

# Nashua Community College

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## Course Catalog 2009 - 2010

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Nashua Community College (NCC) is one of the seven colleges in the Community College System of New Hampshire. For more information about CCSNH, 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 tuition, 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, 2009 • Cover photo of NCC Atrium: RixonPhotography.com



## President's Message

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On behalf of Nashua Community College, I invite you to visit our campus. From the moment you arrive, you'll experience a dynamic, energetic environment that's welcoming and just the right size.

This is truly an extraordinary time for Nashua Community College as we celebrate 40 years of providing affordable, high-quality education to residents of the Greater Nashua region. 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.

The College's commitment to continual improvement is evidenced by initiating a comprehensive program review process, strengthening our President's Advisory Board, and hiring a Director of Institutional Advancement. These strategies ensure that we will continue to provide "market-driven, accessible, quality programs of higher education that respond to the needs of students, businesses and communities."

Technology remains an important tool. To this end, we have converted all traditional classes to "smart classrooms" and created wireless access throughout the campus. We will continue to investigate emerging technologies that enhance the educational experience.

Service to community is one of the tenants of a NCC education as we believe in being a model citizen in the region. In February 2009, we were honored for the third consecutive year with a place on the President's Higher Education Community Service Honor Roll.

This June, the New Hampshire State Legislature and Governor Lynch approved \$9.5 million dollars in the capital budget to build a new Health and Science Technology Center. This structure will house four laboratories, eleven general classrooms, a Nursing simulation laboratory, and lecture hall/auditorium. This facility will allow us to investigate offering new programs in "green technologies".

At NCC, we offer a vibrant campus life. Our students may partake in a myriad of clubs, activities, intramurals and most recently interscholastic athletics. We believe these experiences and opportunities complement our academic programs.

Community colleges are solutions and economic engines to help lead economic recovery. Whether you're a high school graduate choosing to complete your first two years of a baccalaureate degree, an individual looking to learn a new skill for your next career, or a corporate executive seeking customized training for your workforce, NCC may be your pathway to success.

I wish you well as you commence your higher education journey at Nashua Community College.

Best regards,

Lucille A. Jordan  
President

***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.***

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## 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
- Preparation for Transfer
- Services and Citizenship
- Governance
- Financial Management
- Programs of Instruction
- Development of Partnerships
- Workforce Development
- Student Development
- Technology

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## 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 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## History

Since 1970, Nashua Community College 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 a laboratory 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. The Wellness Center opened in Fall 2008. In June 2009, the New Hampshire Legislature approved capitol improvement funds to construct a new health and science academic building to open Fall 2010.

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## Campus Setting

The three buildings contain nineteen general classrooms, twenty program-specific classrooms and laboratories, the Academic Support Center, the Advising Center, the Wellness 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. 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.

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## 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](mailto:cihe@neasc.org)

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## 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 (FAA certificate number NSUTO25K)

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

**Nursing** – The program has Full Approval of the New Hampshire Board of Nursing and Initial Accreditation from the National League for Nursing Accrediting Commission, Inc. (NLNAC), 3343 Peachtree Road NE, Suite 500, Atlanta, Georgia 30326, [www.nlnac.org](http://www.nlnac.org).

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## 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.

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## 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 Daniel 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](mailto:OCRBoston@ed.gov); the Equal Employment Commission, John F. Kennedy Federal Building, Government Center, 4<sup>th</sup> 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

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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, color, age, sex, handicap, religion, veterans status, sexual orientation, marital status, 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 courses.
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 the \$10 fee.
3. Present, when requested, recommendations from a high school teacher or an employer. 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). Credits transferred from another institution will be added to the total credits accumulated for graduation.
5. Participate in Accuplacer Course Placement Assessment 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 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.

## Home-Schooled Students

Nashua Community College encourages applications from students who are home-schooled. While the nature of home schooling is inherently unique to each student, the College requires appropriate documentation to determine admission. Applicants are expected to meet the same general and specific admission requirements (or their equivalent) as other applicants and to document the academic work they have accomplished. Documents to be submitted may include the following:

1. A letter or other documentation from the student's local school district stating the student has completed a home school program at the high school level.
2. A list of courses taken and grades earned and/or portfolio of work accomplished.
3. GED or other testing, if applicable.

## Residency Status

Any student who has, on his/her first admission to the Community College System of NH, 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 who 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 three years from the last semester of attendance.
2. The student applies for Academic Amnesty before the start of his/her second semester after readmission.
3. The student has never before received Academic Amnesty.
4. The student achieved a cumulative GPA below 1.7 during previous attendance.

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## 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 Nashua Community College, 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 2009-2010

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Students will pay tuition on a per credit basis:

Resident	\$183.00 per credit
New England Regional Student Program	\$274.00 per credit
Non-Resident	\$418.00 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)	\$80.00
Diploma Replacement Fee	\$20.00
Academic Instruction Fee (per lab credit)*	\$60.00
Accuplacer Placement Test Fee	\$10.00

A non-refundable tuition deposit of \$100.00 will be required from all matriculated students. A matriculated student is defined as one who has been formally accepted into a degree or certificate program. 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 fee will be charged for all Laboratory/Practicum 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 \$60.00 for each course. This will be added to the normal tuition charge for that course. Example:

	CL	LAB	CR
SCIN215 Microbiology	3	3	4

$$4 - 3 = 1 \times 60 = \$60$$

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.

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

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 equipment and supplies 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 \$7,791. 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 and can be paid online through the use of the e-Cashier link at [www.nashuacc.edu](http://www.nashuacc.edu), in the Business Office, or by mail.

When tuition is not fully covered by financial aid and/or a payment plan, it is the student's responsibility to pay the difference two weeks prior to the start of classes. A \$50.00 late fee will be charged to students who do not comply.

Students who have not accepted their financial aid award (the award letter from financial aid needs to be signed and returned to financial aid), established a payment plan, or paid in full two weeks prior to the start of classes will be deregistered from classes.

### **Monthly Payment Plan**

To assist students with tuition charges, the College offers an interest free monthly or annual payment plan administered by 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 NBS/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 Veterans Administration, 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 begin 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 receive 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, the comprehensive student services fee.

**Please note:** To qualify for all refunds, students must complete and submit an official withdrawal form to the Registrar's Office or Division of Continuing Education Office. Students who register for classes, never attend, and do not officially withdraw are liable for all charges.

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

# Financial Aid

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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.

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## 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 \$300 to \$5,350 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, Vermont, and Maine State Grants**

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.

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## **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 five (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 the 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 responsible 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 to meet 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.

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## **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.

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## Refund of Title IV Funds For Financial Aid Recipients

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

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.

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## 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

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## 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. In addition, special support services include individual academic and personal counseling, support groups, assistance with community agencies, and tutoring. Contact Elise Fortin 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.

### **New Hampshire Transfer Connections Scholarship**

The top (up to) five NHTCP applicants to KSC, PSU, UNH, and the top applicant at UNHM will each be designated a "NH Transfer Connections Scholar" and will be awarded a \$1,000 merit scholarship to be renewed annually for a maximum of three years provided the student attains a minimum cumulative grade point average of 3.0 by the end of the first year of baccalaureate study and retains that minimum GPA for each succeeding semester. The scholarship will terminate when the NHTC Scholar earns a bachelor's degree, leaves the institution awarding the scholarship, or has received the scholarship for six semesters, whichever occurs first. For the purpose of these awards, UNH and UNHM are considered separate institutions, so the scholarship is not transportable from Durham to Manchester or vice versa. These scholarships will be a discount to the annual tuition rate and will apply only for those students who maintain full time status in their baccalaureate study.

### **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 online at [www.nh.gov/postsecondary/financial/war\\_orphans.html](http://www.nh.gov/postsecondary/financial/war_orphans.html) or by calling (603) 271-2555.

### **Valedictorian Scholarship Program**

A one-year tuition scholarship will be awarded to designated New Hampshire high school valedictorians, based on cumulative grade point average, from New England Association of Schools and Colleges accredited institutions. The recipient must be a full time matriculated student in a CCSNH college within 15 months from the time of secondary school graduation. For more information, please contact the Admissions Office at 882-6923 ext 1461.

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## **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 minimum published CGPA at the published intervals.

## Quantitative Standard

Completion Rate Component: Must complete more than 2/3 of the credits attempted.

## Maximum Timeframe Component

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 program of study	Y	Y	Y
Repeat Courses	Y	Y	Y
Transfer Credits	N	Y	Y
Consortium Credits	N	Y	Y
Developmental/ Remedial/ESL	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 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 are excluded from the student's CGPA component.

## Developmental/Remedial/ESOL Courses

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

## Incomplete Grades

An incomplete grade 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.

<b>Total Credits Earned Toward Program</b>	<b>Minimum Cumulative Grade Point Average Required For the Program</b>	
	<b>Certificate</b>	<b>Associate</b>
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.

## **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.

## **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 for the following semester.

## **Change of Program**

A student who changes his/her academic program may request an appeal in that determination if he/she has changed programs while enrolled at his/her current college. If this appeal is approved, 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.

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## 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](http://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 to Benefits**

The College certifies your enrollment status, programs, and academic progress. All questions concerning payment are to be referred to the Department of Veterans' Affairs at 1-888-442-4551 or by sending an electronic inquiry to [www.gibill.va.gov](http://www.gibill.va.gov).

### **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 servicewomen, 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.

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## 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

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## **Associate Degree**

The minimum requirement for the Associate Degree is 64 credit hours and completion of all specified program requirements. Students must successfully complete a minimum of 22 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.

## **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, 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 are 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.

Transcripts require two business days to be processed. A longer time is required at the end of each term and at graduation.

### **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](http://www.nhtransfer.org). For more information, please consult Jan Curtis in the Admissions Office or an advisor in the Advising Center in Room 105.

## **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. 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 granted 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 the Admissions 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 on our website as well as in the Admissions Office and the Academic Advising Center. The cost of each exam is published on the College Board website [www.collegeboard.com/clep](http://www.collegeboard.com/clep). NCC charges an administrative fee of \$15 per exam. For further information and to schedule an appointment, contact the Academic Advising Center at (603) 882-6923 ext 1450.

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.

## 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/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 of 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 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), 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 enrolled for 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.

Students not meeting the criteria below will be placed 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 and certificate programs are available from the Registrar. Credits earned in developmental courses are not counted toward graduation requirements but are calculated in the GPA and CGPA. 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. 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 28%. 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 Community College System of New Hampshire 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

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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 establish reasonable accommodation plans. Many additional resources are available.
- **Computer Lab**—Students may use the 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 is located in Room 135 in the rear of the library. It offers students an opportunity to discuss and refine their writing skills through one-on-one sessions with qualified writing consultants. Students will develop self-confidence as writers and have a better understanding of the writing process. Consulting sessions may focus on research papers, technical reports and other projects such as resume writing and preparing an essay for college transfer. The Center sponsors poetry and short story writing contests twice a year and publishes the *Windows* literary magazine showcasing student's written work and artistic talents.

## 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 the International Café. There are a variety of multi-level classes 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.

## Academic Advising Center

The Academic Advising Center, located in Room 105, assists students with the registration process, course and program changes, transfer options, and other related college practices. The specific programs served, hours, and contact information are posted outside room 105. Students can find the name of 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.

# Division of Continuing Education

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The Division of Continuing Education reflects Nashua Community College's mission of valuing lifelong learning and striving to accommodate the needs of all students. By serving students bound by time and responsibility constraints, the Division of Continuing Education meets the needs of more and more students in the community.

Courses offered in the Division of Continuing Education 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.

Division of Continuing Education 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

- A variety of 100% online courses
- Hybrid courses that combine classroom instruction with online instruction
- Traditional 16-week courses available on weeknight evenings and weekends
- 8-week courses and intensive courses available on evenings and weekends.

A listing of courses is available each semester in the College's Course Schedule. For additional information, contact the Division of Continuing Education



# General Education Requirements

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## **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 continues 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 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 Requirement

### 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
CMNN115	Introduction to Media Writing	3
CMNN201	News Writing	3
CMNN204	Screenwriting	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 (no lab)	3
SCIN130	Physics I	4
SCIN131	Physics II	4
SCIN134	Stereo Physics	4
SCIN141	Introduction to Chemistry	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 (no lab)	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
HISN110	Ancient Civilizations of the World	3
HISN130	History of Modern Asia	3
HISN140	U.S. History from the Colonial Era to Reconstruction	3
HISN141	U.S. History Since Reconstruction	3
HISN150	Latin American History: From Independence to the Present	3
HISN241	American Constitutional History	3
HISN243	A Twentieth Century Social History of the United States through Film	3
HISN246	Modern American	3
HISN250	American Economic History	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

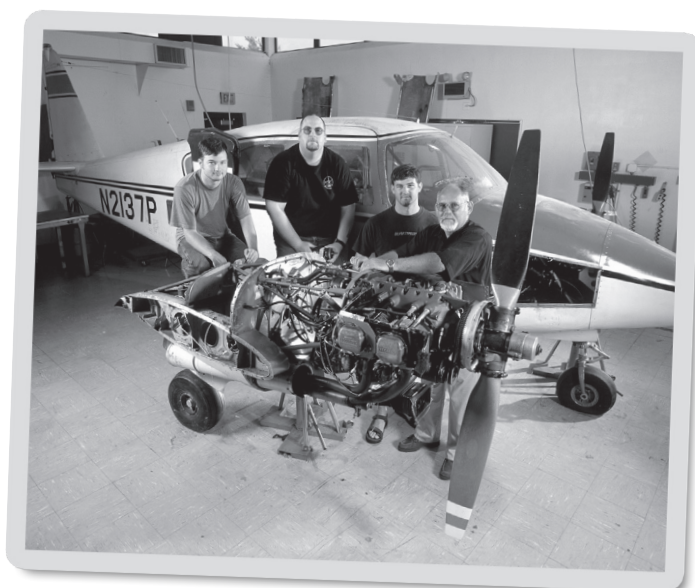
Students will explore world languages. Students will be exposed to creative expressions of the imagination and the human intellect.

		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 22 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 ADVANCED MACHINE TOOL TECHNOLOGY

## (Day/Evening Program)

At the heart of our mechanized world is the Advanced 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 **Advanced 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.
23. 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.

## ADVANCED 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 Elective		4	0	<u>4</u>
				<b>18</b>

### 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	<u>4</u>
				<b>19</b>

### 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	<u>3</u>
				<b>16</b>

### 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	<u>3</u>
				<b>16</b>

**Total 69 Credits**

## COMPUTER NUMERICAL CONTROL PROGRAMMING 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 Advanced 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

## ADVANCED 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 Advanced 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**



# 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.

Features of the program include:

- 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 and \$3,500
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).

## 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
				<b>15</b>

## 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
BCPN101	Introduction to Computers	2	2	3
General Education: Group A Elective		3	0	3
General Education: Group E Elective		4	0	4
				<b>21</b>

## 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
				<b>18</b>

## SPRING SEMESTER

AUTN215	Engine Performance II	2	3	3
AUTN221	Automotive Heating and Air Conditioning	2	3	3
AUTN228	Automotive Engine Repair: A Capstone Experience	2	6	4
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				<b>16</b>

## Total 70 Credits

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

*\*\*A student must earn a "C" or better to achieve a passing grade in this course.*

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 emphases 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.

## 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
				<u>22</u>

## SPRING SEMESTER

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

## SUMMER SEMESTER

(9 WEEKS)

AVTN105	Aircraft Systems	3	3	4
AVTN202	Airframe Electrical Systems	2	4	3
AVTN203	Hydraulics and Pneumatics	3	5	5
				<u>12</u>

## 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
				<u>22</u>

## 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
				<u>22</u>

## 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 with a concentration in Accounting offers a mix of both applied and theoretical courses. Specifically, the Accounting concentration 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 are 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 students planning to continue their education beyond the Associate degree, the Accounting 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 concentration 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.

### 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
				<b>15</b>

#### 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
				<b>17</b>

#### 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
				<b>17</b>

#### 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
<b>OR</b>				
XXXX	Open Elective**	3	0	3
General Education: Group B Elective		4	0	4
				<b>17</b>

**Total 66 Credits**

\*MTHN 106, 110 or 115 is recommended.

\*\*Consult with advisor

# ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION

## CONCENTRATION: MANAGEMENT (Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a concentration 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 concentration 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.

### 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
				<b>15</b>

#### 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
				<b>18</b>

#### 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
				<b>18</b>

#### 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
<b>OR</b>				
XXXX	Open Elective**	3	0	3
				<b>15</b>

### 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 concentration 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.

### 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	<u>1</u>
				<b>15</b>

#### 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	<u>4</u>
				<b>17</b>

#### 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	<u>3</u>
				<b>18</b>

#### SPRING SEMESTER

BUSN240	Business Law	3	0	3
BUSN210	Marketing Strategies: A Capstone Experience	3	0	3
SOCN101	Introduction to Sociology	3	0	3
BUSN294	Marketing Internship	1	8	3
<b>OR</b>				
XXXX	Open Elective*	3	0	3
General Education: Group F or G Elective		3	0	<u>3</u>
				<b>15</b>

#### Total 65 Credits

\*Consult with advisor

# ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION

## CONCENTRATION: SMALL BUSINESS ENTREPRENEURSHIP (Day/Evening Program)

The Associate in Science Degree in Business Administration curriculum with a concentration 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 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.

### 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	<u>3</u>
				<b>15</b>

### 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	<u>4</u>
				<b>17</b>

### 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	<u>3</u>
				<b>18</b>

### SPRING SEMESTER

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

### Total 66 Credits

\*MTHN106, 110 or 115 is recommended

\*\*Consult with advisor

# BUSINESS STUDIES CERTIFICATES

The Accounting 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.

## ACCOUNTING CERTIFICATE I

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	Spreadsheets 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 Mngment: 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 Mngment	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	Spreadsheets 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
- An environmentally friendly waterborne 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.)

### 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
				<b>13</b>

### SPRING SEMESTER

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

### 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
				<b>21</b>

### SPRING SEMESTER

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

### 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.

# ASSOCIATE IN SCIENCE COMPUTER ENGINEERING TECHNOLOGY

(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:

- Completion of high school Algebra I is required.
- Other high school courses such as Algebra II, physics, electronics, and computer programming are recommended.
- Basic skills in written English are required.
- 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:

1. Mastery of the knowledge, techniques, skills, and modern tools of their discipline.
2. Apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology.
3. Conduct, analyze, and interpret experiments and

apply experimental results to improve processes.

4. Ability to apply creativity in the design of systems, components, or processes appropriate to program objectives.
5. Ability to function effectively on teams.
6. Ability to identify, analyze, and solve technical problems.
7. Ability to communicate effectively.
8. Recognition of the need for and an ability to engage in lifelong learning.
9. Ability to understand professional, ethical, and social responsibilities.
10. Respect for diversity and a knowledge of contemporary professional, societal, and global issues.
11. Commitment to quality, timeliness, and continuous improvement.

\*Accredited by the Technology Accreditation Commission (TAC) of ABET, Inc., 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 COMPUTER 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
EETN110	Intro. to Object Oriented Programming Using Java	2	3	3
LEXN101	Freshman Seminar	1	0	1
				<u>19</u>

### SPRING SEMESTER

EETN122	Digital Circuits II	2	3	3
EETN132	Circuit Analysis II	3	3	4
EETN115	Advanced Object Oriented Programming Using C++	2	2	3
EETN170	Fundamentals of Operating Systems	2	2	3
MTHN120	Precalculus	4	0	4
				<u>17</u>

### SECOND YEAR - FALL SEMESTER

EETN251	Micro-Processors	2	3	3
EETN270	Operating System Administration I	2	2	3
EETN210	Problem Solving & Algorithms	2	2	3
SCIN130	Physics I	3	2	4
CPTN205	Networking Basics	2	2	3
				<u>16</u>

### SPRING SEMESTER

ENGN109	Oral Communication OR			
ENGN122	Technical Writing	3	0	3
EETN271	Operating System Administration II	2	2	3
SOCN101	Introduction to Sociology	3	0	3
HUMN230	Ethics in the Workplace	3	0	3
EETN288	A Capstone Experience	1	0	1
HISN260	History of Multiculturalsim	3	0	3
				<u>16</u>

**Total 68 Credits**



# 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.

### 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	<u>3</u>
				<b>17</b>

### 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	<u>3</u>
				<b>17</b>

### 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
CPTN207	Database Design and Management	2	2	3
	OR			
BCPN213	Database Management: ACCESS	2	2	3
	General Education: Group C Elective***	3	0	<u>3</u>
				<b>15</b>

### SPRING SEMESTER

CPTN210	Advanced Windows Servers	2	2	3
CPTN225	Intermediate Networking	3	3	4
CPTN290	Computer Science Internship	1	8	3
	OR			
CPTN286	Networking Capstone Project	3	0	3
	General Education: Group F or G Elective	3	0	3
	Elective in the Major***	3	0	<u>3</u>
				<b>16</b>

### Total 65 Credits

\* SCIN 134 or SCIN 150 recommended

\*\*MTHN 106, 110, or 115 required

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

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.

# 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 the Web a basic requirement for most businesses resulting in a widely acknowledged need for professionals having a strong education in web related areas.

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

- Problem Solving
- XHTML/CSS
- Programming Languages such as JavaScript, C++, PHP, and SQL
- Systems Analysis including data flow and use case/class design
- Database Design

Graduates of this program can either seek entry level positions in web development or continue their education in the field of computers.

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

1. Effectively use the Internet for research to complete written assignments and for technical support to resolve issues encountered during laboratory exercises.
2. Effectively comprehend and present in written and oral form concepts learned throughout the program of study.
3. Demonstrate the ability to apply the software development life cycle during an actual team project by developing project plans, data flow or UML process modeling documents, project schedules and test plans.
4. Work in the UNIX environment and successfully create and manage files.
5. Demonstrate the ability to create static or dynamic web pages in accordance with the web site's purpose utilizing graphic design concepts.
6. Demonstrate the ability to follow a systematic progression of software development and refinement when designing and development the software for the project.
7. Describe and draw Entity-Relationship diagrams.
8. Use SQL commands to implement database schemas, implement referential integrity and manipulate the data stored in the tables.
9. Understand the client/server model and the differences between this environment and the traditional environment when developing software.
10. Demonstrate the ability to develop server-side scripts that access and maintain data stored in either a flat file or 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
				<b>18</b>

## 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
MTHN170	Discrete Mathematics	3	0	3
FARN120	Introduction to Graphic Design Theory	3	0	3
				<b>18</b>

## SECOND YEAR - FALL SEMESTER

CPTN201	Client-Side Scripting Using JavaScript	2	2	3
CPTN203	Introduction to UNIX	2	2	3
CPTN207	Database Design and Management	2	2	3
	General Education: Group A Elective	3	0	3
	General Education: Group B Elective	3	2	4
				<b>16</b>

## SPRING SEMESTER

CPTN202	JAVA Programming	2	2	3
CPTN206	Server-Side Scripting Using PHP	2	2	3
CPTN290	Computer Science Internship	1	8	3
	OR			
CPTN284	Senior Website Development Lab:			
	A Capstone Experience	2	2	3
	General Education: Group C Elective	3	0	3
	General Education: Group D Elective	3	0	3
				<b>15</b>

**Total 67 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, computer science, or other computer related fields.

The curriculum has been strongly influenced by the Association of Computing Machinery's (ACM) guidelines for associate degrees in software. The curriculum combines theoretical and applied courses to teach the design and programming skills a software developer needs. Students completing this curriculum will have knowledge of the following competencies:

- Programming languages such as C++
- Data structures such as stacks, queues, and linked lists
- Object oriented programming
- Windows programming using VB.net
- Systems Analysis including Data Flow & Use Case/Class design
- 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

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

1. Effectively use the Internet for research to complete written assignments and for technical support to resolve issues encountered during laboratory exercises.
2. Effectively comprehend and present in written and oral form concepts learned throughout the program of study.
3. Demonstrate the ability to apply the software development life cycle during an actual team project by developing project plans, data flow or UML process modeling documents, project schedules and test plans.
4. Demonstrate the ability to follow a systematic progression of software development and refinement when designing and developing the software for the project.
5. Develop one or more software programs in a 3 GL language to satisfy the project needs.
6. Describe and draw Entity-Relationship diagrams.
7. Use SQL commands to implement database schemas, implement referential integrity and manipulate the data stored in the tables.
8. Utilize the principles of abstraction and data hiding when developing objects.
9. Demonstrate understanding of basic data structures such as stacks, queues, linked lists and sorting algorithms.

### 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
				<b>18</b>

### SPRING SEMESTER

CPTN140	Essentials of Systems Analysis	2	2	3
CPTN175	Intermediate Programming: Using C++	2	2	3
CPTN205	Networking Basics	2	2	3
MTHN170	Discrete Mathematics	3	0	3
CPTN103	Website Development II	2	2	3
General Education: Group A Elective		3	0	3
				<b>18</b>

### SECOND YEAR - FALL SEMESTER

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
Elective in Major*		2	2	3
				<b>16</b>

### SPRING SEMESTER

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

### Total 67 Credits

\*Includes CPTN, MTHN, BCPN

# COMPUTER SCIENCE CERTIFICATES

## COMPUTER NETWORKING CERTIFICATE (DAY/EVENING PROGRAM)

This certificate is designed to present a package of skills that would enable someone to perform basic entry-level work in the IT field. It begins with setting up and maintaining the computers and software needed by end users. Those skills are extended by learning to provide resources through Windows and Linux servers. The three networking courses deal with designing, implementing, and supporting the underlying communications between the end users and the servers. All the skills for Cisco CCNA certification are included.

		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**

## 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 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.

## 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.

# 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, preschools, 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 with regard to interpersonal relationships with teachers, fellow students, children and their families.

An interview with the Early Childhood Education Program Coordinator or the Education Department Chair is required for admission into the 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 child'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 and issues.

# EARLY CHILDHOOD EDUCATION cont.

## 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	<u>3/4</u>
				<b>17/18</b>

### 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	<u>4</u>
				<b>16</b>

### 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	<u>3</u>
				<b>18</b>

### SPRING SEMESTER

EDUN203	Emerging Literacy in Early Childhood Education	3	0	3
EDUN290	Early Childhood Education Capstone Course	1	8	3
EDUN230	The ECE Profession and the ECE Portfolio	1	0	1
General Education: Group D Elective*		3	0	3
General Education: Group F or G Elective*		3	0	3
EDUN201	Organization and Management in Early Childhood Education*	3	0	3
OR				
General Education: Group C Elective		3	0	<u>3</u>
				<b>16</b>

### Total 67/68 Credits

This degree 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.



# 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
EDUN190	Early Childhood Education Practicum I	1	8	3
EDUN230	The ECE Profession and Professional Portfolio	1	0	1
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

### 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 **Early Childhood Education 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:

- Completion of high school Algebra I is required.
- Other high school courses such as Algebra II, physics, electronics, and computer programming are recommended.
- Basic written skills in English are required.
- 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

## 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
EETN110	Introduction to Object Oriented Programming Using Java	2	2	3
LEXN101	Freshman Seminar	1	0	<u>1</u>
				<b>19</b>

### SPRING SEMESTER

EETN122	Digital Circuits II	2	3	3
EETN132	Circuit Analysis II	3	3	4
EETN115	Object Oriented Programming with C++	2	2	3
EETN142	Analog Circuits I*	2	2	3
EETN170	Fundamentals of Operating Systems	3	0	3
MTHN120	Precalculus	4	0	<u>4</u>
				<b>20</b>

### SUMMER SEMESTER

EETN243	Analog Circuits II*	2	2	3
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### SECOND YEAR - FALL SEMESTER

EETN251	Micro-Processors	2	3	3
EETN246	Op. Amps. and Linear Integrated Circuits*2		3	3
CPTN205	Networking Basics	2	2	3
SCIN130	Physics I	3	2	4
PSYN130	Human Relations			
OR				
General Education: Group C Elective		3	0	<u>3</u>
				<b>16</b>

### SPRING SEMESTER

EETN245	Communication Theory*	2	2	3
EETN274	EETN Capstone Project*	0	3	1
ENGN109	Oral Communication			
OR				
ENGN122	Technical Writing	3	0	3
General Education: Group D Elective		3	0	3
General Education: Group F or G Elective		3	0	<u>3</u>
				<b>13</b>

### Total 71 Credits

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

# 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:

- To offer a flexible curriculum that may be tailored to students' professional needs.
- To provide a program wherein credit may be granted for significant prior learning assessment in an occupational/technical specialty.
- 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
<b>Specialty and Support courses</b>	<b>32</b>
<b>General Education as follows:</b>	<b>26</b>
<b>Group A:</b> Written Composition/Oral Communication	7
<b>Group B:</b> The Scientific World	3
<b>Group C:</b> Social Sciences (Behavioral)	3
<b>Group D:</b> Social Sciences (Non-Behavioral)	3
<b>Group E:</b> Mathematical Reasoning	4
<b>Group F:</b> The Humanities	
OR	
<b>Group G:</b> World Languages	3
Minimum of an additional 3 credits from Groups A - G.	3
<b>Open Elective</b>	<b>3</b>
<b>GSTN296 General Studies: A Capstone Experience</b>	<b>3</b>
<b>LEXN101 Freshman Seminar</b>	<b>1</b>
<b>GSTN101 Assessment of Prior Learning</b>	
[if student chooses to develop a portfolio]	<b>1</b>

*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:

- Be high school graduates or have the GED equivalent.
- Submit an application for admission and have official transcripts forwarded to New Hampshire Community College by secondary and post-secondary institutions previously attended.
- Participate in a personal interview if required.
- 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 begin 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.



## GENERAL STUDIES

### FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
PSYN101	Introduction to Psychology	3	0	3
PSYN201	Human Growth & Development	3	0	3
SCIN201	Anatomy and Physiology I**	3	3	4
LEXN101	Freshman Seminar	1	0	<u>1</u>
				<b>15</b>

### 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	<u>3</u>
				<b>14</b>

### FIRST YEAR - SUMMER SEMESTER

SCIN215	Microbiology	3	3	4
	General Education	3	0	<u>3</u>
	(as appropriate to student's career plans)			<b>7</b>

\*MTHN106 is recommended.

\*\*Anatomy and Physiology I has a prerequisite of high school biology and 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 and Psychology 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

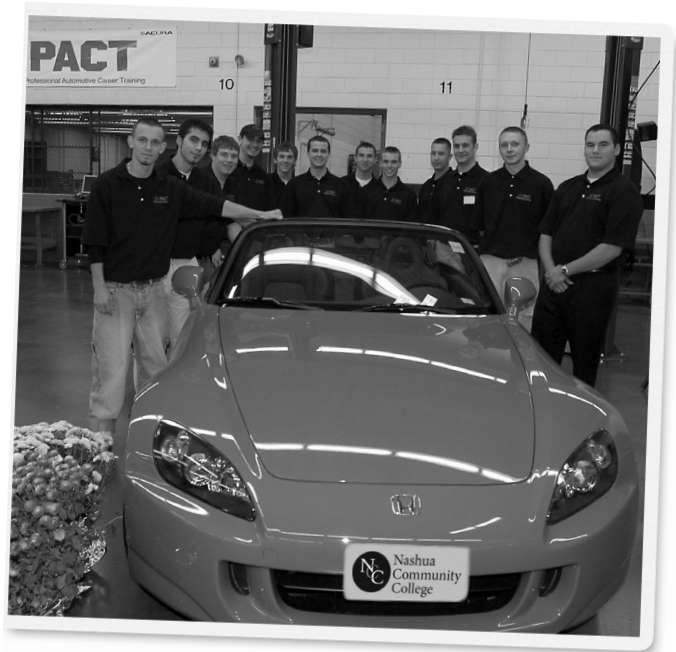
## Professional Automotive Career Training (PACT) (Day Program)

The Honda Automotive Technology program, otherwise known as PACT (Professional Automotive Career Training) is a partnership among Nashua Community College, American Honda Motor Co., Inc. and Honda/Acura Dealers. This associate degree program is designed to train students for employment in Honda/Acura dealerships and to 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 website. 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 \$1,600 and \$3,500.
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.

# HONDA AUTOMOTIVE TECHNOLOGY cont.

## ASSOCIATE IN SCIENCE IN HONDA AUTOMOTIVE TECHNOLOGY

### FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
HATN106	Honda Engines and Measurements	2	3	3
HATN121	Honda Chassis Service*	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
				<b>18</b>

### 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: A Capstone Experience I***	0	8	2
General Education: Group A Elective		3	0	3
General Education: Group E Elective		4	0	4
				<b>18/20</b>

### SUMMER SEMESTER

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

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: A Capstone Experience III***	0	8	2
SCIN150	Physical Science I	3	2	4
General Education: Group D Elective		3	0	3
				<b>16/18</b>

### 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
HATN192	Honda Dealer Internship: A Capstone Experience IV***	0	8	2
General Education: Group C Elective		3	0	3
General Education: Group F or G Elective		3	0	3
				<b>16/18</b>

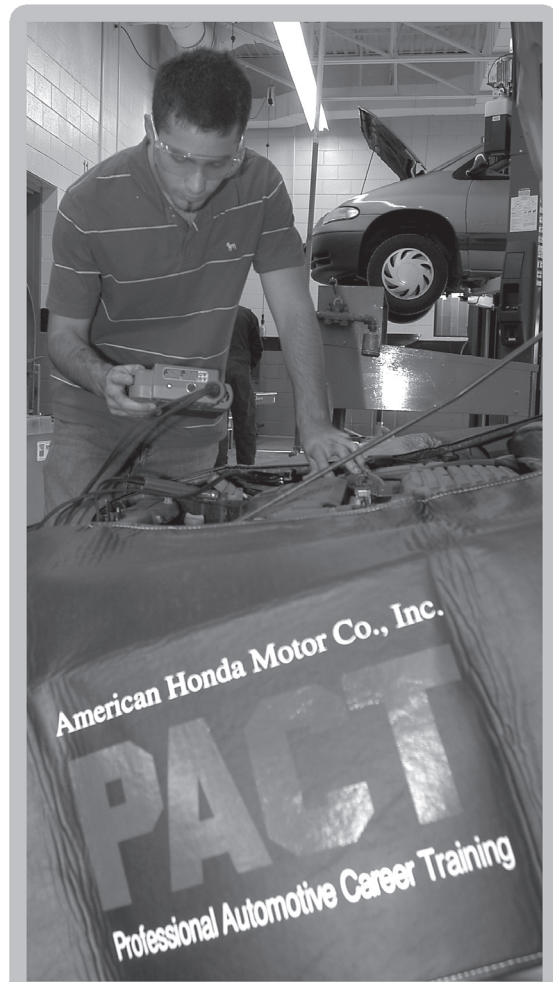
### Total 74 Credits

\* A student must earn a "C" or better in order to progress in this program.

\*\*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.



To qualify for a Honda Dealership placement, a student must successfully complete all program course work leading to each of the internship courses.

# 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.

The job market for human service workers has experienced tremendous growth during the past twenty years, concurrent with the expansion of community based mental health and developmental disabilities programs for the elderly, the disabled and families in crises.

Locally, employment growth in Hillsborough County is projected to be the fourth highest of all ten counties in New Hampshire. One of the fastest growing occupations in NH includes social and human service assistants, projected to increase by 43.4% over the next ten years.

Entry level salaries with an associate degree can range from \$27,000 to \$35,000 with opportunities for overtime, tuition reimbursement and insurance coverage.

Transfer Agreements: Graduates wishing to pursue their bachelor's degree can benefit from our transfer agreements with Granite State College, Rivier College, and Springfield College of Human Services. Students may enroll into one of these programs after transferring credits earned at Nashua Community College.

**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 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.

# HUMAN SERVICES cont.

## HUMAN SERVICES

### FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
BCPN101	Introduction to Computers	2	2	3
PSYN101	Introduction to Psychology	3	0	3
HSVN111	Introduction to Human Services	3	0	3
EDUN205	Support Techniques for Challenging Behaviors	3	0	3
LEXN101	Freshman Seminar	1	0	1
				<u>17</u>

### SPRING SEMESTER

HSVN123	Supportive Communication Skills	3	0	3
HSVN125	Individual Assessment and Planning	3	0	3
HSVN126	Issues in Developmental Disabilities and Mental Health	3	0	3
HSVN190	Fieldwork I	1	8	3
MTHN104	Topics in Mathematics			
	OR			
General Education: Group E Elective		3/4	0	<u>3/4</u>
				<u>15/16</u>

### SECOND YEAR - FALL SEMESTER

ENGN102	College Composition II			
	OR			
ENGN103	Professional Writing and Presentations	3	0	3
HSVN212	Individual Counseling: Theory and Practice	3	0	3
PSYN240	Alcohol and Drugs	3	0	3
HSVN290	Fieldwork II	1	8	3
General Education: Group B Elective (lab recommended)		3	0/2	<u>3/4</u>
Open Elective		3	0	<u>3</u>
				<u>18/19</u>

### SPRING SEMESTER

HSVN225	Family Supports	3	0	3
HSVN220	Group Dynamics and Counseling	3	0	3
HISN260	History of Multiculturalism	3	0	3
HSVN291	Capstone Experience	1	8	3
General Education: Group F or G Elective*		3	0	<u>3</u>
				<u>15</u>

### Total 65/67 credits

\*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.

## 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
EDUN205	Support Techniques for Challenging Behaviors	3	0	3
PSYN101	Introduction to Psychology	3	0	3
HSVN111	Introduction to Human Services	3	0	3
HSVN123	Supportive Communication Skills	3	0	3
HSVN125	Individual Assessment and Planning*	3	0	3
HSVN190	Fieldwork I	1	8	3

### Total 26 Credits

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

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.

# 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.

### LIBERAL ARTS FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
LEXN101	Freshmen Seminar	1	0	1
General Education: Group C Elective		3	0	3
General Education: Group E Elective*		4	0	4
				<b>15</b>

### SPRING SEMESTER

ENGN xxx	English Elective (ENGN 105 recommended)	3	0	3
LIBN101	Liberal Arts and Career Preparation	1	0	1
General Education: Group D Elective		3	0	3
General Education: Group E Elective*		3/4	0	3/4
General Education: Group F or G Elective		3	0	3
XXXX xxx	Open Elective	3/4	0	3/4
				<b>16/18</b>

### SECOND YEAR – FALL SEMESTER

General Education: 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
General Education: Group A – F Elective		3	0	3
XXXX xxx	Open Elective	3/4	0	3/4
				<b>16/17</b>

### SPRING SEMESTER

General Education: Group B Elective**		3	2	4
General Education: Group F or G Elective		3	0	3
LIBN296	Liberal Arts Project: A Capstone Experience OR	3	0	3
LIBN290	Liberal Arts Internship: A Capstone Experience	1	8	3
General Education: Group A – F Elective		3/4	0	3/4
General Education: Group A – F Elective		3/4	0	3/4
XXXXxxx	Open Elective (as needed)	3/4	0	3/4
				<b>19/22</b>

### Minimum 64 Credits

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

\* MTHN103 does not meet this requirement

\*\*SCIN141 does not meet this requirement

# 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.

### LIBERAL 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
			<u>15</u>

### SPRING SEMESTER

ENGN xxx English Elective	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
			<u>16</u>

### 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	3	0	3
ENGN xxx English Elective	3	0	3
XXXX xxx Open Elective	3	0	3
			<u>19</u>

### SPRING SEMESTER

General Education: Group B Elective**	3	2	4
General Education: Group F or G Elective	3	0	3
ENGN xxx English Elective	3	0	3
ENGN xxx English Elective	3	0	3
ENGN xxx English Elective	3	0	3
			<u>16</u>

**Total 66 Credits**

### English Electives List

CMNN101	Introduction to Mass Communication
CMNN102	Principles of Communication
CMNN110	Introduction to Journalism
CMNN115	Introduction to Media Writing
CMNN201	News Writing
CMNN204	Screenwriting
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.*

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

\* MTHN103 does not meet this requirement

\*\*SCIN141 does not meet this requirement

# 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.

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

\* MTHN103 does not meet this requirement

\*\*SCIN141 does not meet this requirement

## LIBERAL ARTS HISTORY CONCENTRATION FIRST YEAR – FALL SEMESTER

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
HISN101	Western Civilization from Ancient Times through the 17 <sup>th</sup> 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
				<b>18</b>

## SPRING SEMESTER

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

## SECOND YEAR – FALL SEMESTER

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

## SPRING SEMESTER

HISN141	United States History Since Reconstruction OR			
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
				<b>16</b>

## Minimum 66 Credits

\*\*\* Recommended courses include ENGN102, ENGN105, ENGN109. Refer to English Elective List under Liberal Arts: English Concentration.

\*\*\*\* 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 Program)

The Liberal Arts Degree 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.

## LIBERAL 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
				<u>18</u>

### 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	0	3/4
General Education: Group F or G		3	0	3
				<u>16/17</u>

### 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
				<u>18</u>

### 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
				<u>14</u>

### Total 66/67 Credits

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

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

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



# ASSOCIATE IN ARTS IN LIBERAL ARTS PEACE & JUSTICE STUDIES CONCENTRATION

Nashua Community College's Peace & Justice Studies Concentration within the Liberal Arts degree program prepares graduates to function as community advocates to help ensure a society in which equity and peace building are embraced and preserved. Practical, real world solutions will be explored throughout the program and will be applied in a required internship in the community.

The Peace & Justice Studies Concentration has three 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 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.
3. To encourage academic exploration of the growing field of Peace & Justice Studies throughout the nation and the world.

## 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.

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.

## LIBERAL ARTS PEACE & JUSTICE CONCENTRATION FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
BCPN101	Introduction to Computers	2	2	3
ENGN101	College Composition	4	0	4
PJSN101	Introduction to Peace & Justice Studies	3	0	3
General Education: Group E Elective*		4	0	4
General Education: Group F or G Elective		3	0	3
LEXN101	Freshman Seminar	1	0	<u>1</u>
				<b>18</b>

## SPRING SEMESTER

ENGN105	Introduction to Literature	3	0	3
	OR			
ENGNxxx	English Elective	3	0	3
PSYN101	Introduction to Psychology	3	0	3
PJSN105	Foundations of Conflict Resolution	3	0	3
General Education: Group E Elective*		4	0	4
General Education: Group F or G Elective		3	0	<u>3</u>
				<b>16</b>

## SECOND YEAR - FALL SEMESTER

PJSN108	Theories of Conflict and Conflict Resolution	3	0	3
PJSN201	Group Facilitation Theory and Practice	3	0	3
General Education: Group B Elective**		3	2	4
General Education: Group D Elective		3	0	3
General Education: Group F or G Elective		3	0	<u>3</u>
				<b>16</b>

## SPRING SEMESTER

PJSNxxx	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
General Education: Group B Elective**		3	2	4
General Education: Group C or D Elective		3	0	<u>3</u>
				<b>16</b>

## Total 66 Credits

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

\* MTHN103 does not meet this requirement

\*\*SCIN141 does not meet this requirement

# ASSOCIATE IN ARTS IN LIBERAL ARTS PSYCHOLOGY CONCENTRATION

(Day and Evening Program)

The university parallel Concentration in Psychology is designed for students who intend to complete the first two years of a bachelor's degree program at Nashua Community College and then transfer to a four-year college or university to complete the bachelor's degree with a major in Psychology. The curriculum includes general education and other selected courses typically required in a bachelor's degree program in psychology.

Psychology is the wide-ranging scientific study and exploration of behavior and mental processes. Critical thinking skills are emphasized and developed. Psychology courses are an excellent complement to any profession or course of training that involves human interaction.

Students should be aware that careers in the field of professional psychology typically require a master's degree or a doctoral degree, depending upon the career path selected.

## Liberal Arts Psychology Concentration FIRST YEAR - FALL SEMESTER

		CL	LAB	CR
ENGN101	College Composition	4	0	4
BCPN101	Introduction to Computers	2	2	3
PSYN101	Introduction to Psychology	3	0	3
MTHN106	Elementary Statistics	4	0	4
LEXN101	Freshman Seminar	1	0	1
				<u>15</u>

## SPRING SEMESTER

PSYN201	Human Growth and Development	3	0	3
PSYN202	Personality Psychology	3	0	3
HUMN101	Introduction to Humanities	3	0	3
	General Education: Group A Elective	3	0	3
	General Education: Group F or G Elective	3	0	3
XXXXxxx	Open Elective	3	0	3
				<u>18</u>

## SECOND YEAR - FALL SEMESTER

PSYN210	Abnormal Psychology	3	0	3
SCIN101	Biology I	3	1	4
PSYNxxx	Psychology Elective	3	0	3
XXXXxxx	Open Elective	3	0	3
	General Education: Group E Elective*	4	0	4
				<u>17</u>

## SPRING SEMESTER

PSYN220	Research Methods	3	0	3
PSYN20	Social Psychology	3	0	3
	General Education: Group B Elective** (must have a lab)	3	2	4
	General Education: Group D Elective	3	0	3
	General Education: Group F or G Elective	3	0	3
				<u>16</u>

## Total 66 Credits

A minimum of 64 credits must be earned in the required categories to complete the program of studies. A minimum of 16 credits must be earned at Nashua Community College, and 8 of those 16 credits must be earned in courses at the 200 level.

\* MTHN103 does not meet this requirement

\*\*SCIN141 does not meet this requirement



# 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.

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 2009, graduates have an 89% pass rate in obtaining their licenses.

The Bureau of Labor Statistics (US Department of Labor) projects an increased growth rate of 20% for massage therapy through 2016.

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

Students in the Massage Therapy Program will be held to the highest professional and ethical standards. Inappropriate behavior and issues pertaining to the quality of touch will not be tolerated and will result in removal from the program at any time. 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 **			<u>2/3</u>
				<b>12/13</b>

### 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 **			<u>2/3</u>
				<b>13/14</b>

### 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	2	2
MSTN190	Clinical Internship	0	3	1
MSTNXXX	Elective **			<u>2/3</u>
				<b>12/13</b>

### Minimum of 35 Credits

### MASSAGE ELECTIVES (CHOOSE TWO):

		CL	LAB	CR
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
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.

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.

## 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
				<b>13</b>

## 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
				<b>19</b>

## 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
				<b>15</b>

## 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
				<b>17</b>

## Total 64 Credits

\*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

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 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 Full Approval of the New Hampshire Board of Nursing and Initial Accreditation from the National League for Nursing Accrediting Commission, Inc. (NLNAC), 3343 Peachtree Road NE, Suite 500, Atlanta, Georgia 30326, [www.nlnac.org](http://www.nlnac.org).

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

1. Plan and deliver individualized care to patients by integrating the nursing process and pertinent nursing knowledge, principles of teaching / learning, and preferences of patients or legal designees across the lifespan, diversity of culture, and the levels of prevention.
2. Practice collaboratively on the multi-professional health care team using principles of leadership across the disciplines and throughout the health care system to influence and facilitate conflict resolution and the establishment and achievement of shared goals.
3. Support a culture of continuous quality improvement by using data to monitor outcomes; identifying and reporting actual or potential problems; collaborating with the multi-professional team throughout the health care system; and developing evidence-based strategies for optimal practice.
4. Use health care system resources and technology, including information technology, time, policies and procedures, materials, and equipment, to coordinate and deliver individual and / or population-focused care that is effective and efficient.
5. Communicate clearly in goal-oriented, culturally-sensitive, caring, concise, and timely ways using written, verbal, non-verbal, and electronic modalities.
6. Demonstrate accountability for professional practice using legal, ethical, and regulatory guidelines and participate in activities that contribute to life-long learning.

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

Applicants seeking admission to the Associate in 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 (see [www.atitesting.com](http://www.atitesting.com) for information about preparing for the test) relative to the applicant pool, as measured by the Adjusted Individual Total Score minimum score of 70, with all sub-scores above 50.
- Two letters of professional reference on forms provided by the College.
- Ability to meet the Health, Character, and Technical

Standards for the ASN Program (please see below).

- An applicant who has attended another nursing education 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 desired entry to the program. Incomplete applications will not be considered.
- Applicants meeting the above requirements will be ranked according to TEAS scores and previous college grades, and will be invited for an interview. Sufficient interviews will be conducted to fill class openings and a waiting list with the best qualified applicants.

### 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](http://www.ncsbn.org)).

### 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), and in previous coursework.
- Demonstrate relatively 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.
- Have basic experience in health-related employment.

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

# NURSING cont.

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.

## Transfer Credit

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

## Licensed Practical Nurses

- Licensed Practical Nurses (LPN) with college credits in nursing completed in the past five years and with current nursing practice may be able to challenge by exam up to seven credits in nursing.
- Other college courses may be evaluated for transferability.
- The LPN may earn 4 credits applicable to NURN130 by taking the ATI Fundamentals of Nursing exam and scoring a minimum of Level 2. Satisfactory performance on a simulated patient care experience in the nursing laboratory may earn 3 credits applicable to NURN120.
- Graduates of practical nursing programs who meet criteria for admission to the Associate of Science in Nursing Program 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.

## 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 for classroom and clinical experiences 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.
8. Sufficient information technology skills to complete assignments according to program standards.

# NURSING cont.

## 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).
- If the applicant has previously completed SCIN201, Anatomy and Physiology I and PSYN 101, Introduction to Psychology, a transcript demonstrating their completion with minimum grades of B- must be submitted to the Admissions Office by the end of the Summer Session.
- 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 Heart Association, CPR for the Professional Rescuer).
- Mantoux testing to assess for prior tuberculosis exposure.
- Personal medical insurance.
- A fee for nursing liability insurance will be assessed in the second semester tuition bill.
- Applicants with latex allergies are advised to seek professional medical consultation.
- Additional requirements include uniform, stethoscope, watch with a second hand, textbooks, and testing materials.
- The Background Check, which may include drug screening, is due within thirty days of receipt of conditional acceptance. Instructions will be provided.

## 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 which may include drug screening 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, Human Growth and Development, 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, Rivier College, 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.



# NURSING cont.

## NURSING Two Year Curriculum Plan

### Prerequisite

for NURN120 and NURN130:

		CL	LAB	CR
SCIN201	Anatomy & Physiology I	3	3	4
PSYN101	Intro to Psychology	3	0	$\frac{3}{7}$

### FIRST YEAR - FALL SEMESTER

ENGN101	College Composition I	4	0	4
SCIN202	Anatomy & Physiology II	3	3	4
PSYN201	Human Growth and Development	3	0	3
NURN120	Fundamental Nursing Skills**	0	10	3
NURN130	Concepts for Nursing Practice**	4	0	$\frac{4}{18}$

### SPRING SEMESTER

NURN140	Nursing Care I: Concepts and Skills	4	12	8
NURN230	Pharmacology for Nursing Practice	3	0	3
SCIN215	Microbiology	3	3	4
General Education: Group E Elective	(MTHN106 preferred)	4	0	4
				$\frac{19}{13}$

### SECOND YEAR - FALL SEMESTER

NURN220	Nursing Care II: Concepts and Skills	4	18	10
General Education: Group A Elective		3	0	$\frac{3}{13}$

### SPRING SEMESTER

NURN240	Management of Nursing Care Across the Lifespan	4	18	10
General Education: Group F or G Elective		3	0	$\frac{3}{13}$

**Total 70 Credits**

\*\*LPNs may challenge by exam

## NURSING Three Year Curriculum Plan

### FIRST YEAR - FALL SEMESTER

SCIN201	Anatomy & Physiology I	3	3	4
ENGN101	College Composition I	4	0	4
General Education: Group E Elective*		4	0	$\frac{4}{12}$

### SPRING SEMESTER

SCIN202	Anatomy & 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 H Elective		3	0	$\frac{3}{13}$

### SUMMER

SCIN215	Microbiology	3	3	$\frac{4}{4}$
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### SECOND YEAR - FALL SEMESTER

PSYN201	Human Growth and Development	3	0	3
NURN120	Fundamental Nursing Skills	0	10	3
NURN130	Concepts for Nursing Practice	4	0	$\frac{4}{10}$

### SPRING SEMESTER

NURN140	Nursing Care I: Concepts and Skills	4	12	8
NURN230	Pharmacology for Nursing Practice	3	0	$\frac{3}{11}$

### THIRD YEAR - FALL SEMESTER

NURN220	Nursing Care II: Concepts and Skills	4	18	$\frac{10}{10}$
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### SPRING SEMESTER

NURN240	Management of Nursing Care Across the Lifespan	4	18	$\frac{10}{10}$
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**Total 70 Credits**

\*MTHN106 suggested

# 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*. 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.

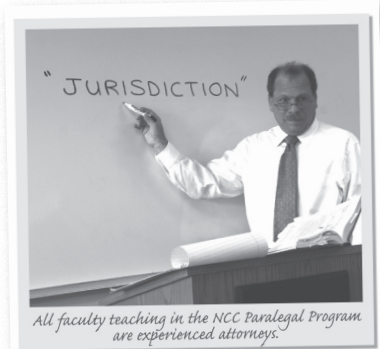
For the Mission Statement, Goals and Objectives of the Paralegal Studies Program of Nashua Community College, go to the Paralegal Studies Program web pages on the College website at [www.nashuacc.edu](http://www.nashuacc.edu).

Nashua Community College is an accredited Institutional Member of the American Association for Paralegal Education ([www.aafpe.org](http://www.aafpe.org)) and a Sustaining Member of the Paralegal Association of New Hampshire ([www.panh.org](http://www.panh.org)).

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.

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.



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.

# PARALEGAL STUDIES cont.

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.

**NCC Paralegal 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 fundraising 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.



## 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
				<b>15</b>

### 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
				<b>16</b>

### 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
				<b>18</b>

### 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 OR	1	8	3
PLSN280	Paralegal Capstone	3	0	3
General Education: Group B Elective		3	0	3
				<b>15</b>

### Total 64 Credits

\*MTHN106, 110, 115 is recommended

## 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

# 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 Hotellerie 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 immersion

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.

# RESTAURANT MANAGEMENT cont.

## 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	<u>4</u>
				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	<u>3</u>
				21

## SUMMER/FALL SEMESTER (in Switzerland)

INTN1108	Internship: A Capstone Experience	0	40	<u>2</u>
				2

## SECOND YEAR - SPRING SEMESTER (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	<u>4</u>
				17

## SUMMER SEMESTER (in New Hampshire)

ACCN102	Financial Accounting II	4	0	4
ECON202	Macroeconomics	3	0	<u>3</u>
				7

**Total 67 Credits**

\*SCIN141 does not meet this requirement.



# 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 from 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.

# SPEECH-LANGUAGE PATHOLOGY ASSISTANT cont.

## 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	<u>4</u>
				<b>18</b>

### SPRING SEMESTER

PSYN101	Introduction to Psychology	3	0	3
XXXX	Open Elective	3	0	3
EDUN 205	Support Techniques for Challenging 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	<u>3</u>
				<b>18</b>

### SUMMER SEMESTER

SLPN115	Phonetics	3	0	3
SLPN123	Disorders of Articulation*	3	0	<u>3</u>
				<b>6</b>

### 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	<u>3</u>
				<b>15</b>

### 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	<u>4</u>
				<b>12</b>

### Total 69 Credits

\* Please check course descriptions for prerequisites for these courses.

\*\*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 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 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 an 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 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.

# TEACHER EDUCATION cont.

## 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
				<u>17</u>

### SPRING SEMESTER

EDUN 132	Introduction to Exceptionalities	3	0	3
POLN 102	American Government and Politics	3	0	3
SOCN 110	Cultural Anthropology	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
				<u>16</u>

### 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
				<u>17/18</u>

### SPRING SEMESTER

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

### Total 67/70 Credits

Students are advised to contact transfer institutions in order to make appropriate elective course selections. Please check with an 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 institutions to prepare the student for a major focus after transfer.



# CERTIFICATES

## 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 into the program, applicants must meet the requirements for admission listed in this catalog.

### SIGN LANGUAGE CERTIFICATE

		CL	LAB	CR
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 22 Credits**



# 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

## 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. **A student must earn a "C" or better to achieve a passing grade in this course.** 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 non-destructive 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 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 A Capstone Course 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 3 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 intro-

duced. 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

**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

**CMNN115 Introduction to Media Writing 3 Credits**

This course will introduce students to the application of writing principles for various forms of media copy: print news and features; broadcast news for radio and television, public service announcements, advertising, new media, and public relations. Topics covered in this class include: hard news; feature writing; AP style; crafting effective leads; editing; organizational media; interviewing techniques; publishing on Web 2.0; identifying and targeting audiences; public service announcements; press releases; and communications ethics and theory. Prerequisite: 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

**CMNN204 Screenwriting 3 Credits**

Students will learn and apply the techniques and principles of scripting narratives for visual media and will examine the writing process from idea conception to completed work. Topics covered include: the tenets of the Classic Hollywood narrative structure; the sophisticated nature of storytelling through description; the language of script writing; writing scripts that connect to audiences; characterization and arc; peer evaluation. Prerequisite: ENGN101 with a grade of "C" or better

## 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 JAVA Programming 3 Credits**

The students will reinforce their understanding of basic programming concepts such as variables, loops, conditions, arithmetic operations, functions, parameters and arrays while learning the Java programming language and the Java SDK. The key concepts of the object-oriented programming such as classes, objects, inheritance, and encapsulation are also addressed as well as object oriented problem conceptualization and class definition. Additionally graphical user interface (GUI) and event driven programming concepts are reinforced. Prerequisite: CPTN161

### **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: CPTN101 or EETN170

### **CPTN206 Server-Side Scripting Using PHP 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, CPTN161

### **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.

### **CPTN208 Perl Programming 3 Credits**

Students will learn Perl while continuing to develop their proficiency in problem solving by developing a series of programs and a comprehensive final project. Simple scalar and more complex data types such as arrays, lists and hashes will be examined. Constructs including if/unless, for, while, foreach, user defined functions, file handles, and regular expressions will be studied. Prerequisites: Prior programming experience in C, C++, or Java

### **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

**CPTN284 Senior Website Development Lab: A Capstone Experience 3 Credits**

This is the website development program's capstone course. Students, in cooperation with supervising faculty members, demonstrate their mastery of website development competencies. They select a project and perform 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 GUI design and data structure design, project scheduling and project implementation and testing using one or more scripting or programming languages. Students are expected to present the completed project documents as well as to present the actual project to fellow students and department faculty members. Corequisite: CPTN206

**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, demonstrate their mastery of their software development or website development competencies. They select a project and perform 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 to present the actual project to fellow students and department faculty members. Prerequisite or Corequisite: 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. A minimum grade of C is required for progression in Collision Repair Courses.

**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: Successful completion of all catalog-listed courses in first three semesters or permission of Program Coordinator. Corequisites: AUTN221, CRTN225

**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**

This course provides 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 products; consumer price and confidence indexes; the business cycle; inflation and unemployment; fiscal, supply-side and monetary policy; and the Federal Reserve System.

## EDUCATION

### **EDUN099 Exploring Careers in the Human Service and Teaching Professions 2 Credits**

This course will provide an overview of the human service and education fields. It introduces the student to the populations served, occupations and basic concepts of the human service and teaching professions, as well as the roles and functions necessary for success in the fields. The student will gain an understanding of the types of agencies, programs and institutions where professionals are employed. This course requires four hours of field work and supports the development of reading, writing, and speaking skills. This course is to be taken in conjunction with a developmental English or Reading course when required, before enrolling in HSVN111 or EDUN130 or EDUN101. A minimum grade of C is required. Credits do not count toward degree requirements. Corequisite: One or more of the following: ENGN098, ENGN099, RDGN096, RDGN096

### **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. 20 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 Education. 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

### **EDUN205 Support Techniques for Challenging Behaviors 3 Credits**

This course will provide pre-service teachers, paraeducators and human service providers with knowledge and skills for supporting students and others displaying challenging behaviors, using the framework of positive behavioral supports. Future teachers, paraeducators, and human service providers will gain knowledge of the basic assumptions about the context and functions of behavior and understand the role that behavior plays in helping students influence people and events in their environment, meet their basic needs, and/or avoid unpleasant situations. By developing strategies to determine the functions of certain behaviors, pre-service teachers, paraeducators, and human service providers will gain new and effective strategies for supporting students and others who demonstrate challenging behaviors in the classroom, as well as in other settings. The focus on the teaching of new skills (as opposed to intrusive interventions that rely on the elimination of challenging behaviors) will provide pre-service teachers, paraeducators, and human service providers with effective, positive approaches that respect the dignity of the individual and facilitate social inclusion. Prerequisites: EDUN101 or HSVN111 or EDUN130 or SLPN110 or permission of the Education or Human Services Department Chairperson

### **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

**EETN170 Fundamentals of Operating Systems 3 Credits**

This course is a basic introduction to how computers operate. CPU, memory and disk concepts will be discussed. The layering of software on top of the operating system and hardware will be discussed. Students will learn how to use computers in both a scripting command line environment and through a GUI. Differences will be outlined. The concepts will be explained using Linux Operating System. Students will start with basic user account and login concept and will progress to system installation and set up. File system structure and security will be discussed. From there students will move to explore shell scripting and other scripting tools provided by the Linux environment. Compiled programs will be demonstrated via C++ and application examples. Foundations for future learning of client server architecture will be presented.

**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

**EETN210 Problem Solving and Algorithms 3 Credits**

This course is a third course in the sequence of four courses leading to proficiency in problem solving and programming skills. It builds further knowledge of C++ and Java. Students will explore methods of solving problems efficiently. They will study algorithms applicable to computer problem solving such as stacks, queues, linked lists and graphs. A strong emphasis will be placed on problem solving skills. C++ is the primary language with Java used to demonstrate additional concepts. This course is for CENT and EET students only. Prerequisite: EETN115

**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

**EETN270 Operating System Administration I 3 Credits**

This course will teach the student how to set up and administer a multiuser computer system. Students will start by installing a new system and setting up accounts on the system. Software installation and maintenance will be discussed. Students will examine operating system kernel and learn how to rebuild Linux kernel. After students learn about installation and security of a single system, they will move to a client server environment. They will install multiple servers and explore their configuration and access in a networked environment. The three specific servers that students will set up will be web server like Apache, mail server like sendmail, qmail or postfix and secure connection communications server like SSH and its components. Appropriate protocols will be discussed: HTTP, SMTP, POP/IMAP, SSH, FTP. Hardware and software aspects of the client server will be discussed. Prerequisite: EETN170

**EETN271 Operating System Administration II 3 Credits**

This course continues with a complete secure system set up with emphasis on the client server architecture. This course will study how the information is transferred between peripherals and computer of two computers. Security is discussed with every topic. Students will continue adding modules to the Web server including a MySQL database server. They will also continue setting up other servers that make a complete networked system. SAMBA server will provide interoperability with Windows operating systems. DNS and BIND will explore tracking Domain names and addresses.

NFS will provide file sharing with other systems. Finally setting up a firewall using iptables will be demonstrated. Both hardware layer including features of the signal and the application layer will be discussed and analyzed. Prerequisite: EETN270

**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 A Capstone Experience 1 Credit**

This course will give students an opportunity to select and design projects provided by students, projects researched by the team, assigned by the Engineering Technology Department or by other departments on campus. Students forming teams will synthesize their understanding and skills from previous courses, incorporating all of their academic tools and cooperative skills, in designing a project that will demonstrate in a practical way their ability to integrate theory and research into this capstone project. Each team is responsible for the production, presentation and defense of a project paper which relates to the capstone experience. Prerequisites: EETN115, 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

**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

**ENGLISH****ENG098 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: Placement test; Corequisite: LEXN101

**ENG098R Introduction to College English and Reading 5 Credits**

A preparatory course designed to develop writing and reading skills. Emphasis will be on vocabulary mastery, grammar usage, paragraph development, reading comprehension and thinking skills necessary for success in college-level classes. Students must receive a minimum passing grade of C. A grade of CS will be given to

students who do not satisfactorily meet course requirements within one semester. Credits do not count toward degree requirements. Prerequisites: Accuplacer Score; 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

### **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

### **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, with the emphasis on sharing work and offering 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 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 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 Academic Writing for English Language Learners 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 Academic Writing for English Language Learners 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 Academic Writing for English Language Learners IV 4 Credits**

This course is for students who speak English as a second lan-

guage. 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.**

## 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 and 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.

**GSTN296 General Studies Project: A Capstone Experience 3 Credits**

The General Studies Project course is a capstone course in the General Studies Degree program that provides students with the opportunity to integrate critical and analytical skills to evaluate diverse ideas, information, and research. The student-designed project will emphasize the relationships of knowledge and information from the following discipline groups: mathematics/science, social science and behavioral science, English and the humanities, and technology and research. The project may take the form of an extended research paper, a creative project, or even a project to improve the community.

In consultation with the supervising faculty member, the student or a small group of students will design and complete a project that integrates the student learning outcomes for the General Studies Degree program. Particular attention will be paid to Critical Thinking (including Scientific Methodology, Numeracy Applications, and Information Literacy), Written Communication, and Oral Communication skills. Prerequisites: Completion of 45 credits of course work applicable to the General Studies Associate 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 & 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 Chassis Service 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. A "C" or better grade is required for progression.

**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 re-

quiring 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

**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.

**HISN110 Ancient Civilizations of the World 3 Credits**

This survey course provides an introduction to the ancient civilizations of the Near East, Egypt and Africa, China and East Asia, India and Mesoamerica. The influence of Greece and Rome will also be considered. Discussion will focus on comparing and contrasting the characteristics of these civilizations as well as identifying their political, technological, economic, ideological, and cultural achievements.

**HISN130 History of Modern Asia 3 Credits**

This survey course provides an overview of the political, economic, and social development of Asia from the 19th century to the present. Special emphasis will be placed on China, Japan, Korea, and India - Asian nations that play an increasingly important role in today's global economy. Discussion topics will include Western imperialism and its legacy, strategies of modernization, the rise of nationalism, communism in Asia, World War II, the Cold War, the emergence of Asian countries into the global economy, the modernization and exportation of Asian cultures, and 21st century trends.

**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.

**HISN150 Latin American History;  
From Independence to the Present 3 Credits**

This survey course explores the history of Latin America and the Caribbean from 1800 to the present day. Discussion topics will include the 19th century nation-building, caudillismo, 20th century revolutions, modernization, cultural developments, Latin American relations with Europe and the United States, and recent trends. While the experiences of individual countries will be considered, the course will focus on larger political, economic, and social themes that shaped the entire region.

**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

**HISN243 A Twentieth Century Social History  
of the United States through Film 3 Credits**

This course will explore a variety of topics in the social history of the United States from 1900 to the present using non-documentary movies as a historical source. While specific topics and films examined may vary with individual instructors, suggested topics include modernization, the "American Dream," poverty, crime, high society, family life and gender roles, the lives of African-Americans, the deaf, gays and lesbians, youth culture, and baseball. The approach will include: assessing the accuracy of how movies portray various decades and socio-cultural issues, analyzing the themes of films in the context of 20th century history, and evaluating what movies reveal about the attitudes and concerns that were prevalent in the USA at the time they were released. This is a writing intensive course. Prerequisite: ENGN101

**HISN246 Modern America 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.

**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 his-

tory. 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

**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, EDUN205

**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, EDUN205; 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, EDUN205; 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.

### **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 artists' materials, messages and language (i.e. color, line, shape, shade, texture, volume space and composition). Field trips may be part of this

curriculum and students may incur nominal fees.

### **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 music periods. The course offers discussion of the musical style along with the societal and historical significance of the period. Students will also learn to critically perceive musical selections. Field trips may be part of this curriculum and students may incur nominal fees.

### **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

**LIBN296 Liberal Arts Project:  
A Capstone Experience****3 Credits**

The Liberal Arts Project course is a capstone course in the Liberal Arts Degree Program that provides students with the opportunity to integrate critical and analytical skills to evaluate diverse ideas, information, and research. The student-designed project will emphasize the relationships of knowledge and information from the following discipline groups: mathematics/science, social science and behavioral science, English and the humanities, and technology and research. The project may take the form of an extended research paper, a creative project, or even a project to improve the community.

In consultation with the supervising faculty member, the student or a small group of students will design and complete a project that integrates the student learning outcomes for the Liberal Arts Degree Program. Particular attention will be paid to Critical Thinking (including Scientific Methodology, Numeracy Applications, and Information Literacy), Written Communication, and Oral Communication skills. Prerequisite: Completion of 45 credits of course work applicable to the Liberal Arts Associate 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 struc-

tures 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 geni-

tive 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, nonverbal 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 conversation, 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 biophysical 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. NHCTC 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

**MTHN103 Topics in Applied College Mathematics****3 Credits**

This course is designed to expose the student to a wide range of general mathematics. Problem solving and critical thinking skills,

along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved solving applied problems. Topics to be covered include: Number Theory and Systems, Functions and Modeling, Finance, Geometry and Measurement, Probability and Statistics, and selected subtopics related to the student's major field of study. A graphing calculator will be required. **Fulfills mathematics requirement for Automotive Technology, Collision Repair Technology, and Honda Automotive Technology students only.** Prerequisite: Placement Test or MTHN099

**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 expected 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

**ADVANCED 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

**MTTN211 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

**MTTN232 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

**NUNC103 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**

**NURN120 Fundamental Nursing Skills 3 Credits**

NURN120, Fundamental Nursing Skills, is a three-credit, ten hour per week lab/clinical course that prepares the student to deliver safe nursing care under the supervision of a licensed nurse. Skills for basic assessment, management of universal human needs in health and illness, documentation, and medication administration are addressed in this course. Upon completion the student is eligible to seek NH licensure as a nursing assistant. The LPN student may earn credit for this course by satisfactorily completing a challenge exam of specific nursing skills. Prerequisite: PSYN101, SCIN201 Corequisite: NURN130, SCIN202, PSYN201

**NURN130 Concepts for Nursing Practice 4 Credits**

NURN130, Concepts for Nursing Practice, is a four hour/week course that introduces the student to major concepts required as a foundation for further studies in nursing and also serves as a bridge course for the LPN student to pursue studies preparing for RN Licensure. Content includes introduction to nursing; the program's conceptual framework; health field concepts; levels of prevention; systems-based practice; critical thinking; communication; nursing process; health assessment, health care informatics; patient/family education, multicultural practice, meeting needs across the lifespan; management of pain, nutrition, and hydration; and basic concepts of law and ethics as they apply to the practice of nursing. LPNs may earn credit for NURN130 by scoring a minimum of Level 2 on the ATI Fundamentals of Nursing exam. Prerequisite: SCIN202; PSYN201; Corequisite: NURN120

**NURN140 Nursing Care I: Concepts and Skills 8 Credits**

NURN140, Nursing Care I: Concepts and Skills, introduces the care of patients across the life span with health deviations including cardiac, respiratory, metabolic, musculoskeletal, and neurological / mental health deviations. Each health deviation is explored from the dimensions of pathophysiology, pharmacology, and medical-surgical interventions. Concepts introduced in NURN 130, Concepts for Nursing Practice will be applied and further developed throughout the semester. Clinical experience will occur in medical-surgical, psychiatric, and community settings. Prerequisites: NURN120, NURN130, PSYN201, SCIN202; Corequisite: NURN230

**NURN220 Nursing Care II: Concepts and Skills 8 Credits**

NURN 220, Nursing Care II: Concepts and Skills includes care of

patients with health deviations related to cardiac, respiratory, gastrointestinal, hepatobiliary, renal, immune, hematologic, endocrine, oncologic, acid-base, and fluid and electrolyte problems. In addition to the multi-system focus, concepts and skills from the first year will continue to be developed and reinforced. Prerequisites: NURN120, NURN130, PSYN201, SCIN202; Corequisite: NURN230

**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. Prerequisites: NURN120, NURN130

**NURN240 Management of Nursing Care Across the Lifespan 10 Credits**

NURN 240, Management of Nursing Care Across the Lifespan is the capstone course and requires students to apply all previous learning to the care of patients across the lifespan as well as groups of patients in emergent situations. Maternal-child health care will be emphasized as well as new concepts of critical care, community health nursing, leadership and management, health care policy and trends, transition to practice. Prerequisite: NURN220

## **PEACE AND JUSTICE STUDIES**

**PJSN101 Introduction to Peace and Justice Studies 3 Credits**

This introductory course is designed to provide an overview of the nature of concerns about equality that impact a community. The common threads of gender, race, and socio-economic status will be considered throughout the course to demonstrate how social inequality differentiates the value of one group compared to another group.

Through course readings, student-led discussions, and guest speakers, students will examine the most pressing issues in the local community, and they will learn how to translate their knowledge into action as change agents.

A Service-Learning opportunity will be available for students to work with a not-for-profit organization in the community.

**PJSN105 Foundations of Conflict Resolution 3 Credits**

The course offers an introduction to the field of conflict analysis and resolution, and it examines definitions of conflict and diverse views of its "resolution." Thinking about human behavior and social systems is explored as they relate to the origins of conflict and the role of conflict in violent and peaceful social change. Students consider appropriate responses to conflict at interpersonal, inter-group, industrial, communal, and international levels.

**PJSN108 Theories of Conflict and Conflict Resolution 3 Credits**

This course examines major social scientific theories of conflict with an emphasis on the need for theories to inform our ability to resolve conflict. The course weaves together ideas from conventional disciplines with new approaches to the causes of deep-rooted conflict. A major focus in the course is on analysis as a tool. Prerequisite: PJSN105

**PJSN201 Group Facilitation Theory and Practice 3 Credits**

This course develops students' skills in working with groups. The course incorporates theories and models of group dynamics, fa-

cilitation, and group development, as well as workshop development and delivery. This course uses a practice-based approach, including role-playing and workshop presentations.

**PJSN210 Theory and Practice of Mediation**

**3 Credits**

This course examines theories, methods, and techniques of mediation. Students will have the opportunity to demonstrate their knowledge of mediation skills. Prerequisite: PSJN201

**PJSN290 Peace and Justice Studies Internship**

**3 Credits**

The internship for the Peace and Justice Studies Program is a hands-on learning experience that provides an opportunity for students to practice learning outcomes and skills learned in the program under the direct supervision of an on-site internship supervisor.

With the permission of the supervising faculty member, the internship may be arranged at a for-profit or a not-for-profit organization. Prerequisites: Completion of 45 credits of course work applicable to the Liberal Arts—Peace and Justice Studies Associate Degree Program.

**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. Prerequisite or Corequisite: ENGN101

**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 student 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.

### **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 wastage 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: A 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**

### **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

**SCIN141 Introduction to Chemistry 4 Credits**

This introductory chemistry course provides students with conceptual and hands-on experience with fundamental principles of chemicals. Included are topics in atomic structure, chemical bonding, periodic table, solutions, gas laws, acid-base and reduction/oxidation reactions, chemical equilibrium, thermodynamics, and an introduction to organic and bio-chemistry. This course does not fulfill the requirements of General Chemistry I & II or Organic Chemistry I & II.

**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 or Placement Test

**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**

This Anatomy and Physiology I course focuses on the organization of the human body and the complementarity of structure and functions from chemistry of life, cell, and tissues, to several organ systems including integumentary, skeletal, muscular and nervous. These areas will be covered in a series of detailed lectures which are supported by hands-on laboratory experiences, including cytology, histology, physiological experimentation both wet lab and computer-assisted, study of human anatomical models, and dissection of appropriate specimens. Prerequisite: Grade of C or better in High School Chemistry OR SCIN141 Introduction to 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 or SCIN201

**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 Disorders of Articulation 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

### **SPLN 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; Pre-requisite 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; Pre-requisite 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)

### **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.

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**Position to be filled**

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National Certificate-Applied Physics, Birmingham College of  
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# **2009-2010**

## **STUDENT CALENDAR**

### **2009**

<b>August 31</b>	<b>Classes Begin- Fall Semester</b>
<b>September 7</b>	<b>Labor Day Holiday- <i>No Classes</i></b>
<b>September 8</b>	<b>Last Day to Withdraw with Full Refund 16 week classes only</b>
<b>October 17</b>	<b>Fall Open House</b>
<b>November 2</b>	<b>Registration for Spring 2010 Semester begins</b>
<b>November 3</b>	<b>Last day student can withdraw with “W” grade 16 week classes only</b>
<b>November 11</b>	<b>Veteran’s Day Holiday- <i>No Day or Evening classes</i></b>
<b>November 26-28</b>	<b>Thanksgiving Holiday- <i>No classes</i></b>
<b>December 14-18</b>	<b>Final Exams</b>
<b>December 18</b>	<b>Classes End- Fall Semester</b>

### **2010**

<b>January 18</b>	<b>Martin Luther King, Jr./ Civil Rights Day Holiday</b>
<b>January 19</b>	<b>Classes Begin- Spring Semester</b>
<b>January 26</b>	<b>Last Day to Withdraw with Full Refund 16 week classes only</b>
<b>February 15</b>	<b>Presidents Day Holiday- <i>No Day or Evening classes</i></b>
<b>March 15-21</b>	<b>Spring Break</b>
<b>March 27</b>	<b>Last day student can withdraw with “W” grade 16 week classes only</b>
<b>April 5</b>	<b>Registration for Fall 2010 Semester begins</b>
<b>April 10</b>	<b>Spring Open House</b>
<b>April 30-May 6</b>	<b>Final Exams</b>
<b>May 6</b>	<b>Classes End- Spring Semester</b>
<b>May 15</b>	<b>Graduation- 11:00 a.m.</b>



