic principles of declaring variables and memory allocation. They learn control structures such as single, double, and multiple selections and various forms of looping structures. Students also learn simple data structures such as arrays. Students also learn simple on disk file structures such as text and random files. Finally, students learn to analyze existing algorithms and develop their own algorithms for solving applied problems. These concepts are taught in the Visual BASIC environment.

Graphics are incorporated into the course to enhance the class content and enrich the content in a visual manner. Prerequisite: ACCUPLACER Placement Score equivalent to MTHN 099

CPTN175 Intermediate Programming: Using C++ 3 Credits

This course is the second course in the software development sequence. It continues the idea of using programming and its constructs to solve problems. The student's understanding of variables, arrays, if, if else, loops, and functions will be reinforced, while introducing the student to the object oriented C++ programming language. Additionally the student will be introduced to pointers and structures, and selected preprocessor directives as well as bit manipulations. Prerequisites: CPTN161

CPTN201 Client-Side Scripting Using JavaScript 3 Credits

This course is an introduction to JavaScript programming. The students will be introduced to the following topics: language constructs, form handling, input validation using regular expressions, events and event handlers, creating and using cookies, DOM (Document Object Model), and Ajax (Asynchronous JavaScript and XML). Students are required to develop and present a final project. Prerequisite: CPTN103, CPTN161

CPTN202 Introduction to JAVA 3 Credits

The Java programming language opens the doors to a cross platform Web based programming. The students will reinforce their basic programming skills and apply them to the Internet environment. The students will learn how to develop applications and applets, how to add active content to their Web pages and how to respond to user initiated events. They will learn how to develop Web user interfaces in a dynamic and responsive way. They will examine client server programming. All this will be accomplished in Object Oriented Programming environment using Java SDK. Prerequisite: CPTN175

CPTN 203 Introduction to UNIX 3 Credits

The student will be able to perform ordinary tasks in the UNIX operating system. This would include user file and directory management, use of shell /template, use of an editor, executing commands and managing processes. The student will also learn to customize the work environment, use UNIX utilities and learn simple scripting. Prerequisite: BCPN101 or CPTN101 or Permission of Instructor

CPTN204 Administering Windows Servers 3 Credits

This course covers the skills and knowledge to install, configure, administer and support the primary services in the Microsoft Windows Server operating system. The course begins by examining basic system administration procedures and continues with the creating and management of Windows Server user, group, and computer accounts, the sharing of system resources and the installation and maintenance of system hardware. Prerequisite: CPTN101 or BCPN101

CPTN205 Networking Basics 3 Credits

This course introduces the basic concepts and principles that underlie computer networking using the Open Systems Interconnection (OSI) model and the TCP/IP protocol suite. It presents an overview of networking terminology, examines different networking topologies and architectures, discusses the physical components of computer networks and reviews the principles of network connectivity. It also examines the implementation through design and installation of simple Ethernet networks. Prerequisite: CPTN 101

CPTN206 Internet Scripting/Active Server 3 Credits

The student is introduced to the fundamentals of server side scripting in a web server based environment. This course focuses on the fundamentals needed to design and create dynamic and interactive HTML/XHTML pages that access information on the server. Students learn to design and develop applications for use in an intranet/internet environment. Prerequisite: CPTN103

CPTN207 Database Design and Management 3 Credits

This course is an introduction to database design & management. The students will be introduced to the following topics: database environment, the database development process including information architecture and system planning, database analysis, database planning and design, the relational theory and terminology as well as normalization. The course will also introduce the student to CASE tools and their uses in the database development process. Additionally the course will study the Structured Query Language (SQL). Students will apply their knowledge with hands on projects designed to teach the intricacies of database design. Prerequisites: CPTN101, CPTN161, or prior knowledge of a programming language as approved by Program Director.

CPTN209 UNIX System Administration Using Linux 3 Credits

This course will teach the students how to set up and operate Linux based system as a server for a network of computers. The course will start with set up of a local system including booting and shutting down the system. The student will know how to create user accounts on the system, install software on the system and set up the two most popular user interfaces GNOME and KDE. Students will learn how to set up basic Internet services: DNS, FTP, Web Server (Apache), SMTP Mail, POP mail, DHCP, and Secure Shell (SSH). Special attention will be given to setting up and working with Apache Web server. The student will be exposed to some of the Intranet issues: NFS (Network File Server), NIS (Network Information Services), Samba (Windows Connectivity), printing. Finally some more advanced Networking topics will be explored. The TCP/IP will be examined from the system administrator's point of view and from the point of view of setting up firewalls. Prerequisite: CPTN203

CPTN210 Advanced Windows Servers 3 Credits

This course is a continuation of CPTN204, Administering Windows Servers. The course covers the skills and knowledge necessary to configure, manage and troubleshoot a Microsoft Windows Server network infrastructure, including such protocols as DHCP, DNS and IPsec. The student will also utilize a number of monitoring tools provided by the operating system. Prerequisite: CPTN204

CPTN215 Routing Fundamentals 3 Credits

This course is a continuation of Networking Basics, with increased focus on the installation and configuration of local and wide area networks. Topics include physically connecting LANs and WANs to Cisco routers, implementing static and dynamic routing using the Cisco IOS and troubleshooting routing problems. Prerequisite: CPTN205

CPTN225 Intermediate Networking 4 Credits

This course is a continuation of Routing Fundamentals. The major components are Ethernet switching, an introduction to wireless networking, network security, and wide area network services. Specific topics include Spanning Tree Protocol, Virtual LANs basic wireless configuration and security, access control lists, Point to Point Protocol, and Frame Relay. Prerequisite: CPTN215

CPTN230 Advanced Programming Using: C++ 3 Credits

This is the third course in the software development sequence. In this course the student will continue to develop proficiency in problem solving using more in depth abstract programming constructs using the C++ programming language and object oriented techniques. They will strengthen their knowledge of classes, inheritance and polymorphism. Templates and the Standard Template Library (STL), Exception handling and Operator Overloading will be discussed in detail. File processing will be discussed in greater detail. Students will be familiar with the data structures and algorithms as applied to the solving of every day problems. Prerequisite: CPTN 175

CPTN278 Data Structures: Using C++ 3 Credits

This course is the fourth in the software development sequence. It introduces the student to algorithms used to represent data in an efficient manner. Standard data structures and problem solving techniques will be introduced. The data structures studies will involve stacks, queues, linked lists, trees, graphs and hash tables. These structures will be presented in an object-oriented manner using C++ language. Prerequisite: CPTN230

CPTN285 Senior Software Development Lab: A Capstone Experience 3 Credits

This is a capstone course in the software development and website development programs. Students, in cooperation with supervising faculty members, are given the opportunity to demonstrate their mastery of their software development or website development competencies by selecting a project and performing the work necessary to move it through the phases of the SDLC including project definition, project planning, systems analysis and process modeling including data flow and UML, systems design including UI or GUI design, project scheduling and project implementation including testing using one or more 3GL programming languages. Students are required to present the completed project documents as well as the present the actual project. Corequisite or pre-requisite: CPTN278 or CPTN206

CPTN286 Networking Capstone Project 3 Credits

This course draws together the major goals of the Computer Networking degree: designing a network, implementing that design, providing services to users on that network and maintaining that

network. In addition, the course integrates the important ability to communicate technical information to both technical and non-technical individuals. Students will choose, design, or be assigned a project that incorporates the components identified above in the form of a Request for Proposals. Both a written solution and an oral presentation of that solution will be required. Pre-requisites/Corequisites: CPTN225, CPTN210

CPTN290 Computer Science Internship 3 Credits

The internship program allows the student to apply, in a work environment, competencies and skills learned in the classroom. Internship activities include a weekly seminar in which the different business structures and work experience will be shared. Students will keep a journal of their work experience. A final report will be written to evaluate work experience. This course offers a service learning option. Prerequisite: Substantial completion of all catalog-listed courses for the first three semesters in the Computer Science program and approval of the internship coordinator.

COLLISION REPAIR TECHNOLOGY

CRTN101 Basic Collision Repair 4 Credits

The theory and development of skills required in making auto body sheet metal repairs. Procedures in the proper use of equipment, tools and materials to straighten, shrink, and restore automobile sheet metal will be covered. Shop safety will be stressed and applied. MIG and gas welding theory and technique will be covered as well.

CRTN105 Basic Automotive Refinishing 4 Credits

The theory and development of skills required to properly prepare an automobile for refinishing. Topics include the selection of abrasives and other refinishing materials. The proper use and safety of painting equipment such as compressed air systems, respirators, spray guns, paint booths, and drying systems will be covered. Detailing of automotive interiors and exteriors will be discussed and practiced. Laws, regulations and safety regarding the handling of paint materials will be emphasized. Prerequisite: CRTN101

CRTN201 Advanced Collision Repair 4 Credits

The refinement of skills required to repair auto body panels plus the proper procedures in sectioning bodies, replacing bolted and welded panels, and glass replacement will be covered. Other topics will include the proper repair of non-steel body panels. Prerequisite: CRTN101, CRTN105

CRTN210 Structural Analysis and Repair 4 Credits

This course covers the construction of conventional and unitized frames used in automobiles. The principles of measurement and alignment of both frames and suspensions will be studied. Students will learn about the different types of measuring equipment and have hands-on training using our 3D measuring system and Chief E-Z Liner frame machine. Skills and safety using frame straightening equipment will be emphasized. Prerequisite: AUTN114, AUTN121, CRTN101, CRTN105

CRTN225 Advanced Automotive Refinishing 5 Credits

This course covers the skills and procedures needed to apply topcoat finishes to the automobile. The course will cover such topics as color theory, paint mixing, blending and tinting techniques, and paint problems. Application of topcoat finishes will include single stage, basecoat/clearcoat, multi-stage and custom paint systems. Safety and proper handling of refinish materials will be emphasized. All students will refinish body panels and complete vehicles in a controlled environment. Prerequisite: CRTN101, CRTN105, CRTN201

**CRTN230 Collision Estimating and Repair:
A Capstone Experience 4 Credits**

This course will cover the theory and skills of analyzing and estimating costs to replace and repair collision damages. Topics will include analysis of damage, customer relations, insurance policies, shop operations, liability estimating systems and economics of repairs. Practice in writing damage estimates will be performed. This course contains a capstone experience. Prerequisite: CRTN201, CRTN210

**CRTN235 Collision Mechanical and
Electrical Systems 3 Credits**

The study and development of skills in automobile undercarriage repairs such as brake service, CV shaft and driveline service, headlamp aiming, air bag diagnosis and repair, charging and starting systems, and fuel and ignition systems. This course is intended to teach the Collision Repair Student the basic knowledge and skills of the automotive systems as related to collision damages as described in the NATEF certification task list. Prerequisite: AUTN114, AUTN121, CRTN101, CRTN105; Corequisite: AUTN113

ECONOMICS

ECON201 Microeconomics 3 Credits

A microeconomic analysis of the basic characteristics of a market-directed economy. Topics include demand and supply elasticity; consumer choice; cost and productivity in the firm; perfect, monopolist, oligopolist, and monopolistic competition; antitrust, regulation, and deregulation; and resource markets.

ECON202 Macroeconomics 3 Credits

A macroeconomic analysis of the basic characteristics of a modern market-directed economy challenged by global development. Topics discussed include supply and demand; national income; gross domestic product; consumer price and confidence indexes; the business cycle; inflation and unemployment; fiscal, supply-side and monetary policy; and the Federal Reserve System.

EDUCATION

**EDUN101 Foundations of Early
Childhood Education 3 Credits**

This course provides an introduction to and analysis of the early childhood profession in relationship to society, community, the family, the child and self. The historical context, teaching and learning theories, types of programs best practices, ethical guidelines, current issues and trends, laws and regulations are covered. The impact of the multiple and diverse influences of family, culture and society on the child and the early childhood professional will be explored. This course requires six hours of observation field work.

**EDUN102 Growth and Development of
the Young Child 3 Credits**

This course examines the growth and development of the young child from birth through age eight. The characteristics, patterns and theories of development in the areas of physical/motor, emotional, social, language and cognitive development are covered. The complex and diverse influences of culture, environment and individual needs are considered as the young child is studied in relationship to family, school and community. The role of the early childhood professional in relationship to the development of the young child is considered. This course requires six hours of field observation and offers the student a Service Learning option experience.

**EDUN103 Safe and Healthy Programs for
Early Childhood Education 3 Credits**

This course provides an in-depth study of the planning for and evaluation of safe, healthy, nutritional early childhood environments. Settings and curriculum that are developmentally, individually and culturally sensitive in the areas of health, nutrition and safety will be explored. The course reviews the relevant policies, regulations and quality guidelines that support healthy, safe environments for the young child, birth through age eight. Topics include: planning, creating and evaluating play in learning environments and curriculum; the "whole child", family needs, related community resources, issues, trends and advocacy needs. This course requires a minimum of four hours of observation and six hours of participatory advocacy work in support of the young child's, health, safety and nutritional needs.

**EDUN104 Curriculum for Early Childhood
Care and Education 3 Credits**

An exploration of current theories of teaching and learning techniques used in early childhood education for children ages three through eight years. Special emphasis is placed on the impact of the constructivist, play, and process approaches on the environment, curriculum planning, instructional techniques, behavior guidance and teacher interactions. Attention is paid to the role of the teacher in the development and assessment of activities, materials and environments that support the developmental as well as the cultural and special learning needs of the individual child and their families. This course requires a minimum of 8 hours of field work in an approved early childhood setting. Prerequisites: EDUN101, EDUN102

**EDUN105 Children with Special Needs
and Their Families 3 Credits**

This course will examine the child with a special need, birth through age eight, within the family context and in an inclusive early childhood setting. The characteristics of typical and atypical development and the most common exceptionalities will be covered. Emphasis will be on identification, observation, screening, assessment, family-centered early supports and services, natural and inclusive environments, individualized plans, the IEP and IFSP, community resources, current issues and trends. The role and impact of family and cultural, linguistic diversity on the child with a special need will be emphasized. This course requires six hours of field work and offers a service learning option. Prerequisites: EDUN101, EDUN102

**EDUN120 Family Child Care Business
Management 3 Credits**

This course will review the fundamentals of sound business practices as they relate to the running of a successful Family Child Care business. Emphasis will be on designing of business plans, budgeting, insurances, effective business policies, contracts, pricing, marketing, customer relations, purchasing, financial, legal, and licensing regulations and reports, small business management and related record keeping.

**EDUN124 Family Child Care Curriculum
and Education 3 Credits**

An in-depth look into the home environment and the process of early childhood planning for multi-age groupings of children through age eight. The role of the environment as well as various curriculum programs will be explored and evaluated. Emphasis will be placed on developing positive growth in children through instructional and play materials, along with methods of evaluating the environment to ensure optimal opportunities for nurture and play. Participants will experience and broaden their own creativity

and imagination through learning activities that can be applied to their home settings. Prerequisite: EDUN102

EDUN130 Foundations of Education 3 Credits

This course examines the philosophical, historical, legal and social/cultural aspects of education in the United States. It explores how schools and classrooms function organizationally and academically. Teacher preparation, selecting teaching as a profession, teacher certification and effective teaching will be explored. Students will formulate a beginning philosophy of education. Twenty hours of observation and participation in a public school setting are required. This course offers the student a service learning experience.

EDUN132 Introduction to Exceptionalities 3 Credits

This course examines the psychological, physiological, social and educational characteristics of children who demonstrate an exceptionality and who are in need of special education services. This course will provide an overview of the most common exceptionalities, standard interventions, and social and educational trends connected to these exceptionalities. An emphasis will be on observation, screening, assessment, supports and services necessary for effective functioning in the home, school and community. Students will explore the historical foundations of special education, as well as current trends, federal laws that regulate special education, and the basic values and philosophies that underlie the supports provided for the student. This course offers the student a service learning experience.

EDUN190 Practicum I 3 Credits

This course will provide students with an experiential learning opportunity during which the student will be actively involved in all aspects of the children's learning. Emphasis will be placed on the student learner's interactions with the children, parents, and professionals that will be encountered in the experience as well as various theories in child development, curriculum, observation and environment planning. The student will apply and integrate the skills, theories, and knowledge base acquired in the pre-requisite course work. The student will participate in an approved, field based, licensed early childhood setting for 125 hours under the supervision of an experienced and degreed early childhood teacher. This course is a capstone course for the Certificate student. The course addresses all five of the NAEYC Standards for Early Childhood Professional Preparation. Prerequisites: EDUN101, EDUN102, EDUN103; Corequisite: EDUN105

EDUN200 Developmentally Appropriate Programs for Infants and Toddlers 3 Credits

This course is a study of current research, theories, and models of teaching and learning techniques used in the care and early childhood education of children birth to three years of age. The role, responsibilities of and relationships between families and early childhood care givers and educators will be emphasized. Topics will include the developmental stages of infants and toddlers, the components of quality programs, supportive environments and curriculum with sensitivity to attachment and separation, trust, communication and nurturing. Attention is paid to the role of the caregiver/teacher in the development and assessment of activities, materials, environments and routines that support the child and families individual and special needs. This course requires six hours of field work in an approved early childhood setting. Prerequisites: EDUN101, EDUN102

EDUN201 Organization and Management in Early Childhood Education 3 Credits

This course provides a survey of the organization and management of early childhood programs and child care centers. Topic covered will include planning, managing and evaluating programs and facilities for children. The topics of marketing, record keeping, budgeting, funding, licensing, accreditation and professional standards, hiring, motivating/evaluating staff and family involvement will be included. Emphasis will be placed on ethical guidelines, professional standards, the role of the early childhood program in the community and the sensitivity of cultural and family diversity. This course requires a minimum of 4 hours of field work. Prerequisites: EDUN101, EDUN102, EDUN103, EDUN104

EDUN203 Emerging Literacy in Early Childhood Education 3 Credits

This course provides an in-depth study of the literacy and language development of the young child. The component of a literacy and language rich environment that is culturally and individually sensitive will be explored. Topics covered will include literacy and language arts; developmental characteristics and needs according to the child's stage; special needs of the individual child and the ESOL developing child; pre-reading and reading skills; methods and techniques of lesson presentations; diverse language and literacy materials and activities; partnerships with families and communities to support literacy development and trends in literacy. This course contains a service learning experience option and requires a minimum of six hours of field work. Prerequisites: EDUN101, EDUN102, EDUN104

EDUN204 Behavior Guidance and Classroom Management in Early Childhood Ed. 3 Credits

This course provides a study of theories and strategies related to the positive, supportive, developmentally appropriate guidance of the young child in the group environment. Emphasis is placed on creating environments that are flexible and respectful, and are socially and culturally sensitive for all children and their families. Strategies for building an encouraging classroom in order to minimize disruptive behavior and support the development of the young child will be explored. Workable strategies for conflict management, quick intervention and crisis management techniques will be examined. This course requires a minimum of eight hours of field observation. Prerequisites: EDUN 101, EDUN 102, EDUN 104

EDUN215 Creativity and the Young Child 3 Credits

This course provides a study of the creative nature of the young child as it relates to the creative arts, math and science. Emphasis will be on an experiential application of developmentally appropriate, constructivist, play and process curriculum methods in early childhood curriculum for children ages three through eight years. The impact of the creative, exploratory approach on behavior guidance and classroom management will be included. This experiential course will provide the student with the opportunity to plan, create and implement activities, as well as to develop teaching strategies, technique and skills. This course requires a minimum of eight hours of field work in an approved early childhood setting. Prerequisites: EDUN 101, EDUN 102, EDUN 104

EDUN230 The Early Childhood Profession and Professional Portfolio 1 Credit

This course reviews the teaching and ethical standards of the early childhood profession. The assembling and presentation of a professional portfolio for assessment and the processes of selecting best work samples that present evidence of competency in program outcomes will be covered. Topics include;

the role of the teacher in connection to the child, family and community, professional standards and code of ethics, selection of and reflection on artifacts and evidence of learning and demonstration of the self as an early childhood professional. Corequisite: This course must be taken in conjunction with EDUN 190 for the Certificate student or EDUN 290 for the Degree student. A final presentation of the completed portfolio is required.

EDUN290 Early Childhood Education: Capstone Course 3 Credits

This capstone course is an opportunity to apply and integrate the skills, theories and knowledge base the student has acquired in the course work in the Early Childhood Associate Degree. The student will participate in an approved, field based, licensed early childhood setting under the supervision of an experienced and degreed level early childhood teacher.

This practicum experience includes observation, development and implementation of developmentally appropriate learning experiences and environments, classroom management, and working with parents and a teaching team. The student will complete a minimum of 130 hours on-site and attend a weekly, 1 hour seminar. Students will culminate this experience with the development and presentation of a professional portfolio and a major project. This capstone experience addresses all five of the NAEYC Standards for Early Childhood Professional Preparation. Prerequisite: EDUN190; Corequisite or Prerequisite: EDUN203

EDUN295 Teacher Education Capstone Seminar 1 Credit

This course reviews the preparation for and process of transferring to a Teacher Education Bachelor of Science degree program. Topics covered include the assembling of a portfolio that demonstrates the students competencies in courses taken, selection of and reflection on artifacts and evidence of learning, demonstrations of the self in regard to readiness to continue one's education, and preparation for and taking of the Praxis Examination. Presentation of a portfolio and completion of the Praxis Examination is required.

Prerequisite: A minimum of 50 credits in the Associate in Arts in Teacher Education Concentration degree must be successfully completed prior to taking this course.

ELECTRONIC ENGINEERING TECHNOLOGY

EETN110 Introduction to Object Oriented Programming with Java 3 Credits

In this course students will be introduced to fundamentals of programming and logical problem solving using object oriented methods and Java language. The primary objective will be to develop problem solving skills applicable in the area of computers. Students will learn I/O operations, algebraic manipulations, simple control structures and string manipulations. After introduction of fundamentals of programming an object oriented approach will be presented and developed. Elements of event driven programming and Graphical User Interface development will be introduced as well as some Web Oriented programming will be introduced. This course is for CENT and EET students only. Prerequisite: Accuplacer score equivalent to MTHN099

EETN115 Object Oriented Programming with C++ 3 Credits

This course is a continuation of the introductory course. Students will continue their general knowledge of programming and object oriented development. Classes will be discussed as a way to create user defined data types. Code reuse through

inheritance and polymorphism will be explored in depth. Other topics will include operator overloading, templates, exception handling and I/O streams.

There will be emphasis on Standard Template Library. Students will learn about pointers, bit manipulations and other topics specific to systems programming. The difference in C and C++ will be pointed out as C is a wholly inclusive subset of C++. This course is for CENT and EET students only. Prerequisite: EETN110

EETN121 Digital Circuits I 3 Credits

This course is a presentation of fundamental concepts in digital theory needed for more advanced study of digital circuits. The subject areas are number systems, digital codes, Boolean algebra, Karnaugh mapping techniques, basic logic gates, and flip-flops. Prerequisite or Corequisite: MTHN099

EETN122 Digital Circuits II 3 Credits

This course investigates the digital implementation of the basic elements of a digital computer, counters, and registers. A study of computer memory, ALU units, and miscellaneous circuits used for input-output, timing and data transmission is included. Prerequisite: EETN121; Corequisite: MTHN110

EETN131 Circuit Analysis I 4 Credits

Theory and laboratory work on DC current, voltage, resistance, Ohm's law, energy, power, series-parallel circuits, network theorems and networks. Introduction to AC current, voltage and power. Prerequisite or Corequisite: MTHN099

EETN132 Circuit Analysis II 4 Credits

Theory and laboratory work on AC current, voltage, impedance, power, series-parallel circuits, network theorems and networks. Theory and laboratory work on magnetism and magnetic circuits, resonant circuits, transformers, and filters. Prerequisite: EETN131; Corequisite: MTHN110

EETN142 Analog Circuits I 3 Credits

An introduction to semiconductor diodes, rectifying circuits, bipolar transistor and its biasing circuits, DC and AC equivalent circuits. Prerequisite: EETN131; Corequisite: EETN132

EETN202 Data Communications 3 Credits

This course studies how information is transferred either between peripheral equipment and computer or between computers. Both serial and parallel techniques are studied. Emphasis is placed on modems, modulation, electrical interfaces, codes and half- and full-duplex operations. Prerequisite: CPTN205

EETN243 Analog Circuits II 3 Credits

A continuing study of transistors, load line analysis, small and large signal amplifier circuits, bias, stability and equivalent circuit models from device parameters. Prerequisite: EETN142

EETN245 Communication Theory 3 Credits

Study of principles of radio frequency communication, modulation systems, pulse, digital modulation circuits, transmission line and propagation.

EETN246 OP Amps and Linear Integrated Circuits 3 Credits

This course provides an in-depth study of the analysis and application of operational amplifiers. Topics include differential amplifiers, frequency response, A/D and D/A circuits, active filters, troubleshooting of lab test circuits and analysis using computer simulation. Prerequisite: EETN243

EETN251 Microprocessors 3 Credits

A continuation of materials from Digital Circuits II. Memories, PLDs, UARTs and the building of a digital microprocessor will be covered. Prerequisite: EETN122

EETN252 Electronic Troubleshooting 3 Credits

This course presents the philosophy of fault analysis, the differences between empirical and experimental knowledge and the standardization of problem reporting and analysis. Attention is given to risk vs. reward and cost effectiveness. Case studies and actual problems are used to provide the laboratory experience necessary to develop possible solutions. Prerequisites: EETN122, EETN132, EETN243, EETN246, EETN251

EETN274 Laboratory Project 1 Credit

An independent lab project using the student's knowledge of digital/analog electronic circuits and microprocessors. Students will design and build a working model of their selected project. The project will be built, troubleshot and demonstrated by the end of the semester. Prerequisites: EETN132, EETN243, EETN251

EETN288 Capstone Experience 1 Credit

In cooperation with supervising faculty members, this course provides students with the opportunity to select design projects that demonstrate in some practical manner their ability to integrate research, theory, and application of computer engineering technology principles and related general education skills.

Each work team is responsible for the production, presentation, and defense of a project and written report related to the capstone experience.

The assessed skills will include competence in the areas of the students' technical subject matter, interpersonal and team work skills, written and oral communication, project management and analysis, and technical design. Prerequisites: CPTN230, EETN122, EETN132, EETN251

ELECTRONICS

EMTN101 Electronics 3 Credits

An introduction to electricity and electronic components. Primary emphasis is placed on analysis and understanding of resistive circuits. Theorems basic to the analysis of electrical networks are introduced in this course. Circuit analysis is extended to alternating current circuits. Time constants, phase relationships and resonance are taught. Solid state devices are introduced. Prerequisite or Corequisite: MTHN099

EMTN102 Control Electronics 3 Credits

An introduction to various components of electronic control; transistor amplifiers, operational amplifiers, comparators and feedback controls. Other solid state devices and opto-electronics are also studied. Prerequisite: EMTN101

EMTN104 Digital Electronics 3 Credits

Digital logic gates, flip-flops, PLAs and memory are studied as microprocessor support chips. Gate reduction techniques are introduced. Number systems used in logic and microcomputer applications are studied. The student is also introduced to microcomputer hardware and software concepts. Prerequisite or Corequisite: EMTN101

EMTN111 Microcomputers 3 Credits

Microcomputer hardware and software are studied using IBM compatible PCs as trainers. Hardware topics include microcomputer architecture, instruction timing, keyboard operation, the PC bus and interfacing. Software topics include the 8088 instruction set, tracing a program using DEBUG, the PC interrupt structure, use of the interrupts, accessing ports and the use of the assembler and linker. Prerequisite: EMTN104

EMTN201 Introductory Control Systems 3 Credits

The nature of control systems is presented, including open and

closed-loop control and time and event driven sequential control. The factors affecting control system performance and stability are introduced. The nature of the elements that make up a control system is discussed to enable the student to better understand the functioning of the systems. Sensors and signal conditioning are presented. Prerequisite: EMTN102; Prerequisite or Corequisite: MTHN120

EMTN202 Advanced Control Systems 2 Credits

Switches, actuators, valves, heaters and the response of physical systems is studied in detail. Emphasis is on understanding why systems respond as they do and the effect of such factors as gain and damping on the stability of control systems. Process characteristics and the methods of analysis are an integral part of this course. Prerequisite: EMTN201

EMTN203 Applied Mechanics I 3 Credits

Introduction to material science, stress and strain in materials, and failure modes in materials. The study of mechanical components such as springs and fasteners is begun. Corequisite: SCIN130 or SCIN150

EMTN204 Hydraulics and Pneumatics 2 Credits

The dynamics of liquids and gases encountered in traditional manufacturing, industrial automation, and vehicular applications. Prerequisite: EMTN203

EMTN210 Applied Mechanics II 2 Credits

Continuation of the study of mechanical components with shafts, clutches, belt and chain drives, etc. Emphasis is on proper selection and operating conditions for reliable operation. Prerequisite: EMTN203

EMTN211 Design Seminar 2 Credits

A project incorporating mechanics, a control system and electronics is designed, constructed, and documented in a manner that approximates as closely as possible a real industrial design and development process. Development teams are selected to perform required tasks, such as electrical control, computer or PLC control, mechanical design and documentation. The Design Seminar constitutes a major part of the lab component for EMTN202, EMTN204, and EMTN210. This course will include a service learning opportunity when available. Prerequisite: CADN215 or EMTN201

EMTN214 Programmable Controllers 2 Credits

Practical wiring and programming of programmable controllers to provide a basic understanding of the operation of these commonly used devices in the control of manufacturing processes. The course includes an introduction to ladder logic and the principles of operation of the controllers. Corequisite: EMTN201 or Permission of Instructor

EMTN215 Automation Programming 3 Credits

Students will learn the basic components of control systems and methods of programming such control systems. The course will consist of classroom instruction of the devices used and in the methods of organizing the requirements for particular programs to create a working and optimal solution to various control application problems. Prerequisite: CADN112

ENGLISH

ENGN098 Introduction to English I 4 Credits

A preparatory course designed to develop writing skills. Emphasis is on grammar, usage, punctuation, capitalization, topic sentence and paragraph development. **Minimum passing grade of C is required.** Credits do not count toward degree requirements. Prerequisite or corequisite: LEXN101

ENGN099 Introduction to English II 3 Credits

A preparatory course designed to develop writing skills, building upon the student's knowledge of grammar, sentence mechanics and paragraph development, and focusing on the short essay form. **Minimum passing grade of C is required.** Credits do not count toward degree requirements. Prerequisites: Mastery of ENGN098 or Accuplacer score; Prerequisite or Corequisite: LEXN101

ENGN101 College Composition 4 Credits

In this course, students learn to write clearly and effectively for defined audiences through a variety of strategies. Emphasis is on the writing process from pre-writing through drafting, revising and editing. Students gain confidence through learning the basic principles of effective expository composition and the application of these principles in writing essays and documented papers. Students become aware of the variety of strategies, behaviors, habits and attitudes, and choose those that help them improve. Students will also read and examine a wide variety of writers and writing styles. Prerequisite: Placement test or mastery of ENGN099; Prerequisite or corequisite: LEXN101

ENGN102 College Composition II 3 Credits

Building upon skills learned in College Composition (ENGN101), this writing and literary course further explores the dimensions of writing based on selected readings that explore relevant themes and issues in today's world. Emphasis is placed on expository and persuasive writing within a research context. Prerequisite: ENGN101

ENGN103 Professional Writing and Presentations 3 Credits

The course is designed to prepare the student to use the principles of and to practice effective communications in business and industry. The course emphasizes formatting, design, style, and organization. Students receive practice and advice in written communications such as letters, memos, and reports, and in oral communications such as oral presentations, group conferences, and interviewing, according to professional standards. Presentation graphics will also be taught. Prerequisite: ENGN101; Prerequisite or Corequisite: BCPN101

ENGN105 Introduction to Literature 3 Credits

This course studies societal issues and events in the twentieth century, which are portrayed through a selection of modern literature. Works vary accordingly at the discretion of the instructor and may include fiction and non-fiction pieces. Prerequisite: ENGN101

ENGN109 Oral Communication 3 Credits

Oral Communication is designed to prepare students to assume active participation in those phases of industrial and social life requiring effective oral communication. Through practice and practical exercises, students will learn the skills associated with professional speaking. Emphasis will be placed on planning and organization, as well as the importance of the audience. Since writing is often the basis for many oral communication activities, some written assignments are also required. Prerequisite: ENGN101

ENGN122 Technical Writing 3 Credits

Applying principles used in business and industry, students will analyze technical documents and write a variety of technical assignments including memos, instructions, feasibility reports, and proposals. Prerequisite: ENGN101

ENGN206 Writing Short Stories 3 Credits

This course puts emphasis on discussion of student short stories by peers. It depends on growth through exposure to other types of writing as well as through in-depth discussion of the

strengths, weaknesses and potential of each piece. Prerequisite: ENGN101, (This course was formerly EN206 and ENN206 Creative Writing).

ENGN220 Contemporary Dramatic Literature 3 Credits

In this course, students will get an overview of the world of contemporary theatre literature through the study of plays of the "modern" or "contemporary" era.

Each week a different play will be chosen to be read (at home and then by web links in excerpts—out loud using Lincoln Center and TCG play archives on line), analyzed in a weekly journal and in a class discussion chat room, and put into historical context through lectures, videos and computer websites. Every four weeks an in depth, longer research paper will be presented to the class in a PowerPoint format through the digital drop box on a play from the era we've been studying that is not on the reading list for all students. Mid-term and final exams will be given at appropriate times in the course.

The period covered will be 1840 to 2005. Prerequisite: ENGN101

ENGN230 British Literature I 3 Credits

This course will survey selections of various genres and forms of British literature from the Middle Ages to 1800. Each of the readings will be examined within the context of the character and history of British literature. Works and major British writers such as Beowulf, Chaucer, Sir Thomas More, William Shakespeare, Donne, Jonson, Milton, Dryden, Swift, Pope and others may be selected for study. Prerequisite: ENGN101

ENGN231 British Literature II 3 Credits

This course will survey selections of various genres and forms of British literature from 1800 to the present. Each of the readings will be examined within the context of the character and history of British literature. Works of major British writers such as Blake, Burns, Byron, the Brownings, Dickens, the Brontes, Eliot, Wilde, Shaw, Hardy, Conrad, Forster, Woolf, Joyce, Orwell, Thomas, Hughes, Heaney and others may be selected for study. Prerequisite: ENGN101 College Composition

ENGN235 Poetry Workshop 3 Credits

Building on writing principles and critiquing abilities learned in College Composition, students will begin to investigate the differences between prose and poetry. Through exercises and revision, and especially by reading and discussing some contemporary poems, students will learn to recognize and employ some of the basic tools of free verse. Working together on their own with one another's poems to offer constructive criticism, students will learn what does and does not work in their own poems. This course meets the requirements for the second course in English. Prerequisite: ENGN101

ENGN240 American Literature I 3 Credits

This course samples American literature from the colonial period to the late nineteenth century. Each of the readings will be examined within the context of the character and history of US literature. The course covers the evolution of literature as a contributing factor to the development of a nation. Works of major American writers such as William Bradford, Anne Bradstreet, Cotton Mather, Benjamin Franklin, Thomas Paine, Thomas Jefferson, Phillis Wheatley, James Fenimore Cooper, Edgar Allan Poe, Herman Melville, Henry David Thoreau, or Louisa May Alcott may be selected for study. Prerequisite: ENGN101

ENGN241 American Literature II 3 Credits

This course samples American literature from the late nineteenth century to contemporary time. Each of the readings will be examined within the context of the character and history of US litera-

ture. The course covers the evolution of literature as a contributing factor to the development of a nation. Works of major American writers such as Walt Whitman, Emily Dickinson, Sarah Orne Jewett, Mark Twain, Edith Wharton, Robert Frost, Willa Cather, Eugene O'Neill, F. Scott Fitzgerald, Langston Hughes, Allen Ginsburg, Sylvia Plath, Amy Tan, Toni Morrison and others may be selected for study. Prerequisite: ENGN101

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ESLN082 Conversation for Authentic Communication 3 Credits

This course is for non-native speakers of English. The main focus is conversation practice for authentic purposes such as communicating in the college classroom and other campus settings; communicating in the community; and communicating to facilitate peer relationships with native speakers. Class activities include pair and group discussions, campus and community interactions, complemented by vocabulary study. **Credits do not count toward degree requirements.**

ESLN083 ESL Speaking, Listening and Pronunciation 4 Credits

This course is for non-native speakers of English. The main focuses are developing oral and aural communication skills. Goals for students include improving communication skills for school, work, and daily life. Class activities will include oral journals, oral presentations, listening activities, and field studies. **Credits do not count toward degree requirements.**

ESLN084 ESL Transitional English I 4 Credits

This course is designed to provide the student with practice in reading and writing skills. Students will develop reading and writing skills and build a more extensive English vocabulary. Grammar will be taught in context with all language skills. Emphasis is placed upon problematic grammatical and mechanical structures for the ESL student. Class activities and assignments will include journaling, reading and writing activities, and discussions. **Credits do not count toward degree requirements.**

ESLN086 ESL Transitional English II 4 Credits

This course provides intensive preparation for the ESL student who will be attending college classes for the first time or the student who is already in college. Students will learn to adapt to the United States social and educational system. Emphasis is placed upon independent and critical thinking skills and problem solving. Grammar and mechanics are addressed in context. Activities will include journal writing, authentic readings and college lectures, and peer conferencing. **Credits do not count toward degree requirements.**

ESLN088 Academic Writing for English Language Learners III 4 Credits

This is an intermediate course designed to give students ample practice in writing paragraphs and developing essays. The course will be focused on a variety of writing tasks building on prior knowledge of paragraph structures. Writing will include continued development of paragraphs and an introduction to essays. Students will benefit from reading, vocabulary and grammar exercises that support improved writing and language skills. **Credits do not count toward degree requirements.**

ESLN096 Introduction to English ESL 4 Credits

This course is for students who speak English as a second language. This preparatory course emphasizes grammar and usage, capitalization, punctuation, pronunciation, sentence structure, and paragraph development. Reading selections will

strengthen comprehension skills. The course covers similar content to ENGN098 but includes a special emphasis on problematic written and oral skill for the ESL student. Individual assistance will be available in the Department of Instructional Services. **Credits do not count toward degree requirements.**

ESLN098 Academic Writing for English Language Learners V 4 Credits

(This course is for non-native speakers of English.) This is an advanced course designed to give students ample practice in writing academic essays. The course will be focused on a variety of writing tasks building on prior knowledge of essays. Students will benefit from reading, vocabulary and grammar exercises that support improved writing and language skills, as well as information synthesis. **Credits do not count toward degree requirements.**

EQUINE BODYWORK

EQMN101 Equine Bodywork I 3 Credits

This course is an entry level course covering the basics of an equine bodywork: the strokes and their purposes; basic application on musculature; materials and tools needed. This basic "How To" will instruct the student in a complete session, with a goal of complete approach to manually addressing the soft tissue of the animal. Corequisite: EQMN110

EQMN110 Equine Anatomy, Physiology and Kinesiology 4 Credits

This introductory course centers on the structure, function and movement of the horse. Concentration will be on normal anatomy with emphasis on system functions and interrelations between systems. The course is also designed to give the student a basic understanding of normal equine movement as related to skeletal, articular and muscular systems. Gait analysis is also included. Prerequisite: SCIN111

EQMN119 Equine Bodywork Business and Marketing 3 Credits

This course will in general familiarize the student with the business of and marketing skills needed to succeed in the equine bodywork world. Particular emphasis will be on defining scope of practice and honing interpersonal skills. The course will offer a broad overview of the entire horse community and its workings, routines, customs and jargon as well as a look at the needs of that community. Special attention will also be given to marketing techniques and ideas.

EQMN121 Equine Bodywork II 3 Credits

This course is a more advanced consideration of horse muscle bodywork. Specific regimen beyond the mere "rub down" will be examined, with consideration of equine pathologies and evaluation. The student will benefit from actual case studies as well as live demonstration and examples. Trimming, shoeing and saddle fitting will also be covered. Corequisites: EQMN101, EQMN110

EQMN125 Equine Acupressure and Aromatherapy 2 Credits

This course will cover horse meridians and points so that the student can learn a complete acupressure session on the animal. Basic principles and techniques will be included as well as indications and contraindications. Also included will be uses of essential oils for equine treatment. Corequisites: EQMN101 and EQMN110

EQMN130 Equine Handling**2 Credits**

This course will cover the essentials of "horse handling" with emphasis on understanding behavior. Students will learn essential ground techniques, working with the emotional and psychological state of the horse to achieve maximum potential results in training, in-hand work and bodywork sessions. Common "First Aid" techniques ("Until the Vet Arrives") will also be covered.

EQMN140 Equine Sports Bodywork**2 Credits**

This course will focus on the horse as performance animal: sports/competition participant. Pre-, Post-, and in-between event massage will be explored with a goal of optimal maintenance of the performance horse. Injury and stress inherent in performance, with manual prevention and treatment will also be emphasized. Corequisites: EQMN101 and EQMN110

EQMN190 Equine Clinical Practicum**1 Credit**

This is a hands-on independent study course in a clinical or other appropriate setting. The student will have the opportunity to get hands on experience in a true working environment using techniques learned. This is a capstone course. Prerequisites: It is assumed that all other subjects have been taken or are being taken by the student focusing on practicum.

FINE ARTS

FARN101 Introduction to Drawing**3 Credits**

This course combines an appreciation of drawings by a number of artists with an exploration of drawing using various materials and media. Students will study several drawing materials, themes, and styles. In that way, they may gain the ability to self-evaluate their own drawings and the drawings of others according to basic principles of design, technique, and style. In addition to tuition and fees for the course, students will be expected to purchase up to \$50 of drawing materials and papers for the course.

FARN111 Photography & Digital Imaging I**3 Credits**

This course covers the technical and artistic aspects of photography and digital imaging. Topics include camera operation, exposure, composition, and lighting with emphasis on the technical and artistic sides of photography. Through assignments in photographing nature, scenery, people, sports, and existing light and through the study of the styles of many renowned photographers, students will begin to develop their artistic sense and photographic vision. The lab component will use photo editing software to manipulate, and composite images. Students must have access to a camera (digital or film) with adjustable apertures and shutter speeds.

FARN112 Photography and Digital Imaging II**3 Credits**

This is an advanced course in photographic techniques, styles and, aesthetics. Students will continue building technical and artistic skills with the camera using composition, lighting, and design as well as expanding their proficiency with photo editing software to create and refine personal vision. Students will create a high-quality portfolio of photographs and lab projects. A film or digital camera with adjustable apertures and shutter speeds is required. Prerequisite: FARN111 (formerly HUMN105) or Permission of the Instructor

FARN120 Graphic Design Theory**3 Credits**

This course covers the technical and artistic aspects of graphic design and its purpose as a tool for marketing and disseminating information to the public. Topics include elements of creative design, visual communication, type, composition, color formats, requirements for print and web and using Photoshop as a designing tool, emphasis on both technical and artistic

sides of graphic design. Through assignments both in studying successful professional graphic design and creating ads, brochures, posters etc., preparing designs for print and web, utilizing images and text as well as creating designs from a blank file, students will start to develop a logical sense of how to use image, color, form and text to achieve the desired level of clear and effective communication of a message. This course requires reading, research and has a lab component working with Photoshop.

FARN200 Drawing II: Developing a Personal Approach to Drawing**3 Credits**

This course will encourage students to explore different stylistic approaches and materials in drawing in order to encourage them to expand their understanding of the drawing process. Mixed media and experimental techniques including dry and fluid mediums will be experimented with in relation to different themes. Some studies of the human form will be included. In addition to tuition and fees for the course, students will be expected to purchase up to \$50 of drawing material and papers. Prerequisite: FARN101 (minimum grade of B) or Permission of Instructor and student portfolio.

GEOGRAPHY

GEON101 Introduction to Geography**3 Credits**

Geography is a discipline that examines a broad range of topics but is unified by a number of themes and methods of inquiry. A systematic introduction to the discipline, designed to give the beginning student exposure to physical, cultural, economic, and cartographic aspects of geography.

GENERAL STUDIES

GSTN101 Assessment of Prior Learning**1 Credit**

This one-credit, four-week course is designed for students entering the General Studies program. Its purpose is to explain the program in detail and, through classroom activities, have each student prepare personal and career inventories and goal statements, articulate work and life experiences, prepare a portfolio as documentation, and plan the degree program.

HONDA AUTOMOTIVE TECHNOLOGY

HATN106 Honda Engines and Measurements**3 Credits**

This course examines the basic principles of Honda engines and the various operating systems within their designs. This course will present both practical and theoretical discussions on engineering designs and principles of physics to enable a student to understand more advanced theories to be studied in the Honda Program. The course will also have a lab component that will train students in the use of precision measuring instruments and proper engine disassembly procedures.

HATN113 Honda Electricity and Wiring**3 Credits**

Basic electrical theory and Honda automotive electrical systems will be studied to provide students with fundamentals necessary to diagnose, troubleshoot and repair Honda electrical systems. Systems to be covered include circuit types, wiring diagrams, wiring circuit requirements, electrical harness diagnosis and repair. This course will include chassis electrical components such as: lighting systems, motors, locks, instruments/gauges, sound systems and sensors.

HATN114 Honda Suspension and Steering**4 Credits**

Honda automotive suspension, steering systems and wheel alignment procedures will be studied. This course will include the development of knowledge to understand the forces that affect

vehicle control, suspension system design, wheel alignment angles and vehicle stability systems. Students will be trained in four wheel-alignment procedures, suspension system repairs and steering system diagnosis and repair. Prerequisites: HATN106, HATN121

HATN115 Honda Advanced Electrical and Electronic Systems 3 Credits

This course will cover the operating principles of advanced electrical and electronic systems found in Honda vehicles. It will include the theory of operation, diagnosis and repair of charging and starting systems, climate control electrical systems, body electrical memory accessories, body computer controlled system, data collection and the diagnostic test equipment related to their service and repair. Prerequisite: HATN113

HATN121 Honda Service and Maintenance 4 Credits

The study and development of skills in Honda underbody maintenance and preventive maintenance procedures will be emphasized. These procedures include engine lubrication systems, exhaust systems, automatic and manual transmission service, cooling systems, front and rear differential service, tire rotation and balance, body panel and door glass assignment, interior trim service, wind noise and water leak repair, dealer new vehicle and NH state motor vehicle inspection procedures, engine drive belt and timing belt service, accessory installation and the use of specialty tools required to perform these service operations. This course offers automotive repair to the public and a Service Learning opportunity for students.

HATN122 Honda Brakes and Stability Systems 4 Credits

The study of Honda automobile hydraulic and parking brake principles of operation, diagnosis and repair will be covered. The course will include the hydraulic system, calipers, rotor, wheel sensors, antilock computerized brake functions and vehicle stability system. Prerequisites: HATN106, HATN113, HATN121

HATN190 Honda Dealer Internship I: Capstone Course 2 Credits

The Internship Course supplements the PACT Program by requiring the students complete 128 mentored hours working in a dealership service department and ultimately serves as a Capstone experience.

HATN191 Honda Dealer Internship III: Capstone Course 2 Credits

The Internship Course supplements the PACT Program by requiring the students complete 128 mentored hours working in a dealership service department and ultimately serves as a Capstone experience.

HATN192 Honda Dealer Internship IV: Capstone Course 2 Credits

The Internship Course supplements the PACT Program by requiring the students complete 128 mentored hours working in a dealership service department and ultimately serves as a Capstone experience.

HATN195 Honda Dealership Internship II: Capstone Course 6 Credits

The Internship Course supplements the PACT Program by requiring the students complete 384 mentored hours working in a dealership service department and ultimately serves as a Capstone experience. The students become eligible for an internship after successfully completing the first semester course-work with a 2.0 or better GPA. The internship requirement may be met part-time over three semesters or full-time during the summer

when no classes are scheduled. The work experience for a student at the dealership should be divided over the eight ASE skill areas. While there will be some areas a student has had previous instruction, there will also be areas where the internship will be their introduction to a subject. It is not the dealership's responsibility to bring a student to a specific level of competency, but to offer the opportunity for development in the skill areas under professional working conditions and document accordingly. A representative from the college will visit the internship site to monitor the student's progress. This course is required only if a student is not earning credit in HATN190, HATN191, HATN192. Prerequisites: HATN106, HATN121, HATN113

HATN210 Honda Engine Performance I 3 Credits

The basic principles of engine computer management systems that control engine performance, emissions and economy will be covered. The ignition, fuel, valve timing, throttle and modulated displacement systems will be covered. Included in the study will be sensor operations, diagnosis and testing required to service and repair engine malfunctions related to the ignition, fuel and emission controls. Prerequisites: HATN106, HATN113, HATN115, HATN121

HATN215 Honda Engine Performance II 3 Credits

This course is an advanced in-depth study of the engine computer management system and the various engine emission and fuel evaporation systems required to meet Federal emission and economy standards. The course will include an in-depth study and use of test equipment and scan tool operations necessary to diagnose and repair engine performance malfunctions related to the ignition, fuel and emission controls. Prerequisites: HATN106, HATN113, HATN115, HATN121, HATN210

HATN221 Honda Heating and Air Conditioning Systems 3 Credits

The theory and operations of Honda climate control systems including safety, diagnosis, service and repair will be covered. Major areas of study will include: manual and automatic controls for heating and air conditioning systems, diagnosis and repair of failed components and recovery/evacuation and charging of refrigerant systems. There will be an emphasis on safety and refrigerant recovery procedures as well as the proper use of test equipment. Prerequisites: HATN121, HATN113; Corequisite: SCIN150

HATN225 Honda Advanced Vehicle System 3 Credits

The theory and principles of operation of Honda hybrid gas/electric vehicles will be taught including the study of regenerating braking systems, charging and battery storage systems, engines and drive motor controls and transmissions. Students will study specialized service and repair procedures unique to hybrid vehicles. Prerequisites: HATN106, HATN115

HATN226 Honda Manual Drive Line 3 Credits

A study will be made of the principles employed in the transfer of engine power through a manually shifted transmission and final drive unit on front, rear, two, four and all-wheel drive vehicles. All internal components of transmissions and drive axles will be studied through the disassembly and reassembly of each unit to gain an understanding of their operation and diagnosis of malfunctions. The course will also include clutch system service and repair as well as data sensor operation. Prerequisites: HATN106, HATN121

HATN227 Honda Automatic Transmissions 3 Credits

The theory of operation, diagnosis and service procedures of automatic and constant variable speed transmissions will be covered. Unit malfunction diagnosis, in vehicle service procedures

will be emphasized as well as disassembly and reassembly to gain a better understanding of the internal components of the transmission. Prerequisites: HATN106, HATN113, HATN121

HATN228 Honda Engine Repair 4 Credits
A detailed study of Honda multi-cylinder engine and components and of chassis engine repair procedures will be covered. Diagnosis, testing and inspection of failed components and their replacement will be emphasized. Prerequisites: HATN106, HATN113, HATN115, HATN121, HATN210; Corequisites: HATN215, SCIN150

HISTORY

HISN101 Western Civilization from Ancient Times Through the 17th Century 3 Credits
This course provides a basic survey and introduction to the heritage of Western people from ancient to early-modern times. Particular attention is given to the ancient civilizations of Egypt, Greece and Rome. Medieval civilization is explored with a focus on the institutions it bequeathed to the modern world. Throughout the course, important individuals are considered such as Alexander the Great, Caesar, Charlemagne, Michelangelo and Elizabeth I.

HISN102 Western Civilization Since the French Revolution 3 Credits
This course will provide students with an overview of European history from early modern times to the atomic age. Particular attention will be given to the French Revolution, the rise of the industrial era, the growth of nationalism, imperialism, the Russian Revolution, and the World Wars. Personalities such as those of Napoleon, Hitler and Stalin are studied. The course also introduces the student to the historical method.

HISN140 U.S. History from the Colonial Era to Reconstruction 3 Credits
This course covers the political, social, economic, and cultural development of the United States with emphasis on the colonial roots of American democracy, the Constitutional Convention, the growth of sectionalism, the Civil War and Reconstruction.

HISN141 U.S. History Since Reconstruction 3 Credits
This course covers the political, social, economic, and cultural development of the United States with emphasis on Reconstruction, the Industrial Revolution, the First World War, the Depression, World War II, and the post World War II era.

HISN160 History of Aviation 3 Credits
The course focuses on the development of flight from early dreams to actual accomplishment, with resulting implications.

HISN164 History of Technology 3 Credits
Studies the interaction between technology and western culture from a historical point of view, exploring the role of technology in the industrialization process and the resultant environmental problems.

HISN230 China – A Survey 3 Credits
China is the world's oldest living civilization in terms of continuity of culture. The purpose of this course is to make this nation – past and present – understandable to all. The course will consist of three parts. The first will provide a geographic and demographic context: a look at the climate, agriculture and people. Part two is a historical survey with an emphasis on politics, society, and art. The third part will provide an overview of language and writing, religion, medicine, mathematics and science, family life, food, and China and the outside world.

HISN240 The American Revolution 3 Credits
An examination of the background and causes of the war, the major battles, and the events establishing the nation under one Constitution.

HISN241 American Constitutional History 3 Credits
A study of the evolution of American constitutional law includes the drafting and ratifying of the Constitution and the doctrine of judicial review and chronicles the development of major constitutional principles. Prerequisite: ENGN101

HISN242 Civil War and Reconstruction 3 Credits
An examination of the background and causes of the war; the military, political, diplomatic and economic aspects of the war; and the challenges and ultimate failure of reconstruction.

HISN245 The Coming of World War II 3 Credits
Examines the changes in Europe as a result of World War I, the worldwide effects of the depression era, and the beginnings of World War II.

HISN246 Modern American 3 Credits
This course will cover important political, technological, economic, and social developments since World War II. Discussion will focus on exploring three themes/topics: the impact of rapid technological innovation on society; the paradox of American democracy and popular demands for change; and the role of the United States government at home and in an increasingly interconnected world. By the end of the course, students should understand that knowledge of the post-World War II period provides them with a valuable historical perspective for critically assessing current events.

HISN250 American Economic History 3 Credits
This course provides the student with a historical background for a better understanding of America's evolving economy as well as America's role in the world today.

HISN251 United States and Vietnam 3 Credits
The course examines the role of the United States in Vietnam from 1945 to 1975. Topics covered include a brief overview of the history of Vietnam, how the U.S. became involved, the political dynamics both in the U.S. and Vietnam, the battle phase, disengagement of U.S., and subsequent relations between the U.S. and Vietnam.

HISN252 Contemporary American Foreign Policy 3 Credits
Important issues and problems of contemporary American foreign policy and alternative proposals for action are studied.

HISN260 History of Multiculturalism 3 Credits
A wide variety of cultural groups will be examined, probing the historical circumstances that motivated them to come to this country. How and why they have been able or unable to maintain an ethnic identification over the generations will be explored. Students will begin to develop an appreciation of the influence of one's cultural heritage and will gain a greater understanding of the cultural value, beliefs, and behaviors of members from different cultures.

HISN285 Essential Skills of the Historian: A Capstone Experience 3 Credits
This course will introduce students to the essential skills needed to study history. Topics addressed will include understanding the "nature of history," learning to locate and critically assess historical sources, applying the method of historical inquiry, and writing history. The approach to learning will be "hands-on." As a summative assessment, students will be required to apply their skills by producing a research paper on an historical topic of

their choosing. This course will prepare students to continue to an advanced study of history at the bachelor degree level and will serve as the capstone experience for history concentration students enrolled in the liberal arts program. Prerequisites: ENGN101, HISN101, HISN102

HUMAN SERVICES

HSVN111 Introduction to Human Services 3 Credits

This course will provide an introduction to the background information and concepts necessary to understand the theory and practice of human services. The information will be drawn from disciplines of history, sociology, and psychology, joined together by values-based themes of social role valorization, ethical behavior, and quality of life. Current influences on Human Services such as managed care will be discussed. Corequisite: ENGN101, PSYN201

HSVN120 Learning and Behavior 3 Credits

This course discusses the history and the principles of behaviorism and presents a learning theory and teaching techniques based on positive behavioral principles. Presentations and discussions focus on the ethical and client rights issues of positive behavior change and recent trends and techniques for applying learning principles in a variety of settings. Prerequisites or Corequisites: HSVN111 or SLPN110, PSYN201 or Permission of Instructor

HSVN123 Supportive Communication Skills 3 Credits

This course provides an awareness and general practice of interactional communication skills expected in a supportive relationship. Supportive communication will be taught through verbal instructions, case studies, and peer and self assessment. Observation and evaluation methods will be incorporated to assess the student's communication skills. Prerequisites: HSVN111, HSVN120

HSVN125 Individual Assessment and Planning 3 Credits

This course reviews the process of designing and implementing supports for human service consumers. Presentation and discussion will include current and evolving models of assessment and planning, as well as the various factors that influence the achievement of individual plans. Prerequisites: HSVN111, HSVN120; Prerequisite or Corequisite: HSVN126

HSVN126 Issues in Developmental Disabilities and Mental Health 3 Credits

This course provides an introduction to the study of mental health and developmental disabilities. Mental health topics covered will include recent developments in the understanding of adjustment as an on-going process, major types of adjustment disorders, diagnosis, treatment, ethical issues and review of the psychological, social and cultural impact of adjustment problems. The course will also cover major types of developmental disabilities, assessment, causes and treatment, ethical issues and the physical, psychological and social impact of having a developmental disability. Prerequisites: PSYN201, HSVN120; Corequisite: HSVN123

HSVN190 Fieldwork I 3 Credits

Pre-approval of fieldwork site by department chairperson before placement. (A GPA of 2.0 is recommended.) This is a lab course designed to provide the student with an opportunity to apply knowledge gained in previous course work to various human service settings. Students will be assigned to a human service agency where they will observe its methods and philosophies. The site supervisor and the academic coordinator will determine

the level of participation by the intern. Prerequisites: LEXN101, BCPN101; Prerequisites or Corequisites: HSVN123, HSVN125, HSVN126. Students are expected to have field work placement before class begins.

HSVN212 Individual Counseling: Theory and Practice 3 Credits

This course will present a discussion of the most widely used theories of counseling offering the students the opportunity to integrate the theories within their own value systems. Counseling practice will consist of role playing and audio and video recording critiques. Self-inventories, case studies and experiential exercise will be incorporated into this course. Prerequisites: HSVN120, HSVN123, HSVN125

HSVN220 Group Dynamics and Counseling 3 Credits

This course will provide a study of therapeutic interventions as carried out through a group. The course design includes academic discussion of group processes and dynamics. Theory will be incorporated allowing students to increase their awareness of their group roles and increase their leadership and group problem solving abilities. Prerequisite: HSVN212

HSVN225 Family Supports 3 Credits

This course examines the most widely used theories of family therapy. This will include an overview of couple therapy, marriage counseling and family systems approach. Prerequisites: HSVN212; Corequisite: HSVN220

HSVN290 Fieldwork II 3 Credits

Pre-approval of fieldwork site by department chairperson before placement. (A GPA of 2.0 is recommended.)The student will work in an approved clinical setting under the supervision of an approved professional. Students will be expected to assume practical responsibilities appropriate to their placement sites, and to attend scheduled meetings of fieldwork participants. Prerequisites: HSVN190, ENGN101; Prerequisites or Corequisites: MTHN104, PSYN240, HSVN212. Students are expected to have field work placement before class begins. Students will **not** be able to do all **three** field placements at the same agency.

HSVN291 Capstone Experience 3 Credits

Pre-approval of fieldwork site by department chairperson before placement. (A GPA of 2.0 is recommended.)A lab course designed to provide comprehensive experience in application of knowledge and values learned in previous course work. Students will select a program or facility which provides human services and will work at that site as a supervised intern. Regular weekly meetings with the instructor and fellow interns will provide opportunities for focusing more on direct service activities that was started in Fieldwork II. Assessment, planning and intervention skills will be emphasized as well as activities dealing with case information/referral knowledge. Educational/observational activities will also be credited as part of the internship experience. Prerequisite: HSVN290; Prerequisites or Corequisites: HSVN225, HSVN220. Students are expected to have field work placement before class begins.

HUMANITIES

HUMN101 Introduction to the Humanities 3 Credits

An overview of the content and purpose of the humanities, this course explores the relationship of the individual to society through materials from various humanities disciplines. Creative imagination and social context, universal versus culture-specific qualities of human experience and expression, the connection

between appreciation and criticism are discussed throughout the course.

Students will sample primary and secondary sources from the arts, literature, religion, philosophy, history, and the social sciences. The terms and methods of critical analysis used in the various fields of study will be stressed. **Field trips may be part of this curriculum and students will incur nominal fees, usually no more than \$25 per semester.**

HUMN102 Art Appreciation 3 Credits

This course combines experience in the appreciation of painting, sculpture, and architecture so that the student may analyze and interpret works of art. The class will study the artist's materials, messages, and language, i.e., color, line, shape, texture, volume, space, and composition. **Field trips may be a part of this curriculum and students will incur nominal fees, usually no more than \$25 per semester.**

HUMN103 Music Appreciation 3 Credits

In this course students will develop the skill of perceptive listening and an understanding of the elements, forms, and styles of several musical periods. The course offers discussion of the musical style along with societal and historical significance of the period. Students will also learn to critically perceive musical selections. **Field trips may be a part of this curriculum and students will incur nominal fees, usually no more than \$25 per semester.**

HUMN104 Jazz and Its Roots 3 Credits

For most of the twentieth century, jazz was not only one of the most important cultural developments in America but was also deeply involved in important political, intellectual and social developments. This course will focus on the development of jazz, its roots and its impact on society. Students will learn both to appreciate "America's art form" and to recognize how jazz reflected and shaped important developments in modern American history.

HUMN107 World Religion 3 Credits

An introductory level survey course exploring the universality of religion in human experience. This course will cover the religious traditions that have a major influence in the world today: Taoism, Buddhism, Hinduism, Islam, Christianity, Baha'i, and tribal nature-based religions (Native American and African).

Cultural and societal change, schisms and divisions such as the Protestant Reformation, rituals and devotional practices, and the relationship between religion and socio-political conditions will be referenced, but emphasis will be placed on a comparison of religious ideas and the teachings of the founders, prophets, and major leaders who have shaped each religious tradition rather than on the facts of institutional history. A portion of the study of each religion will focus on reading selections from its primary sacred texts and literature. Prerequisite: ENGN101

HUMN109 Introduction to Philosophy 3 Credits

An introductory survey covering various components of philosophy including Epistemology, Metaphysics, Materialism, Realism, Pragmatism, Logic, Idealism, Existentialism and Aesthetics. This will include classical original, interpretation, development and modern application of these concepts.

HUMN110 Critical Thinking Skills 3 Credits

This course explores the relationship between communication and critical thinking. It explores logical thought and analysis with an emphasis on cause-and-effect and logical premise-and-conclusion arguments. Students will examine how to assess effective arguments and how to determine fallacious reasoning. Prerequisite: 'C' or better in ENGN099 or Accuplacer placement score equivalent to ENGN101

HUMN120 Introduction to Theatre 3 Credits

In this course, students will engage in an overview of the world of theatre through the study of theatre history, dramatic literature and the practical application of theatre skills to a real life situation. Emphasis is on theatre as an important aspect of our culture both historically and in the present day. Through the study of theatre history and the literature that defines the major eras of theatrical history, students will improve their understanding of how culture evolved from pre-historical times to the modern day. This knowledge will be put to practical use in the form of readings from selected works, observing theatrical performances and becoming actively involved in a theatre event—either at the college, at another theatre or in the community. Students will gain confidence in their abilities to be part of a performing arts event as well as an appreciation for the importance of culture in our daily lives. Prerequisite: ENGN101

HUMN130 Music Composition 3 Credits

In this course students with little or no music experience will learn the fundamentals of music structure and the process of composing and writing down simple music compositions. Steps in the process will include analysis of already existing music, developing an understanding of the grand staff, notes and their values, melody writing, and harmonizing simple melodies. The course will enable students to following the rules for part writing which will lead to an original piece as a final project.

HUMN140 American Cinema 3 Credits

This course explores Hollywood film as an art form, industry and system of representation and communication. In one sense, this is a language course - the language of film. The course will explain how Hollywood films work technically, artistically and culturally to reinforce and challenge America's national self-image.

HUMN220 Classic Myths in Western Civilization 3 Credits

This course will focus on myths from Ancient Greece but will also include material from the Old Testament, Mesopotamia, and Celtic Britain. We will read some of the greatest stories ever told and discuss how to interpret the mythic descriptions of the relationship between immortals and mortals found in these stories of creation and conflict, madness and love, heroic quest and divine punishment.

Some study of historical context will be involved; however, the emphasis will be on exploring the universal qualities that explain why these myths have outlived their cultural roots to become a meaningful part of the heritage of Western Civilization. Students will explore whether certain elements must be present for a story to be accurately labeled as mythic. The reasons why myths are studied in various fields and the differences in approach will also be reviewed.

Selections from various myths and legends will be read in prose or verse translations. Short excerpts will also be read from some of the major European and American authors who have been inspired by them. References to the visual arts will also be included. Prerequisite: Any one of the following courses or Permission of the Instructor: HUMN101 or HUMN107 or HISN101 or PSYN101

HUMN230 Ethics in the Workplace 3 Credits

An introductory study of classical and contemporary ethical philosophies and how these philosophies apply to current business practices. The course stresses analytical and problem-solving skills to comprehend the ethical dimensions of business relationships: employer to employee; managers to owners; manufacturers to consumers; and corporations to the environment. Prerequisite: ENGN101

LEARNING EXPERIENCE

LEXN101 Freshman Seminar 1 Credit

Freshman Seminar is a one credit, competency based course that will aid students in reaching their academic potential and enjoy a successful academic experience. Emphasis will be on personal and academic development and learning strategies that will reach beyond the classroom.

LEXN102 College Success Seminar 1 Credit

College Success Seminar is a one credit, competency based, course that will aid students in reflecting on and becoming aware of their academic progress and potential. Emphasis will be placed on study skills, college life, college resources, and self-development.

LEXN110 Service Learning Experience 1 Credit

This course will engage students in service experiences within the community. Service learning is the integration of service and learning where each is valued as necessary for the other. It is a way of learning that takes place through and within the performance of meaningful service in a community, and a way of enriching service through academic learning. Students will develop and commit to a sustained community service project with approval from faculty for a minimum of 16 hours for the semester and will participate in reflection sessions that take place in bi-weekly seminars.

LIBERAL ARTS

LIBN101 Liberal Arts and Career Preparation 1 Credit

This course introduces students to the intellectual tradition of the liberal arts. Drawing from the humanities, the social sciences, the sciences and mathematics, and world languages, students will explore career applications of skills learned from these disciplines.

In addition, students will explore a variety of career clusters for which Liberal Arts is an appropriate preparation. Students will complete a career interest inventory as a way to begin their exploration of future careers. Guest speakers will provide testimony to the importance of the Liberal Arts for success in the world of business and in the professions. Corequisite: ENGN101

LIBN290 Liberal Arts Internship: A Capstone Experience 3 Credits

The internship option in the Liberal Arts Department is a hands-on learning experience that provides an opportunity for students to practice learning outcomes and skills learned in the classroom, under the direct supervision of an on-site internship manager.

With the permission of the supervising faculty member, the internship may be arranged at a for-profit or at a not-for-profit organization. Prerequisites: Completion of 45 credits of course work applicable to the Liberal Arts Associate Degree Program

LIBN295 Liberal Arts Portfolio: A Capstone Experience 3 Credits

The Liberal Arts Portfolio course is designed to be a systematic and intentional process that will provide for student demonstration of educational excellence. Through this effort, students work with faculty mentors to assemble a set of credentials (the LAP) to highlight accomplishments and strengths.

Creating the LAP involves writing about learning experiences as they relate to important basic skills and knowledge areas that

professionals need. Students will assemble a collection of their best works and will reflect on those experiences. Prerequisites: Completion of 45 credits of the Liberal Arts Degree Program

WORLD LANGUAGES

LNGN101 French I 3 Credits

An introductory course for first year language study that takes a communicative, functional approach to teaching and learning French at the college level. The course includes grammar and conversation. At the end of the course, the student will be able to speak and write basic French.

LNGN102 French II 3 Credits

French II initially reviews, then builds on the simple sentence structures and vocabulary learned in French I. The goal of this course is to teach students to understand and converse in day to day French and know basic aspects of French culture(s). Students are also taught reading skills for comprehending authentic materials and basic literature, and they are taught to write letters and short essays. Course activities accommodate all learning styles and are both innovative and relevant to student experiences. Video materials bring French to life for students by illustrating in context the grammar and vocabulary students are learning. Prerequisite: LNGN101

LNGN105 Spanish I 3 Credits

An introductory course for the first year language study that takes a communicative, functional approach to learning Spanish at the college level. The course includes grammar, conversation, culture, and readings. At the end of the course the student will be able to speak and write basic Spanish. **Students who have taken two or more years of high school Spanish will be required to take a Spanish placement test.**

LNGN106 Spanish II 3 Credits

Spanish II initially reviews, then builds on the simple sentence structures and vocabulary learned in Spanish I. Students will understand and converse in day to day Spanish and know basic aspects of various Hispanic cultures. Students will also read authentic materials and basic literature, and will write letters and short essays. Course activities accommodate all learning styles and are both innovative and relevant to student experiences. Video materials bring Spanish to life for students by illustrating in context the grammar and vocabulary students are learning. Prerequisite: LNGN105 or Spanish placement test score of 75 or higher.

LNGN109 Italian I 3 Credits

An introductory course for first year language study that takes a communicative, functional approach to teaching and learning Italian at the college level. The course includes grammar and conversation. At the end of the course, the student will be able to speak and write basic Italian.

LNGN110 Italian II 3 Credits

A continuation of LNGN109. Prerequisite: LNGN109

LNGN113 Basic German 6 Credits

Basic German enables students to ask simple questions, understand basic instructions, and take part in a basic conversation on familiar subjects. Students will be able to understand short texts and instructions. Students will be able to carry out a conversation in a restaurant environment using the appropriate vocabulary. While the culture of German-speaking countries is not emphasized in the course, some attention is paid to cultural behavior and social relationships.

LNGN114 German I**3 Credits**

German I is the first of two semesters of elementary German, which will acquaint the student with the basic vocabulary and structures of the German language. At the end of the course the student will be able to understand, speak, read, and write basic German sentences, using all sentence forms, including questions as well as commands.

In addition to grammatical structure and use, the course will introduce the student to some of the culture, history, and geography of German-speaking countries.

LNGN115 German II**3 Credits**

German II is the second of two semesters of elementary German. The course will continue to emphasize listening, reading, speaking, and writing skills within culturally significant contexts.

Students will study the dative and genitive cases, dative and genitive prepositions, nouns with "der-" and "ein-" words, imperatives, modals, subordinate clauses, the future and past tenses, and adjective endings.

Students study vocabulary related to mass media, movies, and cultural performances. They are introduced to German foods, restaurants, and eating habits. Prerequisite: LNGN114

LNGN120 Sign Language I**3 Credits**

This course will assist the student in developing basic conversational skills in American Sign Language (ASL). Included in the course will be a study of basic grammatical structures, non-verbal grammatical signals, sign vocabulary, and conversation regulators. Cultural aspects of the Deaf Community will also be discussed. Emphasis will be placed on using American Sign Language (ASL) in one-to-one or small group conversations.

LNGN121 Sign Language II**3 Credits**

This course will assist the student in developing the ability to use and understand sign language at the beginning level. Classes will include readiness exercises, skills development, direct interaction activities and sign vocabulary building. Prerequisite: LNGN120

LNGN205 Spanish III**3 Credits**

Spanish III includes a review of the grammar, geography, and culture taught in Spanish II. During this course, students will expand their knowledge of the Spanish-speaking countries through authentic readings and videos. They will also write essays on a variety of themes and will use complex sentence structures. Ample listening activities will enhance this course to sharpen students' listening comprehension and speaking skills. Prerequisite: LNGN106

LNGN220 Sign Language III**3 Credits**

This course will continue with skills development, direct interaction activities and sign vocabulary building. It will cover the use of sign language in the Deaf Community, comprehension and expression of visual/manual language, grammatical structure and sign production. Prerequisite: LNGN121

LNGN221 Sign Language IV**3 Credits**

This course will assist the student in developing the background and skills necessary to participate in one-to-one or small group conversations. Class activities focus on developing expressive and receptive conversational skills through the use of drill, videotapes, discussion of idioms and colloquial usage and opportunities to participate in signed conversation with deaf people and other signers. Also included in the class will be vocabulary development, rules of social interaction, the process of conver-

sation, and discussion of deaf/hearing interactions. Prerequisite: LNGN220

MECHANICAL DESIGN TECHNOLOGY

MDTN110 Automation Programming**3 Credits**

Students will learn the basic concept of programming a 3-axis robot. Students will design, construct, and program robots for various design applications. These robots will be both bench top and IR controlled. Laboratory exercises complement classroom instruction. Prerequisite: CADN111.

MDTN280 Mechanical Design Capstone Preparation**3 Credits**

Students work in teams under the direction of a faculty advisor to research an engineering design project. Engineering communication, such as reports and oral presentations are covered. We emphasize practical design skills acquired in companion senior-level core courses. Students pursue collaborative research on a design problem of their choice. Students must demonstrate that they can use computer-aided design to model the project, use their engineering computational skills to show that the project will work safely, and present their design package for evaluation. Prerequisite: CADN112

MDTN285 Mechanical Design Capstone**4 Credits**

Students work in teams under the direction of a faculty advisor to complete an engineering design project. Students will create a mockup of their design leading to the development of a prototype to test and verify the effectiveness of their design. Students will present their design and prototype to the Technologies Department Advisory Board for evaluation. Prerequisite: MDTN280.

MASSAGE THERAPY

Students must be matriculated in the Massage Therapy program to enroll in these courses. Enrollment is available on a *space available* basis to non-matriculated Massage Therapy students from other Massage schools or to licensed massage therapists.

MSTN101 Swedish Massage I**3 Credits**

This course introduces the student to the history and theory of massage and will begin the study of the science and art of massage therapy. Course consists of lecture, demonstration and hands-on treatment. Students will be treating each other under the supervision of a licensed massage therapy instructor. This course is devoted to mastering the five basic Swedish strokes: effleurage, petrissage, friction, tapotement and vibration. Corequisite: SCIN111

MSTN105 Spa Techniques**2 Credits**

This course familiarizes the therapist in general with the various technique offerings of spas, including massage. The most frequently used options will be highlighted including wraps, scrubs, aromatherapy massage, and facials. Prerequisites or Corequisite: SCIN111, MSTN101

MSTN111 Musculo-Skeletal Studies**2 Credits**

Course will concentrate on the muscular and skeletal systems of the body, emphasizing identification, anatomical location and physiological function. How each unit studied--muscle and/or bone--relates to the entire human structure will be considered. Prerequisite: SCIN111

MSTN119 Massage Business Practices 3 Credits

Course is lecture and open forum discussion of business laws and practices as it pertains to the Licensed Massage Therapist. Topics included will be employment versus self-employment, business laws, accounting methods, tax-reporting, insurance billing and office filing and procedures and business start-up.

MSTN121 Swedish Massage II 3 Credits

This course continues and completes Swedish or asic massage. Range of motion will be studied as well as more advanced use of the basic strokes on the four quadrants of the body. Prerequisites: MSTN101, SCIN111

MSTN124 Acupressure 3 Credits

This course teaches the student Oriental concepts of the 12 organ meridians and the application of finger pressure for the overall health of the individual. Prerequisites: MSTN101, SCIN111

MSTN126 Massage Rules and Ethics 1 Credit

Course is lecture and experiential, focuses upon the specific ethics of the profession of massage as exemplified in various codes of ethics of major massage organizations and the National Certification Board of Therapeutic Massage Bodywork (NCBTMB). Course will also cover NH Rules governing massage therapy and therapists.

MSTN131 Pathology 3 Credits

Students will learn to treat pathological conditions of the musculoskeletal system, joints, movement, and anomalous conditions that limit movement as well as the more recognized pathological conditions of each anatomical system. Communicable diseases are considered, and hygiene included, along with indications and contraindications of massage. Prerequisites: SCIN111, MSTN101

MSTN132 Sports Massage 2 Credits

This course teaches massage techniques that meet the bio-physical needs of the athlete. Specific injury treatment with massage is covered, as well as pre- and post-event massage and muscular/joint maintenance between activities. Prerequisites: MSTN101, SCIN111

MSTN133 Clinical Evaluation and Treatment 3 Credits

This is a hands-on class emphasizing assessment and corrective techniques. The student will learn evaluation of presenting conditions and have an understanding of causal factors that contribute to musculoskeletal deviations. Integration of all treatment modalities studied and all skills acquired will be coupled with the appropriate application. Medical history taking, S.O.A.P. notes, focusing on specific problems and their treatment will be addressed. Prerequisites: MSTN121, SCIN111

MSTN134 Self Care and Stress Management Techniques 2 Credits

This class is designed to teach professionals specific stress reduction and self care techniques through the use of meditation, visualization, yoga, self massage, breathing techniques and nutrition. Students will develop skills to incorporate into their practice and self healing process.

MSTN135 Deep Tissue Massage 2 Credits

This course introduces the massage student to deeper strokes that include, but are not limited to trigger point, myofascial release and cross-fiber friction. Neuromuscular technique (NMT) will be covered particularly. Prerequisites: MSTN121, SCIN111

MSTN136 Shiatsu 2 Credits

This is an introductory course in oriental acupressure theory and practice. The course covers the twelve organ meridian, the two governing meridians and terminology specific to Chinese acupressure and Shiatsu. Prerequisites: SCIN111, MSTN101

MSTN137 Pre/Post Natal Massage 2 Credits

Special considerations need to be taken when working with pregnant women. Contraindications during each trimester, pressure points and proper positioning will be emphasized. Infant massage will also be included. Prerequisites: MSTN101, SCIN111

MSTN139 Reflexology 2 Credits

Reflexology is the practice of zone therapy and how reflex points on the feet correlate to various parts of the body. Prerequisites: MSTN101, SCIN111

MSTN141 Oriental Theory and Concepts 3 Credits

This course teaches the student basic concepts of Eastern/Asian healing, including the 12 organ meridians, the 5 elements and forms of chi and how they relate to treatments and overall health of the individual.

MSTN143 Chair Massage 2 Credits

Course is lecture and experiential, and focuses upon specific techniques used in this popular modality of massage therapy. Students will learn all necessary preparations, procedures, and strokes for completing a chair massage, from intake of client to marketing this service to organizations, companies, and the public. Prerequisites: MSTN101, SCIN111

MSTN145 Aromatherapy 2 Credits

Use of essential oils for medical and massage purposes. Student will learn to customize aromas for specific purposes.

MSTN147 Elder Massage 2 Credits

The class is designed to teach massage therapists a variety of skills and techniques. These will enable the professional to better work with older people in various settings such as nursing and retirement homes as well as with more active seniors. Prerequisites: MSTN101, SCIN111

MSTN148 Somatic Massage 2 Credits

Massage made famous during the 60's and 70's in the US at such noted centers as the Esalen Institute in California, Kripaulu Institute, MA and Omega Institute, NY. Somatic massage emphasizes slow, full-body strokes and metaphysical and holistic (physical, psychological and emotional) approach to the experience of bodywork. Prerequisites: MSTN121, SCIN111

MSTN149 Russian Massage 2 Credits

Principles of Russian Massage. Hand positions and strokes for specific purposes. Student will learn a full body treatment using methods seldom seen in the U.S. Prerequisites: MSTN101, SCIN111

MSTN153 Myofascial Release and Trigger Point Therapy 2 Credits

In Myofascial Release, the concept of fascial structure within the body will be focused upon. The student will learn major strokes of this technique on various muscle groups. Trigger Point emphasizes specific points on congested muscles for relief of pain and overtonification. Prerequisites: MSTN101, SCIN111

MSTN190 Clinical Internship 1 Credit

A total of 125 hours of hands-on experience is required by the State of NH in approved programs for massage therapy.

NCC offers a unique concept allowing the student the flexibility of completing these hours from second semester onward at their own pace and according to their own scheduling of appointments. However, such independent work must be fully documented and under the regular supervision of a Licensed Massage Therapist. Arrangements for such supervision are left with the student and must also be fully documented. Prerequisite: Completion of all catalog-listed courses for the first two semesters in the massage program of study and approval of the internship coordinator.

MATHEMATICS

MTHN097 Mathematics I 4 Credits

This is a course for students who have difficulty with basic mathematics or who need a good review in basic arithmetic computation skills. The course begins with the arithmetic of whole numbers and then goes into fractions, decimals, percent, word problems, unit conversions, and finally introductory algebra. Minimum passing grade of C is required. **Credits do not count toward degree or program requirements.** Prerequisite or corequisite: LEXN101

MTHN099 Algebra I 3 Credits

A mathematics course which deals with basic and intermediate algebra topics including solving equations, inequalities, systems of linear equations; factoring and simplifying algebraic expressions; basic graphing techniques and applications of all skills. Prerequisite: Placement Test or mastery of MTHN097. Minimum passing grade of C is required. **Credits do not count toward degree or program requirements.** Prerequisite or corequisite: LEXN101

MTHN104 Topics in Mathematics 3 Credits

This course is designed to give students basic mathematical concepts and methods that will assist them in using mathematics in both their personal and professional lives. The course provides exposure to problem solving, sets, systems of numeration, geometry, financial mathematics and statistics. Prerequisite: Placement Test or mastery of MTHN097

MTHN106 Elementary Statistics 4 Credits

An introductory course in modern statistics concerned with the organization and presentation of data in descriptive statistics from which meaningful decisions can be made. This course contains a service learning option. Prerequisite: Placement Test or MTHN099 or Permission of Instructor.

MTHN108 Contemporary Mathematics 3 Credits

This course introduces students to recent advances in mathematics and their application to the social sciences. It focuses on the understanding and application of mathematics in applied situations and includes a number of topics in which mathematical ideas are used to solve modern problems such as: voting systems, weighted voting systems, Fairness, Euler and Hamiltonian Circuits, networks, scheduling problems, and population growth. Prerequisite: Placement Test or MTHN099 or Permission of Instructor

MTHN110 Algebra and Trigonometry 4 Credits

This course starts with algebra topics, which include linear, quadratic, and radical equations. Trigonometry topics include trigonometric functions, their graphs, identities, inverse trigonometric functions, Laws of Sines and Cosines, and vectors are studied in detail. Applications to problem solving are emphasized. Prerequisite: Placement Test or MTHN099 or Permission of Instructor

MTHN115 Finite Mathematics 4 Credits

Topics will include linear models, matrix theory, linear programming, combinatorics, and mathematics of finance. Prerequisite: MTHN099 or Placement Test or permission of Instructor.

MTHN120 PreCalculus 4 Credits

Students will begin the course with a general discussion about functions including range, domain, extrema, and inverse functions. The ideas will then be applied to trigonometric, exponential and logarithmic functions. Complex numbers including DeMoivre's Theorem and Euler's Theorem will be studied. The connection of complex numbers to vectors will be elucidated. A selection of topics from the following list will be chosen by the instructor: sequences and series, mathematical induction, binomial expansions, systems of equations and inequalities, introduction to derivatives. Mastery of the topics in this course will prepare students for Calculus. Applications will be integrated throughout the course and particular attention will be paid to the process of problem solving. Prerequisite: Placement Test or MTHN110 or Permission of Instructor

MTHN170 Discrete Mathematics 3 Credits

This course is concerned with the finite processes and sets of elements that can be listed. It covers the basics of discrete mathematics including propositional logic, proof techniques, fundamentals of counting, sets, relations, functions, and Boolean algebra. Prerequisites: MTHN110 or MTHN115

MTHN210 Calculus I 4 Credits

Calculus is introduced through studies of functions, limits, differentiation and higher order derivatives. Problems in maximum and minimum and related rates are considered. Integration is introduced by analyzing the definite and indefinite integral, areas, and volumes. Prerequisite: Placement Test or MTHN120 or Permission of Instructor.

MTHN211 Calculus II 4 Credits

This course is a continuation of Calculus I. The scope of the course includes the differentiation and integration of transcendental functions such as trigonometric, logarithmic and exponential functions. Also included are various methods of integration and the study of infinite sequences and series. Prerequisite: MTHN210

MTHN212 Calculus III 4 Credits

A course in the calculus of functions of more than one variable usually follows a year of calculus involving functions of only one variable. This course will commence with discussions of vectors and vector value functions. Partial differentiation, multiple integration, and vector operators including: gradient, divergence, and curl and related integral theorems: Green's theorem, the Divergence theorem, and Stokes' theorem will be introduced and applications will be included throughout. Prerequisite or Corequisite: MTHN211

MTHN215 Linear Algebra 4 Credits

This course contains both the theory and computational skills needed to study vector spaces, linear transformations, diagonalization, eigenvalues, and orthogonality. Students are expected to develop the ability to reason through and coherently write up proofs of theorems as well as develop computational skills. Prerequisite: MTHN211

MTHN216 Math Language, Logic and Proof 4 Credits

Students will become familiar with the language of mathematics and learn how to use it in writing mathematical proofs. Various methods of proof will be presented, and students will be ex-

pected to demonstrate a level of proficiency in their utilization. Fundamental concepts in the areas of set theory, number theory, relations and functions, and logic will be discussed and proved. Prerequisite: MTHN211

MTHN217 Probability and Statistics 4 Credits

This course begins with a discussion of the differences between descriptive and inferential statistics, the different types of data, and the rudiments of statistical distributions. Classical probability theory and probability distributions are discussed in general. Specific probability distributions appropriate to discrete data and continuous data are developed in detail. Estimation, hypothesis testing, and applications provide "real life" examples. Linear relationships and regression analysis provide another means to make predictions and show correlations. Prerequisite: MTHN210; Prerequisite or Corequisite: MTHN211

MTHN220 Elementary Differential Equations 4 Credits

This first course in Differential equations studies the theory, solutions methods, and application of ordinary differential equations. It includes separable variables, homogeneous equations, integrating factors, higher order differential equations, LaPlace transforms, numerical methods, and applications. Prerequisite: MTHN211

MACHINE TOOL TECHNOLOGY

MTTN101 Manufacturing Processes 3 Credits

The student is introduced to the preparation of materials for manufacturing through the extraction and development of ferrous and nonferrous metals and the influence of elements in the production of alloy steels and irons. The classifications of steel, the mechanical and physical characteristics of metals as well as heat treatment processes are also covered. Manufacturing processes such as forging, powdered metal processes, sand castings, additional casting processes, presswork, rolling, drawing, bending, extrusion, welding, electrical discharge machining (EDM), electrochemical machining (ECM), and numerical control (NC) operations are emphasized.

MTTN 111 Machine Tool Processes and Theory I 6 Credits

This course introduces the student to the fundamentals of basic machining, the machines covered include: the engine lathe, drill press, vertical mill, cutoff saw and other standard machine tools. Machining topics such as turning, boring, drilling, threading, drill and lathe tool grinding along with shop safety will be discussed. An in-depth look at lathe tool geometries, drill sharpening, and various off hand grinding techniques along with basic print reading, inspection methods and tools will be covered.

MTTN118 Machining Technology 3 Credits

This course is designed to teach the student the basic operation of the engine lathe and the manual vertical milling machine and the processes associated with them. The course will include the study of lab safety, measuring tools, as well as the fundamentals of reading and interpreting a blueprint to produce a close tolerance part.

MTTN122 Machine Tool Processes and Theory II 6 Credits

This course is primarily concerned with advanced engine lathe operations, setup and operation of various types of milling machines, grinding operations and procedures as well as precision measuring inspection tools and techniques. Also, levers and

leverages, temperature effects on metal and transmission of power along with emphasis on accuracy and production methods. Prerequisite: MTTN111

MTTN 211 Principles of Numerical Control 3 Credits

Topics studied in this course include a full description of programming, machine terminology, operations, and equipment used in numerical control. Students will be taught manual programming techniques using standard G and M codes, for basic vertical CNC milling applications. The setup and machining of simple projects on the Acurite, Prototrak and Leadwell machines will offer students real world machining experience. Prerequisites: MTTN 111, BCPN101

MTTN223 Computer Aided Manufacturing (CAM) 3 Credits

A course designed to introduce students to Computer Aided Manufacturing (CAM) software and its applications to Computer Numerical Control (CNC) machine tools. Students will draw machine parts through the use of GibbsCAM, and produce and post programs to run CNC milling machines and CNC lathes. Prerequisites: BCPN101, CADN131, MTTN211

MTTN231 Advanced Machine Tool Processes and Theory 7 Credits

The student will increase proficiency and knowledge in the following areas with stress on accuracy and speed: milling machines, surface grinding, cylindrical grinding, heat treating, machining with conversationally programmed CNC machines, electrical discharge machining, digital readout units and CNC milling (programming & operation).

Prerequisites: MTTN122, Corequisite: MTTN211

MTTN 232 Advanced Machine Tool Processes and Theory II 7 Credits

This course will emphasize the application of CAD/CAM in the manufacturing of a quantity of machined parts. Students will utilize CAM software, conversational programming and manual programming skills. Live tooling and fourth axis work will be covered as it relates to the CNC lathe and mill. In addition students will participate in a service learning project as well as individual projects and/or group projects. Students will also be taught various job hunting techniques such as resume writing and interviewing skills to assist them in their job search. Prerequisites: MTTN 231, MTTN 211

NUNC 103 CNC Programming and Operation 3 Credits

This course incorporates the basic principles of manual programming for both CNC lathes and milling machines. Emphasis is placed on the designing and writing of programs using G and M codes. The setup and operation of CNC lathes and mills will be taught using a hands on approach to the manufacturing of multiple parts. Prerequisite: MTTN211

NURSING

NURN112 Foundations for Nursing Practice 8 Credits

Foundational concepts in nursing practice are the foci of this course. Major concepts to be explored are the role of nurses in society; communication, teaching, and interpersonal helping processes; and the nursing process. The student will conduct basic assessments of the patient's ability for self-care, identify

problems, and develop, implement, and evaluate a basic plan of care. Strategies to meet common human needs and self-care deficits, nutrition, pharmacology, legal, and ethical considerations will be introduced. Laboratory practice of basic nursing skills and learning experiences in a long-term care clinical setting will provide opportunities to integrate theory with clinical practice. Co-requisite or Prerequisite: SCIN202, PSYN 101

NURN114 Medical-Surgical Nursing I 5 Credits

This course educates the student to care for patients with needs and self-care deficits related to the peri-operative period; common diagnostic procedures; and alterations in endocrine function, cell proliferation, the immune system and hematologic function. The student will assess the patient's ability for self-care, identify problems, and develop, implement, and evaluate a plan of care. Pharmacology, nutrition, lifespan, and legal / ethical considerations will be studied. Planned learning experiences in an in-patient clinical setting will provide opportunities to integrate theory with clinical practice. Pre-requisites: NURN112; Corequisite or Prerequisite: SCIN 202

NURN115 Behavioral Health Nursing 3 Credits

Common psychiatric disorders across the lifespan and methods of treatment are studied, with emphasis on the nurse-patient relationship, management of the environment, and the nurse's role in pharmacotherapeutics. The student will assess the patient's ability for self-care in relation to behavioral health, identify problems, and develop, implement, and evaluate a plan of care. Stress and coping and their relationship to behavioral health will be explored. Course content includes pharmacology, nutrition, and legal / ethical considerations. Learning experiences, including service learning, in a variety of clinical and community settings will provide opportunities to integrate theory with clinical practice. Corequisite or Prerequisite: NURN114

NURN 118 LPN – RN Transition 3 credits

This hybrid course for the advanced placement nursing student offers concepts of nursing process, critical thinking, health assessment, documentation, evidence-based practice, and pharmacology. The scope of practice and role of the registered nurse in the health care system and in society will be introduced. By its conclusion, the student admitted with advanced placement will reflect similar competencies to those of students completing NURN 112. Prerequisites or Corequisites: SCIN 201, PSYN 101.

NURN212 Medical-Surgical Nursing II 10 Credits

This course will focus on the nursing care of the pediatric and adult patient with needs and self-care deficits associated with alterations in fluid and electrolyte balance, musculoskeletal, respiratory, gastrointestinal, hepato-biliary, cardiovascular, and circulatory function. Nursing strategies for meeting patients' needs related to medical and surgical treatment will be stressed. Clinical assignments will provide opportunities to integrate theory and nursing practice in the nursing laboratory and in the acute care clinical setting. Pharmacology, nutrition, and legal/ethical considerations will be studied. Corequisites or Prerequisites: NURN115, SCIN 215

NURN221 Maternal Child Nursing 6 Credits

The nursing care of pediatric and adult patients with needs and self-care deficits associated with developmental stage, child-bearing and alterations in reproductive functions is the focus of this course. Pharmacology, nutrition, and legal/ethical considerations will be integrated into each unit of study. Clinical

application of theory, the nursing process, and nursing skills to patients in pediatric and family care settings will be emphasized. Corequisite or Prerequisite: NURN 210

NURN222 Medical-Surgical Nursing III 5 Credits

This course will focus on the nursing care of pediatric and adult patients with self-care deficits associated with alterations in renal, urinary, and neurologic function. Pharmacology, nutrition, and legal/ethical considerations will be integrated into each unit of study. The nursing process, application of management and leadership theory, and nursing skills and strategies for meeting complex needs of multiple patients will be stressed. Planned learning experiences in an acute care setting will provide opportunities to integrate theory with clinical practice. Corequisite or Prerequisite: NURN221

NURN229 Issues, Trends, and Management 1 Credit

This capstone course is designed to facilitate the transition of the nursing student to professional practice. Issues and trends such as legal, ethical, cultural, economic and political issues are examined through readings, discussions, research, and presentations. Course content includes the professional role and individual philosophy of the Associate Degree nurse, leadership theory, resolving ethical dilemmas, effective job interviewing, resume writing, and preparation for the NCLEX-RN. Prerequisite: NURN210

NURN230 Pharmacology for Nursing Practice 3 Credits

This course presents information related to the nurse's role in the pharmacological treatment of health problems. Foundational principles of drug action, pathophysiology, and a systematic review of common drugs in clinical use will be studied. Safe administration of medication across the lifespan, assessment of its effectiveness, patient and family education, and ethical and legal issues related to the nurse's role in pharmacotherapeutics is emphasized. Prerequisite or corequisite: NURN112

PARALEGAL STUDIES

PLSN101 Basic Legal Studies 3 Credits

This course introduces the student to the field of law. The course will examine the role of paralegals working for attorneys in the practice of law. The student will gain an understanding of the structure and operation of the legal systems in the United States, both state and federal, with a fundamental knowledge of the major areas of substantive and procedural law. The student will acquire an understanding of the important ethical rules governing attorneys in the practice of law, and will gain valuable practical knowledge for beginning a career and working in the legal field.

PLSN102 Legal Research and Writing 3 Credits

This course will develop strong legal writing, research and analytical skills. Students will be required to engage in frequent "hands-on" exercises in legal research and legal writing to enhance research, writing and analytical abilities. The student will acquire an understanding of legal research tools, methods and resources. Solid and proficient "book shelf" research will be developed; thereafter, electronic research tools, methods and resources will be learned. The course will demonstrate the importance of thorough legal research, and effective and professional legal writing for assisting the attorney in providing competent and quality legal services. Prerequisite: PLSN101, ENGN101

PLSN210 Litigation and Trial Preparation

3 Credits

This course covers an overview of all phases of civil litigation. Emphasis will be on civil "causes of action" (claims) and defenses at common law, under statutes, and based in tort law and contract law. Functional skills acquired include preparing and maintaining the file, gathering information through client and witness interviews, investigation, drafting pleadings and motions, organizing and indexing documents, compiling evidence, examining public records, preparing briefs and memoranda, preparing discovery, and assisting the lawyer in preparing for trial and at trial. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102, PLSN230

PLSN220 Real Estate Law

3 Credits

This course covers the fundamental principles and procedures in the practice of real estate law. The student will be capable of assisting in most phases of residential real estate transactions. Functional skills acquired include reviewing and understanding real estate instruments and documents, title insurance binders and policies, surveys; assisting in the preparation and drafting of deeds, purchase and sales contracts, title affidavits, escrow agreements, use and occupancy agreements, notes, mortgages and related financing documents; and preparing for and attending residential closings. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102

PLSN230 Contracts and Business Organizations

3 Credits

The graduate will have acquired a complete knowledge of the fundamental legal doctrines and principles of the law of contracts; will be familiar with the significant Articles of the Uniform Commercial Code governing Sales, Negotiable Instruments, Secured Transactions; will have acquired a fundamental and practical knowledge of agency law and employment law. From a legal perspective, the graduate will also have a full understanding of the nature, characteristics, formation, operation and termination of the different for-profit business entities; as well as the legal, duties, rights and liabilities of persons associated with such organizations, and related legal actions. Functional skills acquired include assisting in the preparation of business contracts, employment agreements, and documents in the formation of such business entities including: drafting of articles of incorporation, corporate by-laws; preparing notices and minutes for meetings of the board of directors and shareholders; and drafting partnership agreements. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102

PLSN240 Probate, Estates, and Trusts

3 Credits

This course will enable the student to be capable of assisting in the probating, planning and administration of the probate estate. Functional skills acquired include assisting in the preparation of simple wills, revocable trusts, irrevocable trusts, assisting in the preparation of probate documents including inventory forms, final accounting forms, maintaining accounts, and assisting the attorney in the remainder of the probate process. The course will also examine living wills, estate planning, and estate taxes. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102, PLSN220

PLSN250 Family Law

3 Credits

This course will examine the substantive and procedural law relating to family law and particularly with regard to legal ethics, marital and cohabitation agreements, marriage, divorce, separation, division of marital property, annulment, adoption, support of spouse and child, and child custody issues. The stu-

dent will be prepared to assist the attorney in client interviews, information and document gathering, preparation of matrimonial disclosure forms, the drafting of agreements and pleadings related to divorce and family law proceedings. This course also contains an optional service learning component or assignment. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102

PLSN260 Criminal Law

3 Credits

In this course, the student will examine the significant legal concepts, principles, legal doctrines, procedures and practice of criminal law in the local and state (according to New Hampshire law and procedure) and federal court systems; and will trace the steps by which the criminal procedure is followed: from stop and arrest, prosecution, the initial client interview, pre-trial, through trial, and post-trial procedure, motions, and appeals. Prerequisite: PLSN101; Prerequisite or Corequisite: PLSN102

PLSN280 Paralegal Capstone Experience

3 Credits

The Paralegal Capstone Course is designed to prepare the student for obtaining and maintaining employment in the paralegal profession. Students will discuss the application of their knowledge of the law and the legal system, the practical knowledge necessary for successfully working as a paralegal in the field of law, and a review of the ethical rules governing attorneys. The students will review the major skills they acquired during the Paralegal Studies Program and apply them to practical assignments and projects. Students will also complete a Portfolio containing selections of their legal work-product, and will prepare a professional resume which best presents their attributes and employment potential. This course will also prepare the student for the employment process, from job search through interview and hiring. Prerequisites: For students in the Degree Program, completion of all catalog-listed courses for the first three semesters.

PLSN290 Paralegal Internship and Seminar

3 Credits

The Internship and Seminar in Paralegal Studies consists of: 1) an internship which is a hands-on learning experience at law firm, public agency, corporation, or other law related organization, under the direct supervision of a lawyer; and, 2) a capstone seminar of one class contact hour per week designed to prepare the student for obtaining and maintaining employment in the paralegal profession. Prerequisites: For students in the Degree Program, completion of all catalog-listed courses for the first three semesters, a cumulative grade point average of at least 3.0 in the Degree Program, and approval of the faculty internship coordinator. For students in the Certificate Program, completion of six of the eight catalog-listed paralegal specialty courses, a Bachelor Degree from an accredited institution, a cumulative grade point average of at least 3.0 in the Certificate Program, and approval of the faculty internship coordinator.

POLITICAL SCIENCE

POLN101 Introduction to Political Science

3 Credits

This course offers an introduction to a variety of contemporary political systems and practices. Topics include an examination of communism, democracy, socialism, authoritarianism as well as other political structures. Political philosophy, theory, culture, structure, and institutions will be examined.

POLN102 American Government and Politics

3 Credits

Emphasis is on the structure and processes of the American system of government and politics on the federal, state, and local level.

PSYCHOLOGY

PSYN101 Introduction to Psychology 3 Credits

Psychology is the study of cognitions, emotions, and behavior. Core topics include human social behavior, personality, psychological disorders and treatment, learning, memory, human development, biological influences, and research methods. Related topics may include sensation, perception, states of consciousness, thinking, intelligence, language, motivation, emotion, stress and health, cross-cultural psychology and applied psychology. Psychology also critically evaluates "common sense" assumptions about how people function and relate.

PSYN130 Human Relations in Organizations 3 Credits

Human relations is that part of the social sciences that traces its roots to: social psychology, education and anthropology. Human relations seeks to describe, explain, predict and manage the most expensive component found in any organization—the people employed to create product, manage resources and make decisions.

PSYN201 Human Growth and Development 3 Credits

The study of human growth and development across the lifespan is based primarily in the social sciences of psychology, sociology and anthropology. Emphasis will be given to maturation and development achieved in four interrelated systems: physical, cognitive, social, and emotional.

Development is about change; changes that we share as well as changes that are based on unique environments, social and cultural customs. Attention will be paid to controversies that have developed as a result of living in a diverse and multicultural world. Corequisite: Human Services majors only, HSVN111

PSYN202 Personality Psychology 3 Credits

This course is designed to provide a basic introduction to personality psychology. Personality is defined as the attributes—behavioral, temperamental, emotional, and mental—that characterize a unique individual and that are relatively stable over time.

This course will introduce theories, historical background, modern research, and research methods used in the study of personality. This course will provide the opportunity to broaden understanding of the science of personality and to think critically about the application of personality theory in everyday life. Prerequisite: PSYN101

PSYN205 Child Psychology 3 Credits

The developmental processes that start once an egg is fertilized are complex and proceed rapidly. The study of child psychology calls upon many disparate disciplines: biology, medicine, neurology, language and linguistics as well as psychology fields to describe and explain this fascinating period of our lives.

Emphasis is placed on the interaction of biological, psychological, and sociocultural influences on normal development. The growing child is considered in terms of physical, social, cognitive, emotional, aesthetic and moral development. The role of culture is examined throughout the course. Prerequisite: PSYN101

PSYN207 Social Psychology 3 Credits

This course will examine theory and research in the science of individual human behavior in social situations as well as applications of its major principles in everyday life. The course is designed to illustrate how the individual and society are shaped by mutual interaction of mental processes, situational factors,

individual differences, and group phenomena within cultures and social structures. Students will investigate the manner in which the behavior, feelings or thoughts of the individual are influenced or determined by the behavior and/or characteristics of others. Diversity, prejudice, institutional aggression and the political process will be investigated. Prerequisite: PSYN101

PSYN210 Abnormal Psychology 3 Credits

This course explores the diagnosis, treatment and care of the symptoms associated with abnormal behavior. The theoretical causes of various types of psychological disorders—particularly the neurotic, psychotic, and mood disorders will be presented as will a historical perspective regarding treatment.

The psychodynamic, cognitive behavioral and medical model approaches to treatment will be emphasized. Prerequisite: PSYN101

PSYN211 Issues in the Psychology of Grief and Loss: Adaptation to Lifelong Changes 3 Credits

This course will explore the everyday loss of life. How early losses and the different ways of everyday grieving shape us as we move through the life cycle. This course will look at lifelong changes and how these changes, good and bad, evoke the grieving process. This course will look at current issues, ways to assist others and ourselves through times of change and the grieving process, research and ethical issues of grief and loss. The course will explore grief and loss from an academic, personal, social, cultural and experiential perspective. This course will complement courses in the Early Childhood Education, Human Services, Nursing, and Teacher Education degrees, and Psychology and Sociology curriculums. Prerequisites: PSYN101, PSYN201 or SOCN101

PSYN215 Cognitive Psychology 3 Credits

Cognitive Psychology focuses on mental activities such as perception, attention, learning, memory and problem solving.

This course will examine the practical applications of cognitive psychology relating those principles to object design, memory and its use in court and in the media and problem solving strategies applied to public policy. Prerequisite: PSYN101

PSYN217 Psychology of Learning and Memory 3 Credits

Psychology of Learning and Memory examines the various methods and techniques used to create relatively permanent changes in behavior. This course examines basic learning and motivation theories that describe how humans acquire new knowledge and adapt to environmental demands. The relationship between the field of neuropsychology and learning and memory is stressed and attention is given to brain imaging emotion, practice transfer, forgetting, and problem solving to solve behavioral problems as they exist in oneself, one's family, schools, the workplace, and in larger social, economic and political groups. Students will become acquainted with current research findings as well as the research methods used to study these theories. This is a reading and writing intensive class. Prerequisite: PSYN101, MTHN106 recommended

PSYN220 Research Methods 3 Credits

This course of study starts with the processes of observation, creating a theory, developing a hypothesis, planning an empirical study using standard techniques of experimental design, recording, analyzing and interpreting data followed by reporting findings and conclusions. The primary emphasis is on behavioral

and social research specific to the discipline of psychology. A strong effort is made to connect the processes above with the empirical reasoning used in other fields in order to underscore the unity of science.

Emphasis is placed and students are encouraged to develop analytical and critical thinking and writing skills. These skills are used not only in interpreting research findings, but also in investigating what is behind the claims and conclusions in news reports of scientific results.

A working knowledge of internet research techniques as well as word processing and spreadsheet software are required. The student should be able to use email to collaborate with team member. Prerequisite: PSYN101; Prerequisite or Corequisite: MTHN106

PSYN240 Alcohol and Drugs 3 Credits

This course is designed to examine alcohol use, drug use and misuse, addiction and personal and social consequences. The effect on the family system and roles of family members will also be explored as well as etiology, symptomatology and current treatment modalities. This course contains an optional service learning component. Prerequisite: PSYN201 or Permission of the Instructor

READING

RDGN095 Reading Strategies 3 Credits

A preparatory course designed to develop the comprehension skills, thinking skills and vocabulary mastery necessary for reading college-level materials. **Credits do not apply toward degree requirements.** Student must receive a minimum passing grade of C. Prerequisite: Placement test. Prerequisite or corequisite: LEXN101

RDGN096 Reading for College Success 3 Credits

This course develops reading strategies that will allow students to meet the demands of college-level textbooks. Students will develop effective reading and study strategies in order to learn from factual material. Vocabulary development is emphasized. **Credits do not count toward degree requirements.** Students must receive a minimum passing grade of C. Prerequisite: Placement test; Prerequisite or corequisite: LEXN101

RDGN107 Critical Reading 3 Credits

Critical Reading provides instruction in advanced reading skills. This course is designed to develop the student's thinking and reasoning skills through reading. Upon completion of this course, the student should be able to apply critical reading and inferential thinking skills to college texts and other reading material. Prerequisite: Placement test

RESTAURANT MANAGEMENT **(Courses offered in Switzerland only)**

Students must be matriculated into the Restaurant Management Program to enroll in the courses listed in the section below.

CULN2122 Culinary Concepts 3 Credits

The course develops an understanding of various culinary concepts. Culinary concepts will incorporate culinary history, culinary knowledge, and food science elements.

Heating and cooling systems, equipment options for various applications, energy consumption, and kitchen control are all evaluated. Safe and unsafe working conditions are differentiated.

In addition, the course is also designed to examine menu planning for various food outlets taking into consideration the marriage of nutrition and the imaginative, flavorful cuisine demanded by today's customers. Convenience food systems are included as part of this discussion.

Apart from a basic understanding of digestion and metabolism, the emphasis is upon the use of fresh seasonal produce, safe and wholesome produce and non-processed foods.

Through classroom lecture, projects and case studies, students will gain an understanding of principles of nutrition.

FBMN3196 Food and Beverage Management 3 Credits

This course is designed to distinguish restaurant and institutional catering from hotel food and beverage operations. Students will analyze organizational, marketing, operational, and financial aspects of modern food and beverage (F&B) operations. Labor cost controls, introduction to feasibility studies, specific marketing and budget analysis, and banquet and catering are stressed.

FBSN1102 Principles of Bar and Beverage Operation 3 Credits

The course explains and examines the theoretical aspects of bar/beverage operation. The student will gain a good understanding of both alcoholic and non-alcoholic beverages.

The course is designed to build awareness of opportunities and service styles within a bar concept. Within an environment for responsible serving of alcohol, students will be introduced to food and wine mixology. Various beverage trends, controls, and bar psychology will be analyzed.

The course will be delivered in the form of lectures, classroom discussion, research, field trips, tasting, and hands-on operation.

CULN2116 Culinary Craft-based Learning 3 Credits

The course offers students basic skill development in order to prepare food. Students will develop skills in all major cooking methods using proper hygiene, energy conservation, and waste prevention. Students will learn to appreciate quality and gain an understanding of raw materials. The course is designed for students to work in teams or individually to produce quality food in an effective and efficient way. Students are exposed to the main systems of food production from "modern free flow concept" to "à la carte", "fast food," and "classical banquet" production.

The kitchen working environment will provide students with the opportunity to learn the proper use and maintenance of kitchen equipment. Planning and supervisory skills as well as self-sufficiency are developed through the division of work. The practical class activities will foster skills in prioritizing and time management. It will develop the student's creativity, and at the same time the student will learn to respect procedures and instructions. It will encourage the student to develop a sense of responsibility and leadership.

The theoretical knowledge is based on industry relevant requirements and will assist students selecting and combining ingredients correctly.

FBSN1101 Craft-based Learning: Food and Beverage Service Techniques 3 Credits

Craft-based learning in food and beverage service techniques offers students foundation level skills knowledge. Students are prepared to work effectively and efficiently in teams to provide

timely and appropriate food and beverage service. Demonstrations, simulations, and practical activities by students will familiarize them with aspects of modern and classical service techniques. This course will prepare them for the “realities” of the industry. Furthermore, practical work will foster and instill skills in interpersonal communication, organization of work, and personal presentation.

The working environment of the school is designed for students to take an active role in a real work environment and will familiarize students with various forms of authority. Craft-based learning will not only develop technical skills but equally will develop students to respect procedures and instruction and will encourage them to develop their sense of responsibility, self-discipline, and leadership.

The course will be delivered in the form of workshops, demonstration lectures, practical application, group work, and group discussion.

GENN2150 Pre-Intermediate German 3 Credits

Students at this level will be able to converse about typical daily situations using intermediate level vocabulary. They will be able to read and understand an informative text, and understand short notices and advertisements. Students will be able to use various terms relating to the hospitality industry. Prerequisite: LNGN113

TRMN1186 Introduction to the World of Hospitality 3 Credits

The aim of this course is to assist students to understand the origins, development, and the required attitude needed for a successful career in the hospitality industry. The course will include two major aspects. The first aspect will distinguish the styles of various companies and will explore the world of hotels and restaurants. The second aspect will provide students with an understanding of a hotel and its various departments.

The course will emphasize theoretical knowledge of the industry. Students will put theory into practice by contacting hotels and restaurants, presenting knowledge about a hotel chain in class, and producing a report about a restaurant chain. Exercises will allow students to explore the broad world of the hospitality industry by learning about “hot” management issues such as diversity, retention, harassment, security, and loss prevention.

INTN1108 Internship: Capstone Experience 2 Credits

The six month internship in a professional environment is designed to enable the student to develop personal and professional skills acquired during previous study. Tasks undertaken in the internship should be of an operational nature. The student will prepare a personal journal and action plan.

SCIENCES

SCIN100 Chemistry for Biological Sciences 4 Credits

This course is a conceptual and hands-on introduction to the basic principles related to the structure of matter and the nature of chemicals and how they react in nature with a focus of those in the human body. The course material will be reinforced with laboratory experiments. Material covered in this course will aid in the comprehension of the level of chemistry and organic chemistry found in the physiological concepts in Anatomy and Physiology. **This course is not intended for transfer.**

SCIN101 Biology I 4 Credits

Scientific study of living things: their fundamental processes; their unity and diversity and connections to everyday lives. Areas of inquiry include cellular organization, metabolism and respiration or photosynthesis, genetics from classic Mendelism to current biotechnologies. Laboratory exercises support

lecture topics and are designed to develop scientific inquiry and critical thinking.

SCIN102 Biology II 4 Credits

A continuation of Biology I, scientific study of living things. Study of evolution, biological diversity plant form and function, animal form and function, ecology. This course provides students the opportunity to develop critical thinking techniques with current ecological topics, which will be debated in a knowledgeable, logical, constructive fashion. Prerequisite: SCIN101

SCIN111 Basic Human Anatomy and Physiology 4 Credits

An introductory course centering on the structure and function of the human body with a concentration on normal anatomy with emphasis on system functions and interrelations between systems. A series of laboratory experiences are included to provide a practical support for concepts presented in lecture.

SCIN115 Astronomy 4 Credits

This course offers an introduction to astronomy. The course offers a broad introduction to the solar system, stars, and stellar evolution, galaxies, and cosmology.

SCIN116 Meteorology 4 Credits

This course provides an introduction to the science of meteorology. Students will learn about the relationships between weather and the Earth's atmosphere. Topics covered include atmospheric pressure, stability of the atmosphere, fronts, atmospheric circulation, storms and forecasting. Real time data will be used to prepare weather maps and forecasts.

SCIN117 Environmental Science 4 Credits

The course introduces students to the study of major environmental problems and issues facing society today. Topics include ecosystem structure and function; population trends and dynamics; pollution of air, land, and water; and the management of resources. This course contains a service learning option.

SCIN120 Nutrition 3 Credits

This survey course covers basic facts and principles of nutrition. The course is designed for anyone interested in nutrition and how it relates to overall health and wellness. The course examines what role the nutrients serve in the body, their sources, and how well the body absorbs and utilizes them.

SCIN130 Physics I 4 Credits

A study of elementary classical physics with emphasis on the application of physical principles to problem solving. Topics include linear and projectile motion, Newton's laws, transitional and rotational equilibrium, work and energy, momentum, circular and rotational motion, and mechanical properties of matter. Prerequisite: MTHN110 (C grade or better highly recommended).

SCIN131 Physics II 4 Credits

A continuation of the study of elementary classical physics with emphasis on the application of physical principles to problem solving. Topics include simple harmonic motion, waves, thermodynamics, electricity and magnetism and geometrical optics. If time permits, some modern physics topics may be discussed. Prerequisite: SCIN130

SCIN134 Stereo Physics 4 Credits

Stereo physics is an introduction to physics built around stereo systems and sound. The physical principles of each topic and how they are applied to sound recording and playback are covered. Topics include sound, waves, electricity and magnetism, heat and force. Prerequisite: MTHN099

SCIN150 Physical Science I 4 Credits

This course studies the impact of physics on everyday life. Topics include motion, gravity, heat, electricity and magnetism, waves, sound, light and the physics of the atom. Conceptual understanding is emphasized over mathematical manipulation. Prerequisite: MTHN099

SCIN151 Physical Science II 4 Credits

The first half of the course is an overview of chemistry, with an emphasis on the impact of chemistry on everyday life. The second half of the course applies the principles of physics and chemistry to earth science and astronomy. Topics include elements, chemical bonding, chemical reactions, the Earth's interior, the atmosphere, the ocean, the solar system and stars. Conceptual understanding is emphasized over mathematical manipulation. Prerequisites: MTHN099, SCIN150 or Permission of Instructor

SCIN201 Anatomy and Physiology I 4 Credits

A continuation of Biology I, scientific study of living things. Study of evolution, biological diversity plant form and function, animal form and function, ecology. This course provides students the opportunity to develop critical thinking techniques with current ecological topics, which will be debated in a knowledgeable, logical, constructive fashion. Prerequisite: Prerequisite: Grade of C or better in High School Chemistry OR SCIN097 Developmental Chemistry OR Grade of 75 or better on departmental exam **AND** Grade of C or better in High School Biology OR SCIN101 Biology I

SCIN202 Anatomy and Physiology II 4 Credits

This course is a continuation of Anatomy and Physiology I that focuses on understanding how anatomy and detailed physiology of each system affects the function of the whole organism. Systems covered in this course include the endocrine, cardiovascular, immune, respiratory, digestive, excretory and reproductive. Other topics which are pertinent for overall homeostasis and survival are covered, and include: system imbalances, nutrition, metabolism, acid/base and fluid/electrolyte balance and genetics. Hands-on and computer-assisted laboratory experiments will be performed that parallels and support lecture topics. Prerequisite: SCIN201

SCIN205 Basic Pathophysiology 3 Credits

A course designed to provide the student with an understanding of the various mechanisms by which human diseases develop. Includes a survey of common disorders involving each of the major body systems. Prerequisite: SCIN111

SCIN215 Microbiology 4 Credits

This is a comprehensive study of the basic principles of microbiology as it applies to the health field. A brief survey of the history of the science is given. Emphasis is placed on understanding the variety and differences among microbes, their metabolism, genetics, and their relationship to humans. Also covered are modern recombinant DNA technologies, including genetic engineering, gene therapy, DNA profiling, genomics, and cloning. Laboratory study accompanies this and successful completion of these exercises is a partial requirement of the course. PREREQUISITES/COREQUISITES: SCIN101 Biology I or SCIN201 Anatomy & Physiology I

SCIN231 Calculus-Based Physics I 4 Credits

A study of classical physics using calculus. Topics include linear and projectile motion, Newton's laws, translational and rotational equilibrium, work and energy, momentum, circular and rotational motion, and mechanical properties of matter. Corequisite or Prerequisite: MTHN210

SCIN232 Calculus-Based Physics II 4 Credits

A continuation of the study of elementary classical physics using calculus. Topics include simple harmonic motion, waves, thermodynamics, electricity and magnetism and geometrical optics. If time permits, some modern physics topics may be discussed. Prerequisite: SCIN231

Speech-Language Pathology Assistant**SLPN110 Introduction to Communication Disorders 3 Credits**

This course will introduce the student to the profession of Speech-Language Pathology, while focusing on the role of the Speech-Language Assistant. Basic concepts and terminology central to the recognition and management of various communication disorders are presented. Disorders of language, articulation, voice, fluency, and hearing are discussed. Relevant assistive technology will be introduced.

Prerequisites or Corequisite: SLPN 111

SLPN 111 Speech and Language Development 3 Credits

The information presented in this course concerns the language development of children throughout the course of their development. Beginning with a review of child and language development theories, the course will follow the way a child acquires the sounds, meanings, and grammar/syntax of their native language as well as the ways a child learns to use language to communicate with others. There will be a focus not only on early language development but also on the higher order language constructs that are typically seen in children in their later school years. Social and pragmatic skill development will also be discussed. There will also be discussions regarding language diversity and the importance of literacy to language learning.

SLPN 112 Anatomy and Physiology of the Speech and Hearing Mechanism 3 Credits

This course provides a basic introduction to anatomy and physiology of the mechanisms involved in speech production and hearing. Functional aspects of the five interactive components of speech (respiration, phonation, articulation, audition and the nervous system) are discussed.

SLPN 115 Phonetics 3 Credits

A "hands-on" study of the description of speech sounds. Students will learn the International Phonetic Alphabet used in transcribing articulation disorders. Emphasis will be placed on the terminology and classification of articulatory phonetics, the influence of phonetic context and viewing speech as an ongoing process, distinctive feature analysis, and regional dialectal variation. Students will apply the information to practice transcribing words and sentences as would be performed in a clinical setting.

SLPN 121 Language Disorders 3 Credits

This course addresses deficits in the content, form, and use of the native language that result in ineffective communication. Etiology and evaluation of disorders in listening comprehension and oral expression are presented, and clinical/technical skills are emphasized. The use of augmentative and alternative communication devices will be discussed. Prerequisites: SLPN 110, SLPN 111, SLPN 112

SLPN123 Articulation and Phonological Disorders 3 Credits

Instruction will include normal articulation and phonological development, etiologies, assessment, and treatment of articulation

and phonological disorders. Articulation and phonological process theories will be addressed and clinical skills will be emphasized. Prerequisites: SLPN 110, SLPN 111, SLPN 112, SLPN 115

SLPN 220 Advanced Communication Disorders 3 Credits

This course will cover basic information on the following disorders found in children and adults, and may include and not be limited to: developmental and neurogenic dysfluency, voice, cleft palate, acquired motor speech, developmental motor speech; acquired disorders of language, alternative and augmentative communication, swallowing, and hearing. This course includes an optional service learning opportunity. Prerequisites: SLPN 110, SLPN 111, SLPN 112, SLPN 115, SLPN 121, SLPN 123, HSVN 120

SLPN 221 Clinical Procedures in Speech-Language Pathology 3 Credits

This course emphasizes how to provide direct therapy incorporating principles of learning theory and behavioral modification. The students will be trained in observing and recording speech and language behaviors, in tracking and reporting progress, and developing and implementing treatment activities based on treatment plans developed by speech and language pathologists. Prerequisites: SLPN 220

SLPN 290 Capstone Seminar in Communication Disorders 2 Credits

This seminar will focus on analysis, synthesis, integration and application of knowledge, skills and values learned through previous coursework and fieldwork. There will be a guided student exchange on trends, roles, and issues found in the discipline of communication disorders with emphasis on planning, intervention and documentation. Students will develop manuals of relevant resources and materials. In addition, students will present a case study from their practicum experiences and monitor their own progress through written self-assessments. Prerequisites: SLPN 221; Corequisite: SLPN 291, 292, or 293.

SLPN 291 Speech-Language Pathology Assistant Practicum I 1 Credit

The student will work in an approved setting under the supervision of an ASHA-certified Speech and Language Pathologist. This practicum course will provide thirty-four hours of direct client contact, giving students comprehensive experience in the application of knowledge and therapeutic intervention skills acquired in previous coursework. Periodic conferences between the site supervisor and the practicum coordinator are scheduled to monitor and evaluate student progress. Fifteen hours of educational/observational activities will also be credited as part of the fieldwork experience. Prerequisites: SLPN 220, Approval of Program Coordinator; Prerequisite or Corequisite: SLPN 290

SLPN 292 Speech-Language Pathology Assistant Practicum II 2 Credits

The student will work in an approved setting under the supervision of an ASHA-certified Speech and Language Pathologist. The practicum course will provide sixty-six hours of direct client contact, giving students comprehensive experience in the application of knowledge and therapeutic intervention skills acquired in previous coursework. Periodic conferences between the site supervisor and the practicum coordinator are scheduled to monitor and evaluate student progress. Twenty-nine hours of educational/observational activities will also be credited as part of the fieldwork experience. Prerequisites: SLPN 220, Approval of Program Coordinator; Prerequisite or Corequisite: SLPN 290

SLPN 293 Speech-Language Pathology Assistant Practicum III 3 Credits

The student will work in an approved setting under the supervision of an ASHA-certified Speech and Language Pathologist. The practicum course will provide one hundred hours of direct client contact, giving students comprehensive experience in the application of knowledge and therapeutic intervention skills acquired in previous coursework. Periodic conferences between the site supervisor and the practicum coordinator are scheduled to monitor and evaluate student progress. Forty-four hours of educational/observational activities will also be credited as part of the fieldwork experience. May be taken instead of SLPN 291 and SLPN 292. Prerequisites: SLPN 220, Permission of Program Coordinator; Corequisite: SLPN 290

SIGN LANGUAGE

(For Sign Language offerings, refer to LNGN listings)

SNLN 100 Introduction to American Sign Language 1 Credit

This introductory course provides students with an overview of American Sign Language (ASL), other signed languages, and American Deaf Culture. In this course, students will learn some signs, and they will learn to express and receive simple signs and sentences. Students will also be exposed to interpreting some information (ASL/English), manual alphabet and numbers, as well as Non Manual Signals (NMS). In addition, some basic locatives and simple classifiers will be introduced. Also, several of the differences between hearing and Deaf cultures in the USA will be discussed.

SNLN101 Deaf Culture I 3 Credits

This is an introductory course on American Deaf Culture and Community. In this course, students will learn of the prevailing two perspectives on American Deaf Culture and the American Deaf community: Pathological (disability) and Socio-Cultural (language, folklore, mores). We will also touch on deaf history. Our focus during this course will be on the socio-cultural view of the American Deaf community today.

Students will be provided with articles and excerpts from both deaf and hearing sources. In class we will use videotapes, panel discussions, and presentations by visitors to spark discussion and provide broader exposure to issues facing the deaf community. Our predominant focus will be current issues, but we will examine some history to help better understand attitudes and reactions of today.

SNLN102 Deaf Culture II 3 Credits

This is an advanced course on Deaf Culture and the Deaf Community as embedded in American Culture and Communities. In this course we will continue to examine the deaf view (social and cultural perspective) and will add information and discussion on the hearing view (often pathological). From these views we will study and discuss deaf and hearing cultural dynamics and the effects of these dynamics upon interactions between deaf and hearing individuals and groups.

Students will be provided with articles and excerpts from both deaf and hearing sources. In class we will use videotapes, panel discussions, and presentations by visitors to spark discussion and provide broader exposure to issues facing both communities. Our predominant focus will be current issues, but we will examine some history to help better understand attitudes and reactions of today. Prerequisite: SNLN101

SOCIOLOGY AND ANTHROPOLOGY

SOCN101 Introduction to Sociology 3 Credits

The course provides an introductory study of sociology using the principles and methods of social sciences and the scientific method. Sociological principles, sociological perspectives, and the relationship of the individual to society and groups will be emphasized. Culture and the elements influencing society today are major themes of the course. Other topics that will be examined include socialization, social structure, stratification, race, class, family, education, population, economics, religion, gender, age, and social change. Sociological research and the role of sociologists in the modern world are discussed. Students learn to think critically about the nature of society and social institutions.

SOCN108 Introduction to Archaeology 3 Credits

The course offers an exploration of the basic theories, methods, and principles of prehistoric and historical archaeology in the Old and New Worlds. The course will introduce students to methods used by archaeologists to reconstruct ancient societies, interpret their finds, and explain how and why societies evolve.

SOCN110 Cultural Anthropology 3 Credits

Cultural anthropology is a discipline that seeks to understand the human experience through social-scientific investigations of cultures around the world. This course offers tools for making sense of the experiences of diverse people whose lives are different from the student's own life, as well as putting the student's familiar worlds into new perspectives.

SOCN201 Contemporary Social Problems 3 Credits

In this course, students will critically examine a selection of the most pressing issues and problems facing society today, including inequalities of wealth and income, crime and violence, race relations, gender and sexuality, work and the economy, globalization, technology, and the environment. To accomplish this objective, students will learn to apply the sociological perspective to the study of contemporary social life. Through this examination, students will gain an understanding of how social problems arise and how they affect society, and they will apply this understanding to the consideration of possible social policies and other remedies. The course takes a hands-on approach to learning wherever applicable. The goals of this course are to provide a solid foundation in social science learning, to enhance critical thinking skills, and to stimulate social commitment.

SOCN205 The Changing Family 3 Credits

The focus of this course is to help students recognize and understand the dynamic nature of marriages, families and intimate relationships. This course will enable students to recognize, confront and dispel prominent myths about these relationships and to help students see the interactive relationships of race, class and gender.

TELECOMMUNICATIONS NETWORKING

TELN101 Telecommunications Media 3 Credits

This course is recommended as a first semester course and focuses on media that connect computers, telephones, and networks. Communications Media builds on the basic telephone structure that has been in place for years, and explains how those basic concepts are now re-designed to send information, including high speed voice and data, over traditional copper wire. The course also covers new technologies that take advantage of Category 5 or 6 cable, wireless and broadband media, DSL offerings, and fiber optic transmission paths.

TELN102 Analog and Digital Key Systems 3 Credits

This course re-enforces basic concepts of the telephone switching network as learned in TELN 101, and provides the student the opportunity to apply these concepts when designing and implementing small switching networks known as Key Systems. These systems are used in small to medium business applications to handle the switching of digital and analog signals. The major component of this course includes several hands-on projects that allow the student to become competent in the operation of a range of systems. Prerequisite: TELN 101

TELN202 Switching Technology 3 Credits

While Telecommunications Media focuses on the basic concepts of moving information from point to point, this course goes into the details of advanced techniques to accomplish this goal. The heart of the course centers on switching capabilities of two large digital PBX's (private branch exchange) which are used to simulate a telephone central office environment. Specific topics such as "T1" carrier, Multiplexing, ISDN (integrated services digital network), DSL (digital subscriber line) and ADSL (asymmetric digital subscriber line) are discussed and analyzed. This course also compares current cable company broadband offerings with those of local telephone companies. Prerequisite: TELN 101 and TELN 102

TELN204 Telecommunications Management 3 Credits

The traditional telecom student is generally focused on how to make the network electronically respond as directed, but generally lacks the information to administratively keep it working, make sound economic decisions toward its upkeep or growth, or plan a new network or design a network addition. This course introduces the student to business aspects of telecommunications and focuses on the administrative duties, as well as decisions and questions that have to be answered to keep it going, or make sure it does not become obsolete. It also provides insight to manage the people and the cost of services, which are a growing part of the overall corporate expense. Business majors may also benefit from this offering.

TELN205 Transmission Systems 3 Credits

Every day the computer worlds comes up with a new, faster, or better way of sending information over different or bigger or faster networks. This course tries to keep up with those times by investigating the topics that are the tried and true transmission basics, namely, cable, radio, and microwave, and comparing them to the changes that have been made to produce the newer versions that are talked about in every trade journal that you pick up. Some of the older systems revolve around how wireless works, and deals specifically with microwave radio and laser transmitters and receivers for point to point communication. Some of the newer technologies include the cell phone, wireless routers, VoIP (voice over internet protocol), and satellite transmission for both voice and video. Prerequisite: EMTN104

TELN207 Fiber Optics 3 Credits

The ever increasing need for speed has made the Fiber Optic field one of the fastest growing areas on the "Information Super Highway." Locally several companies are placing large amounts of fiber to compete with the customer "need for speed". This course covers the basic theory of fiber optic transmission, as well as the proper placing techniques and design parameters to build a working system according to the latest national standards. Students actually make connectorized cables that they will test with a laser source and power meter. They will use an OTDR (optical time domain reflectometer) to verify and test

cable lengths, and will use a fusion splicer to splice (weld) fiber optic cables together. Completion of this course and TELN 101 fulfill the requirements for the Fiber Optic certificate. Prerequisite: TELN101

TELN290 Telecommunications Internship 3 Credits
Telecommunications internship is a course in observation and supervised participation in a professional telecommunications environment. The Telecommunications Internship is designed to be a learning opportunity that allows the student to practice competencies and skills learned in the classroom, and to help make the transition from the classroom to the work site a pleas-

ant experience. Prerequisites: Completion or current enrollment in all catalog listed courses required for the telecommunications technology program of study, and the approval of the internship coordinator.

STUDENT CALENDAR

2008-2009

2008

September 2

September 9

September 19

October 18

November 6

November 11

November 27&28

December 19

Fall Semester Classes Begin

Last Day to Withdraw with Full Refund (16 week classes only)

Last Day to Resolve "I" grades from Summer Term

Open House

Last Day Student Can Withdraw with "W" grade (16 week classes only)

Veterans Day Holiday—NO DAY OR EVENING CLASSES

Thanksgiving—NO DAY OR EVENING CLASSES

Last Day of Semester

2009

January 12

January 19

January 20

January 30

February 16

March 9-13

March 25

April 4

May 7

May 16

Spring Semester Classes Begin

Martin Luther King, Jr./Civil Rights Day Holiday

Last Day to Withdraw with Full Refund (16 week classes only)

Last Day to Resolve "I" Grades from Fall Semester

Presidents Day—NO DAY OR EVENING CLASSES

Spring Break

Last Day Student Can Withdraw with "W" grade (16 week classes only)

Spring Open House

Last Day of Semester

Graduation—11:00 a.m.

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