**Address:**
1066 Front Street,
Manchester, NH 03102-8518
(603) 206-8000 or 1-800-924-3445 (NH only)
Fax Line: (603) 668-5354
Registrar's Fax Line: (603) 206-8287

TDD (Telecommunications Device for the Deaf)
(603) 668-1792
TDD / Voice: Relay
New Hampshire
1-800-735-2964

**Campus Directions**
The campus is located at 1066 Front Street, Rt 3A, which is 200 yards from exit 7, Interstate 293 North (Route 3). Or take Exit 10 from Interstate 93 North or South. At the end of the exit ramp, take a left at the stop sign and continue for approximately two miles. The college driveway is on the right. Be prepared to take a sharp right turn. From Interstate 293 South, take Exit 6, Amoskeag Bridge. Take a right at the end of the exit ramp. Go back over the highway, bear left and follow the signs to get back onto Interstate 293 North. Then get off at the first exit, which is Exit 7.

**Disclaimer**
The information contained in this catalog is to be used as a guide to Manchester Community College for the students, staff members, prospective students and other educational institutions. All information including but not limited to: costs, rules, regulations, program requirements, course content and staff, is subject to change at any time. The college reserves the right to modify aspects of college operations as well as to change tuition and other charges without notice.

For the most current information and course schedules, visit us at www.manchestercommunitycollege.edu

# **Manchester Community College**

## College Vision, Mission, Values

### Vision
Our vision is to be the leading community college that empowers students and inspires their success through exceptional and innovative education.

### Mission
Being responsive to the diverse communities we serve, our mission at MCC is to be an accessible, student-centered, comprehensive community college that promotes and fosters the intellectual, cultural, and economic vibrancy of our region.

### Values Statement
We firmly believe that certain fundamental values characterize who we are and guide us in the accomplishment of our mission and goals. As a college community we value:

- Student success
- Lifelong learning
- Civic knowledge, responsibility and action
- Scholarship, innovation, and creativity
- Open, honest, and civil communication
- Effective use of public funds

### Code of Ethics
Our college decisions, policies, actions and procedures are based on the following ethical principles:

- Responsibility
- Fairness
- Honesty
- Mutual Respect
- Integrity

### Diversity Statement
Recognizing the inherent value and dignity of each person, MCC is committed to valuing, promoting, and supporting diversity within the college and the community it serves.

## Manchester Community College History

New Hampshire's system of post-secondary vocational-technical education developed in response to conditions in New Hampshire following the end of World War II. Recognizing that many soldiers, sailors, and airmen, among others, would be demobilized and in need of retraining for civilian life, two State Trade Schools were developed. Since that time, the Community College System of New Hampshire *(CCSNH)* has grown to seven colleges and several satellite locations throughout the state.

Manchester Community College, founded in 1945, serves the needs of the Merrimack Valley, MCC is governed collectively by New Hampshire's Governor, Executive Council, and System Board of Trustees, and individually by Advisory Committees, a President and a Chief Academic Officer.

The college enrolls about 3,300 students per semester and offers more than 50 degree and certificate programs as well as workshops and professional development programs. The college includes a Center for Academic Planning and Support, a library, state-of-the-art instructional labs, auditoriums and a full-service Childhood Education Center. The college is accessible to people with physical challenges.

Located on 57 acres near the banks of the Merrimack River, north of the city center, MCC offers classes and programs in three major connected buildings and a separate Automotive Training Center, and has ample room for future growth while retaining more than adequate green space and parking. As part of New Hampshire's largest city, the campus is actively engaged in community outreach, and plays an integral role in the increasing ethnic and cultural diversity of the area.

## Table of Contents

## A Message from our President

**Welcome to Manchester Community College!**

For 65 years MCC has been the choice for thousands of students seeking a better life for themselves and their families. As MCC's new president, my goal — shared by everyone here at MCC — is to help you achieve your academic goal. Whether you plan to transfer to a four-year college, upgrade your skills, or begin a new career, our faculty and staff are committed to helping you succeed.

At MCC, you'll meet students from more than 50 countries from all walks of life, but with a common purpose: to acquire the education they need to move ahead in their chosen career. Our graduates are NH's skilled technicians; they are NH's nurses and medical assistants, accountants and teachers; they are the graduates of NH's four-year colleges and universities.

Everyone deserves an opportunity to earn a college degree. Our mission is to help you make the most of that opportunity. I hope to meet you on campus, and wish you the best of luck on your educational journey.

Cordially,

Dr. Susan Huard
President

## Notice of Non-Discrimination
### NON-DISCRIMINATION AND COMPLIANCE

### Non-Discrimination Policy

Manchester 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, disability, veteran status, sexual orientation, or marital status. This statement is a reflection of the mission of the Community College System of New Hampshire and Manchester Community College and refers to, but is not limited to, the provisions of the following laws:

1. Title VI and VII of the Civil Rights Act of 1964
2. The Age Discrimination Act of 1967 (ADEA)
3. Title IX of the Education Amendment of 1972
4. Section 504 of the Rehabilitation Act of 1973
5. The Americans with Disabilities Act of 1990 (ADA)
6. Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974
7. NH Law Against Discrimination (RSA 354-A)

Inquiries regarding discrimination may be directed to Larissa Baia, Manchester Community College, at (603) 668-6706; 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 US Department of Education, Office of Civil Rights, J.W. McCormack Post Office and Courthouse, Room 701, 01-0061, Boston, MA, 02109-4557, (617) 223-9662, FAX: (617) 223-9669, TDD:(617) 223-9695, or Email: OCR_Boston@ed.gov; the NH Commission for Human Rights, 2 Chennell Drive, Concord, NH 03301, (603) 271-2767, FAX: (603) 271-6339; and/or the Equal Employment Opportunity Commission, JFK Federal Building, 475 Government Center, Boston, MA, 02203, (617) 565-3200 or 1-800-669-4000, FAX: (617) 565-3196, TTY: (617) 565-3204 or 1-800-669-6820.

## MCC ALERTS

MCC ALERTS is Manchester Community College's emergency notification system that will help ensure rapid and reliable mass communication to students, faculty, and staff. The MCC ALERT system is designed to communicate with cell phones *(text and voice messages),* landlines, and e-mail systems, should a crisis, emergency situation or weather closure/delay occur on the MCC campus. For more information on MCC ALERTS visit the college website.

# Admission Requirements

MCC is committed to an open enrollment process, welcoming students who may be seeking a degree, a certificate, or coursework for skills or personal enrichment. While some programs have specific requirements for admission, many courses and programs are open to anyone who completes the application process and can demonstrate the ability to benefit from the program.

**The following rules will guide admission to the college:**
• First priority for admission shall be given to residents of New Hampshire.
• Second priority shall be given to students qualifying under the New England Regional Student Program.
• Third priority shall be given to students not qualifying under the New England Regional Student Program or those not domiciled in the state. However, in highly competitive programs with limited enrollment, the Office of Admissions, while working as much as possible within the above parameters, may exercise discretion in admitting those applicants who best fit the needs and expectations of the department, the college and the local community.

**Application Procedures**
All applicants must submit a completed Application for Admission for the program they intend to pursue *(Note: Nursing applicants must submit a separate application for Nursing, even if they have been previously admitted to Liberal Arts or another program)* and pay a $20 non-refundable application fee. It is the applicant's responsibility to ensure that all required documents, including official transcripts, are received by the Office of Admissions on or before the established deadline *(when applicable)*. Incomplete files will not be reviewed for admission.
**Documents should be mailed to:**

<div align="center">

**Manchester Community College**
**Office of Admissions**
**1066 Front Street**
**Manchester, NH 03102-8518**

</div>

All requirements for admission **must be received** by the Office of Admissions **prior to the drop/add deadline of the semester** for which the student intends to enroll. Incomplete applications may be transferred to the following semester. Students with incomplete applications may register for classes as non-matriculating students. Non-matriculating students are not eligible for federal financial aid. This procedure applies to any student seeking admission for a particular semester, including those who are registered for at least one class beginning on the designated start of the semester. Students registered only for alternative semester *(i.e. second 8-week term)* classes will have 8 calendar days from the start of the term to complete their admission for that term.

## First-Time Matriculating Students *(first-time students seeking admission into a certificate or degree program)*
Follow the application procedures outlined above and:
• Submit official transcripts from all secondary institutions previously attended, including proof of completion of high school or its equivalent.
    a) Applicants who have earned a high school equivalency certificate or GED must submit a GED certificate, including scores.
    b) High school seniors must submit final transcripts indicating successful completion of all requirements for high school graduation.
• Meet or exceed all specific program requirements for the selected program of study as outlined in the program description in the curricula section of the catalog.

## Home-Schooled Students
CCSNH encourages applications from students who are home-schooled. While the nature of home schooling is inherently unique to each student, the colleges require 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. Home-schooled students should follow the application procedures outlined above and submit one of the following:
• A letter or other documentation from the student's local school district stating that the student has completed a home school program at the high school level;
• A list of courses taken and grades earned and/or portfolio of work accomplished;
• GED or other testing, if applicable.

## Transfer Students
Follow the application procedures outlined above and:
• Submit official transcripts from the institutions of higher learning previously attended.
• Submit official final high school transcript indicating successful completion of all requirements for high school graduation or its equivalent.
    a) Students with a conferred associate's degree or higher may submit either their college or high school transcripts.
• Meet or exceed all specific program requirements for the selected program of study as outlined in the program description in the curricula section of the catalog.

## International Students
International students seeking F-1 student status must meet or exceed all of the requirements for admission outlined above. Students interested in pursuing a competitive program with limited enrollment should discuss program availability with an admissions counselor prior to applying. In addition to the requirements above, international applicants must also:
• Submit an official English translation of all secondary school and college or university transcripts. The translation must include all courses taken, grading system and grades earned.
• Submit official scores for the Test of English as a Foreign Language *(TOEFL)* if English is not the student's first language. A minimum score of 61 *(internet-based)*, 173 *(computer-based)* or 500 *(paper-based)* is required for admission.
• Submit a copy of the biographical page of a valid passport
• Submit the MCC Certification of Finances Form and supporting documentation demonstrating the availability of sufficient funds to cover out-of-state tuition and fees, books, health insurance and living expenses for at least one year of study. All documents must be in English.
    a) Applicants with dependents *(spouses and/or children)* must show proof of additional funds to cover living expenses for all dependents for at least one year.
    b) Applicants must also provide copies of the biographical pages of valid passports for all dependents.

- Submit a signed affidavit or letter of support from the person who will be financially responsible for the student if the student will not be supporting his/her own studies. The letter must be in English and include the student's and sponsor's names and the amount of money designated for the student's educational and living expenses.
- Submit the student's address in the home country.
- Students applying for F-1 student status who are already in the U.S. must submit appropriate immigration documents indicating their current status, such as a visa.
- International students transferring from another SEVIS-approved institution must also submit a copy of all previous I-20's issued by other institutions, a copy of their I-94 card and a completed Eligibility Confirmation Form for School Transfer for an F-1 student *(available from the Office of Admissions).*

International students must be accepted into a program of study and all required documentation must be received prior to issuance of an I-20 form. International students are not eligible for financial aid and are required to pay out of state tuition and fees.  In order to maintain F-1 student status, international students are required to register for a minimum of 12 credit hours each semester, excluding the Summer.  Upon arrival in the US, students are required to meet with the International Student Counselor in the Office of Admissions.  For information on the TOEFL exam contact:

**TOEFL Services**
**Educational Testing Service**
**P.O. Box 6151, Princeton, NJ 08541-6151, USA**
**1-609-771-7100 or 1-877-863-3546    www.toefl.org**

## Readmit Students
Matriculated status is maintained by successfully completing one course per academic year. Students unable to maintain this requirement who wish to re-enroll must seek readmission. Students are advised that they will have to abide by any new admission requirements for specific programs. Students should also note that there is no guarantee of readmission, as courses or programs with limited enrollments may not be available. Students seeking readmission must:
- Submit a completed Application for Admission and pay a $20 non-refundable application fee.
- Submit additional documentation as required by the Office of Admissions.
- Meet or exceed all specific program requirements for the their program of study as outlined in the program description in the catalog.

## Non-Matriculating Students
Non-matriculating students are individuals interested in taking a limited number of courses without pursuing a degree or certificate program. Non-matriculating students are not eligible for financial aid. Those interested in registering as a non-matriculating student must:
- Meet any prerequisites for the selected coursework.
- Pay and register for classes.

## Placement Testing
Prior to registering for English and/or math courses, students must first take a placement tests in reading, math, writing and computer skills.  This assessment will be used to place the student in the appropriate college or foundation course. Placement tests are also required to register for/ be admitted to certain courses and programs. See the Academic Placement Policy discussion in this catalog for details. Students will not be denied admission based on placement test scores. However, students may be required to successfully complete a developmental skills course prior to beginning coursework in the program of study to which they have been admitted.

## Tuition Deposits
Students admitted into a program are required to submit a non-refundable advanced tuition deposit of $100 prior to registration. This deposit allows students to register for classes and is applied towards tuition charges. The deposit confirms that the student has accepted the college's offer of enrollment in the chosen program. Registrations are processed in the order in which they are received until seats are filled.  Your deposit is not a guarantee of enrollment in specific courses.

## Orientation Fee
All incoming matriculated students will be charged an orientation fee of $30 to cover costs directly related to the orientation program.

## Class Schedules
Class schedules noting specific times and days are developed on a semester-by-semester basis and are published in the Semester Course Scheduler, available online. Classes are scheduled during the day, evening, weekends and online. Students completing program requirements may be asked to take classes at any of those times.

# Financial Aid

## What is Financial Aid?
Financial aid is money for direct and indirect college expenses. This money comes in three forms:
• Grants which **DO NOT** have to be repaid
• Loans which **DO** have to be repaid
• Part-time jobs from which the student earns an hourly wage also known as Federal Work Study.
Students who are awarded financial aid may receive any or all of these forms of aid.

## Financial Aid Funds Defined
The college's financial aid program assists students who are unable to meet their expenses entirely from their own family resources. Students must be enrolled in an eligible degree or certificate program in order to be considered for financial assistance, and must meet both qualitative and quantitative standards for satisfactory progress. These standards are described in the Financial Aid Handbook. Completion of the Free Application for Federal Student Aid form *(F.A.F.S.A.)* is required for consideration for Pell Grants, Perkins Loans, Work Study, Supplemental Educational Opportunity Grants, Stafford Loans and the New Hampshire Incentive Program. The application is available in the college's Financial Aid Office, at local high schools, and online at **www.FAFSA.ed.gov.**

# Sources of Financial Aid

## Pell Grant
The Pell Grant is a federally-funded program which assists students with the cost of attending college. A Pell Grant does not have to be paid back. To receive a Pell Grant, the student must be an undergraduate who does not already have a bachelor's degree. Awards are granted on a sliding scale ranging from $278 to $5,550 depending on the family financial position.

## Supplemental Educational Opportunity Grant *(SEOG)*
SEOG awards are made available to students who demonstrate exceptional financial need. A SEOG award does not have to be paid back. To receive a SEOG, a student must be an undergraduate who does not already have a bachelor's degree. Awards at this college range from $100 to $300 per year.

## Perkins Loan
Perkins loans are made available to students who demonstrate financial need and are enrolled in at least nine credits per semester. Perkins Loans are low-interest *(5%)* loans made through the Financial Aid Office at the College. Students may borrow up to $3,000 per year, depending on the availability of federal funds. Repayment begins and interest accrues nine months after the date of graduation.

## Federal Work-Study *(FWS)*
The Federal Work Study Program *(FWSP)* gives the student an opportunity to earn money for educational purposes on a part-time basis as well as a way to develop skills that are important in a workplace environment. Typically, students work in a variety of college offices within a support role under the supervision of a faculty or staff member. Some off-campus positions are also available. Whenever possible, students are placed in roles that complement their program of study. Students are paid at least the current minimum wage. Students who qualify for FWS are required to perform the assigned work in a responsible and professional manner. A confidentiality agreement must be signed for all work-study positions. In most cases, work-study hours are limited to a 12-15 hour work week. Eligible students must demonstrate need and be enrolled in at least six credits per semester.

## Federal William D. Ford Direct & Stafford Loans
Stafford Loans are low-interest loans made to the student by a lender. Freshmen may borrow up to $5,500 per academic year; seniors may borrow up to $6,500 per academic year. Repayment begins six months after the date of graduation.  Eligible students must demonstrate need and be enrolled in at least six credits per semester.

## New Hampshire Incentive Program *(NHIP)*
NHIP provides grants for New Hampshire residents attending a college within or outside the state of New Hampshire. Applicants must be at least half-time students and must demonstrate financial need. There is an early application deadline date of **May 1** each year.

## Federal William D. Ford Parent Plus Loans
Federal Loans for Undergraduate Students are meant to provide additional funds for educational expenses. These loans are made to parents of undergraduate, dependent students. Parents of dependent undergraduates may borrow up to a student's cost of attendance less estimated financial assistance. The interest rate for these loans is variable and set annually not to exceed 9%. Interested parents will be required to apply for this loan. This loan is credit based.

## Alternative *(Private)* Loans
Some lenders may offer private, non-federal educational loans for students. These loans are credit based and have various criteria in order for a student to be considered eligible. Please inquire about these loans at the Financial Aid Office.

## Student Eligibility
To receive aid from the student aid programs, you must:
• Have financial need, with the exception of some loan programs.
• Have a high school diploma, or a General Education Development *(GED)* Certificate.
• Be accepted and enrolled as a matriculated student.
• Be working toward a degree or a certificate in a financial-aid-eligible program. Check with the Financial Aid Department to determine if your program is eligible.
• Be a U.S. citizen or eligible non-citizen.
• Have a valid social security number.
• Return all required documentation to the Financial Aid Office.
• See Financial Aid Funds Defined to ensure you meet all criteria for loan programs.
• Maintain satisfactory academic progress. *(See policy below)*

The Higher Education Act *(HEA)* and the Department of Post-Secondary Community Technical Education require that students maintain satisfactory progress in the course of study they are pursuing in order to receive financial aid under Title IV of the HEA. Satisfactory progress is based on quality and quantity of performance. For specific information regarding this policy, please refer to the Financial Aid Handbook.

## Financial Aid Satisfactory Academic Progress Policy
The Financial Aid office is required by federal regulations to periodically review financial aid recipients to ensure that they are making academic progress towards the completion of their program of study.

Satisfactory academic progress 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 institution.

## Qualitative Standard

| Cumulative GPA Component | Must have earned the minimum published CGPA at the published intervals. |
|---|---|

## Quantitative Standard

| Completion Rate Component | Must complete more than 67% of the credits attempted |
|---|---|
| Maximum Timeframe Component | Can receive financial aid for up to 150% of the number of credits |

In general, coursework that is taken while you are attending MCC that applies to your academic program is considered when reviewing your 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 GPA Component | Completion Rate Component | Maximum Timeframe Component |
|---|---|---|---|
| Regular courses in your program of study | yes | yes | yes |
| Repeat Courses | yes | yes | yes |
| Transfer Credits | no | no | yes |
| Consortium Credits | no | yes | yes |
| Developmental/ Remedial/ESL | yes | yes | yes |
| Incompletes | yes | yes | yes |
| Audit Courses | no | no | no |
| Credit by Examination | no | no | yes |

## Qualitative Standard
### Cumulative GPA Component

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

| Total Credits Earned toward Program | Minimum Cumulative Grade Point Average Required for the Program | |
|---|---|---|
| | Certificate Diploma | Associate |
| 0-13 | 1.50 | 1.50 |
| 14-27 | 2.0 | 1.70 |
| 28-40 | | 1.80 |
| 41+ | | 2.0 |

## Quantitative Standard
### Completion Rate Component

A student must successfully complete more than two-thirds *(66.66%)* of the total credits s/he attempts throughout 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 or 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.*

## 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 in which the student did not receive FSA funds will be included in the review. Additionally, periods for which the student was granted academic amnesty will be included in the review.

## Satisfactory Academic Progress Review Process *(SAP)*

| Question | Answer |
|---|---|
| When is my academic progress reviewed? | At the end of each semester |
| Are there any probationary periods? | Yes, Probation and Final Probation |
| Is there an appeal process? | Yes |
| Can you regain financial aid eligibility once you lose it? | Yes |

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, s/he 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 SAP standards, s/he may be placed on SAP final probation unless otherwise determined by the Financial Aid Office. Students placed on SAP final probation will retain their eligibility for Student Federal 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, s/he 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, s/he will no longer be eligible to receive federal student aid at the institution until such time that s/he is able to meet the standards of SAP.

## Repeat Courses

Only the most recent grade for a course that has been repeated will count towards a student's CGPA. Therefore, grades from prior attempts will be excluded from the student's cumulative CGPA. However, all attempts including the most current will be included in the calculation for the completion rate and maximum timeframe components. Financial Aid will cover a repeated course only when it is repeated to replace an unacceptable grade as determined by a specific course and/or major.

## Transfer Credits

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

## Consortium Credits

All courses taken at an institution other than your 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 cumulative CGPA component.

## Developmental / Remedial / ESL Courses

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

## Incompletes

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

## Audit Courses

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

## Credit By Examination

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

## Appeal Process

A student who becomes ineligible for federal student aid due to not meeting the financial aid standards of satisfactory academic progress may appeal for a review of that determination. A student who believes s/he has extenuating circumstances that affected his or her ability to progress satisfactorily should appeal in writing within 30 days of the date of the letter indicating a loss of financial aid eligibility. The letter should be addressed to the Financial Aid Appeals Committee and be submitted to the Financial Aid office. A successful appeal may preserve the student's eligibility for federal student aid in the following semester.

## Change Of Program

A student who changes his/her academic program may request an appeal in that determination if s/he has changed programs while enrolled at his/her current college. If this appeal is taken up then only those courses applicable to the new program will be evaluated for the Completion Rate and CGPA components. However, all courses attempted will be evaluated for the Maximum Timeframe component. If under these circumstances the student is making satisfactory academic progress, the student will regain eligibility for student aid. If under these circumstances the student is not making satisfactory academic progress, the student will not regain eligibility for student aid at this time.

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

## How To Apply For Federal Student Aid

To apply for a PIN number go to www.pin.ed.gov *(needed to sign FAFSA on the web)*

- FAFSA on the web *(This takes up to 2 weeks to process after submitted to the Department of Education)*
- To ensure that you have enough time to complete the Financial Aid process before payment/payment arrangement is due *(two weeks prior to class start)*, please start the Financial Aid process 8 weeks before classes commence. If your financial aid process is not complete by the payment/payment arrangement deadline, you will be responsible for all charges and will be reimbursed once your financial aid has been awarded/disbursed to your student account.

# Tuition Rates

**In-State Students -** *(New Hampshire Residents)* **$195/credit**

**New England Regional Students** - *(CT, MA, ME, RI, VT)* **$293/credit**

**NERSP Policy:** All matriculated New England students *(Maine, Vermont, Massachusetts, Connecticut and Rhode Island)* will be charged NERSP tuition rates for MCC day classes. All other out-of-state students will pay out-of-state rates for day courses. New Hampshire residents will always pay the in-state rate. All students will be charged the same rate for evening, weekend, and online courses.

**Out-Of-State Students / International Students -  $445/credit**

* The tuition rate is subject to the approval of the Board of Trustees and is subject to change without notice.

**Fees (**Required*)*

| | |
|---|---|
| Application Fee | $20.00 |
| Academic Instruction Fee | $60.00 per lab hour |
| Comprehensive Fee | $6.00 per credit |
| Graduation Fee | $75.00 |
| Orientation Fee | $30.00 |
| Placement Test *(Accuplacer)* | $20.00 |
| Tuition Deposit | $100.00 |

**Other Fees**

| | |
|---|---|
| Challenge Exam Fee | $25.00 per credit |
| CLEP Exam | $15.00 |
| ID Replacement | $10.00 |
| Liability Insurance | $20.00 |
| Library Fine | $ 0.25 per day/item |
| Nursing Clinical Surcharge | $350.00 per semester |
| Nursing NLN Entrance Exam | $40.00 |
| Nursing Standardized Testing Fee | $105.00 |
| NSNA Membership/year | $25.00 |
| Parking Fine | $5.00 - $25.00 |
| Payment Plan Service Fee | $25.00 |
| Proctor Exam *(Non MCC students per exam)* | $50.00 |
| Returned Check Fee | $25.00 or 5% check's face value plus any bank fees |
| Transcript Fee | $3.00 |
| Transcript Faxed Fee | $8.00 |

**Books and Supplies** *(Estimated)*

| | |
|---|---|
| Texts and Writing Materials | $800.00 per semester |
| Automotive Tools and Materials | $3,000.00 |
| HVAC Tools | $1800.00 |
| Nursing Uniforms and Supplies | $300.00 |

# Payment

## Payment of Tuition Deposit
Applicants accepted as students must pay a non-refundable tuition deposit of $100 upon notification of acceptance. The deposit will be applied to the first semester's tuition.

## Payment of Tuition and Fees
Billing for tuition and fees is coordinated through the college Bursar's Office.  Bills are mailed approximately 30 days prior to the semester due date.  Payment or arrangement for payment must be made two weeks prior to the start of the semester.  For classes that begin outside of the regular semester such as Winterim and second 8-weeks, payment must be made three business days prior to the start of the section. For late registration, payment in full must be made upon registration.  Cash, check, Visa, MasterCard, and Discover are accepted as payment.

Students awaiting scholarships or financial aid awards to cover tuition must have the appropriate paperwork completed by the semester due date. To be eligible for deferment, a financial aid award must be awarded and accepted by the semester due date.

Interest free, monthly payment plans are available online each semester through Nelnet Business Solutions.  Please access the e-Cashier link on our website or contact the Bursar for details.

If payment or arrangement for payment is not made by the semester due date, students may be administratively withdrawn.

**NOTE:**  A student may be academically withdrawn later in a semester and will remain responsible for all tuition and fees.

All tuition and fees must be paid prior to the issuance of transcripts, grade reports, professional certificates, certificates and degrees. Students may not register for next semester unless tuition and fees are paid in full.

## Academic Instruction Fee
A fee will be charged for all Laboratory/Clinic/Practicum/ or other similar experiences. This fee is calculated by subtracting the number of lecture hours from the number of credit hours and multiplying the remainder by $60 for each course. This fee will be added to the normal tuition charge for that course.

**EXAMPLE:**
**BIOL110  A&P I**  *(This fee will be charged to all students with no exceptions.)*

| Lec | Lab | Credit |
|-----|-----|--------|
| 3 | 3 | 4 |

*(4 credits - 3 lecture hours = 1 x 60 = $60)*

## Comprehensive Student Services Fee *(CSS)*
$6 per credit - This per credit fee is charged for every credit regardless of the number of credits taken. Online courses will be assessed a CSS fee.

## Collection Clause
The following clause is included on college forms, with areas for student signature, signifying their understanding of their financial obligations.

*"I understand by registering for courses at MCC, I am financially obligated for ALL costs related to the registered course(s). Upon a drop or withdrawal, I understand 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 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 cost to my existing account balance."*

## Credit By Examination
A fee of $25 per credit, plus all direct costs associated with providing a laboratory portion of an exam, will be charged to a student for Credit by Examination.

## Library Fines
Students will be assessed a fine of $0.25 per item/per day for all overdue library materials.

## Nursing Clinical Surcharge
All nursing students taking clinical courses will be charged a nursing clinical surcharge of $350 per semester. This surcharge is designed to assist in covering the increased expenses associated with clinical classes.

This fee is in addition to the lab fee.
**Explanation:** The New Hampshire Board of Nursing adopted a change in the chapter 600:11 of administrative rules. This chapter dictates the number of students that may be supervised by one faculty member in a clinical setting. The new rule changed the student/faculty ratio from 10:1 to 8:1, which has impacted clinical supervision costs. The Board of Nursing governs the instruction offered to nursing students, and the Community Colleges must comply with their rules which took effect June 26, 1998.

## Orientation Fee
Incoming matriculated students will be charged a non-refundable orientation fee of $30.

## Protested Checks
A fee of $25 or 5% of the face value of the check, whichever is greater, plus any bank fees, will be charged for any check protested or returned for non-sufficient funds.

## Senior Citizen Tuition
Senior citizens *(65 or older)* pay only half tuition on a space-available basis for credit courses. They are also responsible for the comprehensive student service and the academic instruction fees. Eligibility requires New Hampshire residency. Senior citizens will pay full tuition for non-credit courses and workshops.

## Summer Semester *(where applicable)*
Students will be charged the applicable tuition rate on a per credit basis for any program-required coursework over a summer semester.

## Veterans
The Registrar verifies veteran registration two weeks after classes begin. Veterans are responsible for payment of tuition and fees pending the receipt of benefits.

# Tuition Refund Policy

## Credit Courses
Students who officially withdraw from the college or an individual course by the end of the eighth calendar day of the semester will receive a 100% refund of tuition, less nonrefundable fees.  This policy applies to all semester lengths and alternative semester formats. Students in classes which begin after the designated start of the semester *(e.g., a mid-semester start)* will have eight calendar days from the designated start of the alternative semester.
**Exception:** Students in courses that meet for two weeks or fewer must drop the course by the end of the first day of the class to get a 100% refund. By MCC policy, no refunds will be granted after that date. Non-refundable fees are defined as advance tuition, application fees and orientation fees.  All other fees are considered refundable. This includes, but is not limited to, the comprehensive student service fee.

The College President or designee may grant a tuition refund or tuition credit under extenuating circumstances on a case-by-case basis, such as military activation, administrative error, or documented long term illness. Appeals regarding tuition refunds should be directed to the business office in writing. In order to receive a tuition credit, supporting information such as physician's note, hospital confirmation, military assignment, etc., must be provided. Students wishing to be considered for an exception must still compete the add/drop form.

## Non-Credit Courses

Students registered for non-credit workshops and courses must withdraw in writing at least three days prior to the first workshop session in order to receive a full refund of tuition and fees.

## Return of Title IV Funds: Mandated by Law

Students who withdraw from school before the 60% point in a semester will have to repay a portion or all of their Federal Pell Grant, Federal SEOG, and Federal Perkins Loan funds to the U.S. Department of Education. In terms of Federal Family Education Loans *(Stafford student loans)*, the unearned portion of the loan money will be returned to the student's lender. The exact amount required to be returned will vary, depending on the amount of grant and loan money the student received and at what point in time the student withdraws from the college.

In addition, the student will be liable for the balance owed the college for tuition, fees and if applicable, room and board. The student will receive a revised statement of account for the expenses incurred, which will include the reduction and/or loss of Federal Title IV funds.

**NOTE:** Federal Stafford Loans *(FFELP)*. If a student is in the first year of an undergraduate program, is a first-time borrower under the FFEL Program *(Stafford Loan)*, and withdraws from the college prior to 30 days into the term, the student becomes **INELIGIBLE** for the Stafford Loan. Students who choose to withdraw from the College must complete a College Withdrawal Form. This form must be signed by the student a various campus offices and then be returned to the Registrar's Office.

# Academic Policies

## I. Degree Requirements
## Associate of Arts Degree *(A.A.)*

Programs leading to this degree provide students with continuous education, career mobility, and full participation in community life. The Associate in Arts degree offers the equivalent of the first two years in a four-year Baccalaureate program.

The program is consistent with the objectives to provide an educational background that is broad enough for the student to continue his/her education and training according to their and society's changing needs, and to provide an educational experience that ensures flexibility of occupational choice. It also serves students who plan on directly entering the workforce or enhancing their career mobility. The degree provides a planned sequence of arts and sciences courses that give students the core competency skills required by today's businesses, as well as the ability to learn how to learn, thereby enhancing workers with flexibility and retraining for new and unanticipated application of knowledge and skills.

The Community College System of New Hampshire offers two types of Associate in Arts degrees; one which focuses on a general liberal arts education and the other which is developed for specialized transfer designed by the offering college. The Associate in Arts Degree program requires a minimum of 64 credits. Remedial and developmental work does not count towards degree completion.

## Associate in Arts Degree - general liberal arts education

*(See Program of Study section within Liberal Arts for specific MCC degree requirements.)*

| | |
|---|---|
| English Composition | 3-4 credits |
| English Electives | 3-4 credits |
| Foreign Language/Humanities/Fine Arts | 9 credits |
| Mathematics | 6-8 credits |
| Lab Science | 8 credits |
| Social Science | 9 credits |
| Liberal Arts Electives | 15 credits |
| Open Electives* | 9-12 credits |
| **Total Credits** | **64 credits** |

* A computer literacy course may be included within the open elective area.

## Associate in Arts Degree - specialized transfer

MCC offers specialized Liberal Arts transfer degrees in Business and Education. *(See the Program of Study section for specific degree requirements.)*

| | |
|---|---|
| English Composition | 3-4 credits |
| English Electives | 3-4 credits |
| Foreign Language/Humanities/Fine Arts | 9 credits |
| Mathematics | 6-8 credits |
| Lab Science | 8 credits |
| Social Science | 9 credits |
| Electives in specialized area of study | 20 credits |
| Liberal Arts or Open Electives* | 2-5 credits |
| **Total Credits** | **64 credits** |

* A computer literacy course may be included as an open elective area.

## Associate in Science Degree *(A.S.)*

The minimum number of credits for the Associate in Science Degree is 64. Remedial and developmental work does not count towards degree completion.
- Major: Every A.S. Degree program shall have a major consisting of a minimum of 32 credits in program specific courses.
- Concentration: The A.S. Degree may have concentrations, which are curricula generally consisting of a minimum of 20 credits of related/sequential course work. Students may choose among two or more of such course groupings for a specialized focus.
- General Education: A minimum of 24 credits in general education.

Courses fall into the areas as follows:

| | Minimum |
|---|---|
| (1) English Composition and Literature or Communication | 6 credits |
| (2) Science | 3-4 credits |
| (3) Math | 3 credits |
| (4) Social Science | 3 credits |
| (5) Humanities/Fine Arts/Foreign Language | 3 credits |
| (6) Liberal Arts electives | 6 credits |
| **Total credits in General Education area** | **24-25 credits** |

## Associate in Applied Science Degree *(A.A.S.)*

The minimum number of credits for the Associate in Applied Science is 64. Remedial and developmental work does not count towards degree completion. The degree emphasizes specific outcomes designed to meet competencies required for direct entry into employment and to provide a basis for transfer, at a minimum, of the general education component of the curriculum.

Although Associate in Applied Science *(A.A.S.)* degree programs are designed for direct entry into the workforce, they cannot be considered terminal. In addition to the necessity for lifelong learning due to rapidly changing technologies, students can expect to make several career changes during their lifetime. A.A.S. programs do not have a directly related occupational-specific curriculum upper-division component. It should be noted, however, that some bachelor's degree institutions have developed upper-division programs to recognize this degree for transfer purposes.

The A.A.S. Degree programs shall provide:
- A minimum of 32 credits of specialized study in courses clearly identifiable with technical skills, proficiency, and knowledge required for career competency
- A minimum of 21 credits in General Education. Courses fall into the following areas:

| | |
|---|---|
| (1) English Composition and Literature or Communication | 6 credits |
| (2) Science | 3-4 credits |
| (3) Math | 3 credits |
| (4) Social Science | 3 credits |
| (5) Humanities/Fine Arts/Foreign Language | 3 credits |
| (6) Liberal Arts electives | 3 credits |

## Additional Associate Degrees

Students may earn additional Associate degrees either by concurrent completion of the requirements of the several degrees or by subsequent study after the first degree is received. The requirements for earning additional degrees are:

• Complete all requirements of each program of study, including general education requirements not in common with the additional program*(s)*, and
• Earn a minimum of 15 additional credits at the college beyond those required for the first and subsequent degrees.

## Student Learning Outcomes

Manchester Community College has identified competencies which must be achieved by students in each degree program. Students will be awarded the Associate Degree upon completion of academic requirements and demonstration that those required program competencies have been achieved.

## II. Professional Certificate Requirements

A Professional Certificate requires completion of a minimum of 32 semester hours of credit to develop skills in an occupational field and a minimum of 12 General Education credits. Each is designed to facilitate transfer into an Associate Degree if the student decides to continue.

## III. Student Academic Classifications

Each student is expected to demonstrate orderly progress in completing his/her educational objective at MCC. To help clarify each student's status at MCC, students are assigned to one of the following categories.

• **Full-time student** – a person who is enrolled in 12 or more semester credit hours.
• **Part-time student** – a person who is enrolled in fewer than 12 semester credit hours.
• **Matriculated student** – a person who has applied for admission and been accepted into a degree, certificate, or professional certificate program. A matriculated student may attend either full or part time but must take at least one course per academic year to maintain his/her matriculated status. A student who fails to maintain matriculated status may be required to reapply for admission and meet any new academic requirements in force at that date. Only matriculated students may:
  a. enroll full time;
  b. apply for financial aid or scholarships;
  c. challenge out / test out of courses;
  d. be assigned an academic advisor; be awarded a degree, certificate, or professional certificate, and
  e. receive priority placement in classes *(non-matriculated students will be admitted on a space-available basis).*
• **Non-matriculated student** – a student who is taking credit or non-credit courses but is not enrolled in a degree, certificate, or professional certificate program. Students are encouraged to matriculate in order to secure the privileges and protections offered to matriculated students.

## IV. Academic Record
## Attendance Policy

It is the responsibility of MCC students to attend all classes, laboratory sessions, and clinical/co-op affiliations. Students must recognize that absence will interfere with academic success in their program of study. The instructor will be responsible for informing students of the attendance policy at the beginning of each course.

MCC requires faculty to verify student attendance twice within a term: at the first class meeting of each term and at the conclusion of the Add/Drop period.

MCC requires an instructor have a published attendance policy. When applicable, the instructor is required to formally withdraw any student who has violated the instructor's attendance policy at any time during a term.

Once admitted as an audit, the student may not change to credit status; likewise, a student registered for credit may not change to audit status.

## Auditing Courses

Under the Audit policy, students may enroll in courses which provide an opportunity to learn more about the challenges of college work, explore a discipline of interest, refresh prior learning, or supplement existing knowledge. Typically, a student attends lectures, seminars and/or lab, but does not complete graded assignments. When enrolled as an audit, the student will not be given a final grade nor will credit towards graduation be given for the course *(the academic transcript will reflect AU for the course).* Students must pay full tuition for the course. Financial Aid does not cover costs for an audited course.

Not all courses can be taken for audit, and entry into a course as an auditing student is by permission of the instructor. A student must complete a registration as an audit during the first week of classes.

## Change of Program

Students wishing to change their major should submit a Change of Major Form. Credit will be transferred only for those courses that apply to the new program. Some programs with limited enrollment may not be available.

## Changing Course Requirements

MCC is constantly reviewing and upgrading the content of programs to ensure that each graduate receives adequate knowledge and training to perform competently in a chosen technical field. To accomplish this, the college reserves the right to modify course requirements based on its educational and professional objectives and the needs of its students.

## Course Repeat

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

A student is only allowed to repeat a course twice. Third and subsequent attempts to repeat a course will require the approval of a student's faculty advisor and the course instructor and/or the Office of Academic Affairs.

**Credit Hour Guidelines**
• A credit hour shall be the equivalent of one (l) hour of work per week for a 16-week semester.

• A semester credit hour shall be comprised of the following:
  • Class;
  • Laboratory;
  • Clinicals;
  • Internships; or
  • Co-ops.

• A credit hour shall be allocated by the following:

| | Contact hours per week | Contact hours. per semester *(based on min. 15 wk. semester)* |
|---|---|---|
| Class | 1 | 15 |
| Laboratory | 2 or 3 | 30-45 |
| Clinical | 3 to 5 | 45-75 |
| Practicum, Fieldwork | 3 | 45 |
| Internship | 3 to 6 | 45-90 |
| Co-op | Variable by Dept. | Variable by Dept. |

One instructional hour shall be equal to fifty *(50)* minutes.

## Grading

Students are assigned grades based upon evaluations of their work. Grades are given at the end of each semester and are based on criteria listed on an individual instructor's syllabus, but generally include quizzes, tests, projects, papers, and participation. Standards for grades are listed on the next page.

| Letter | Numerical Equivalent | Letter | Numerical Equivalent |
|--------|---------------------|--------|---------------------|
| A | 4.0 | Administrative Failure | 0.0 |
| A- | 3.7 | Audit | 0.0 |
| B+ | 3.3 | Continuing Study | 0.0 |
| B | 3.0 | Incomplete | 0.0 |
| B- | 2.7 | No Pass | 0.0 |
| C+ | 2.3 | Pass | 0.0 |
| C | 2.0 | Withdraw | 0.0 |
| C- | 1.7 | Withdraw Failing | 0.0 |
| D+ | 1.3 | Withdraw Passing | 0.0 |
| D | 1.0 | | |
| D- | 0.7 | | |
| F | 0.0 | | |

## Explanation of Grades: *(AF, AU, CS, I, NP, P, W, WF, WP)*

## AF- Administrative Failure

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. AF is calculated in the GPA as an "F."

## AU- Audit

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. ***See Auditing Courses.***

## CS- Continuing Study

This grade allows a student to re-register for a developmental course if competencies have not been met by the end of the course. It is intended for students who have demonstrated progress and a commitment to succeeding in the course, but who need more time to achieve competencies. The CS grade does not affect the student's GPA.

## I- Incomplete

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 Incomplete Grades.***

## NP- No Pass
Unsatisfactory work; not calculated into the GPA.

## P- Pass
Not calculated into the GPA.

## W-Withdrawal

Student initiated withdrawal from a course at any time prior to completion of the drop deadline *(60% of the course)*. Does not affect GPA.

## WP-
Student initiated withdrawal from a course after the drop deadline *(60% of the course)* when the student has a passing grade at time of drop, as determined by the instructor. Does not affect GPA.

## WF-
Student initiated withdrawal from a course after the drop deadline *(60% of the course)* when the student has a failing grade at time of drop, as determined by the instructor. The WF grade is calculated in the GPA as an "F."

## Grade Point Averages

Scholastic standing at the end of each semester is determined via the grade point average *(GPA)*, computed by dividing total semester points *(grade equivalent multiplied by credit hours)* by total credits attempted.

The cumulative grade point average *(CGPA)* is determined at the end of the second and subsequent semesters by dividing cumulative points by the total credit hours attempted, taking into account all previous work completed. Refer to the online Student Handbook for additional information pertaining to calculating or determining GPAs and CGPAs.

## Incomplete Grades

An Incomplete Grade *(I)* indicates that a student has not completed a major course assignment *(usually a final exam or culminating final assessment)* due to extraordinary circumstances, such as serious illness, death in the family, etc. The grade is applied only in those instances where the student has a reasonable chance of passing. It is not used to give an extension of time for a student delinquent in meeting course responsibilities.

The work must be completed by the student through formal arrangement with the instructor no later than:
• the end of the third week in the spring semester for a grade issued in the fall semester;
• the end of the third week in the fall semester for a grade issued in the summer term;
• three weeks from the earliest start date of the summer term for a grade issued in the spring semester.

Should the student fail to complete the work within the designated period, the grade will automatically become an F. Exceptions to the above deadlines may be made by the Vice President of Academic Affairs or his/her designee. "I" grades will not be included in the computation of the Grade Point Average. An "I" grade may affect a student's financial aid. Students should contact the Financial Aid Office for further information.

## Grade Changes

If an instructor deems it necessary to change a student's grade, a Grade Change Form must be submitted to the Registrar's Office. Grade changes will only be allowed until the end of the semester following the assignment of the original grade.

## Matriculation

A student who has taken individual courses and then decided to work for a degree should commit to a specific program and formally matriculate after proper counseling prior to the satisfactory completion of 9 semester hours in appropriate courses.

A student who has completed more than 9 semester hours may find that not all of them can be applied toward the degree he/she seeks; hence, the importance of matriculating before completing 9 semester hours.

## Residency Requirement

The minimum academic residency credit requirement for an associate degree is 16 credit hours. A minimum of eight credit hours of the courses taken to meet the requirement shall be advanced courses in the student's major study. Advanced courses carry a course number of 200 or higher. Students may not test out of courses in order to fulfill their residency requirement.

To establish residency in an institution, the following is required:
• For an Associate Degree, a minimum of 16 semester credits must be completed either as a full-time student, a continuing education student, or a combination of each from credit courses offered directly by and under the full control of MCC. At least eight credits must be taken in advanced level courses in the student's major. Advanced courses carry a course number of 200 or higher.  Students may not test out of courses in order to fulfill their residency requirement.
• For a Professional Certificate, a student must complete at least nine credits or 25% of the credits, whichever is larger, required for the Professional Certificate, at MCC.
• For a Certificate, a student must complete at least six credits or 25% of the credits, whichever is larger, required for the Certificate at MCC.

## Students' Bill of Rights

The college shall provide an environment that fosters academic freedom, ensures the integrity of the academic process, and protects the principle of intellectual diversity. The classroom is a forum for exposing students to scholarly viewpoints. Students will be graded not on the basis of their political, religious or ideological beliefs, but on the basis of their reasoned answers and appropriate knowledge of the subjects and disciplines they study and in accordance with the academic standards set forth in the course syllabus.

## V. Adding/Dropping Courses

Before adding or dropping a class or classes, students must consult their Academic Advisor and/or the instructors responsible for those classes.

### Adding a Course

A course may be added at any time prior to the start of the second week of the semester or other prorated timeline. Students remaining in the same course who wish to change their section must do so through formal notification to the Registrar's Office by using the **ADD/DROP form** with the instructor's approval.

### Adding a 100% Online Course

A student may add a 100% online course up to the official start date of the semester. Once the semester has started, a student may add a 100% online course only with the permission of the instructor.

### Maximum Enrollment for Online Courses

The maximum enrollment for a 100% online course is 20 students. Enrollments in excess of 20 students may be done only after written consent of the instructor and the Registrar's Office.

### Dropping a Course

The student should initiate the official drop procedure after consultation with his/her faculty advisor. Simply ceasing to attend classes or notifying the instructor does not constitute officially dropping a course.

Though there may be financial or academic penalties involved, courses may be dropped at any time, but only through formal written notification to the Registrar's Office and completion of the following procedure:

Before officially dropping a course, the student should first discuss the matter with the instructor and faculty advisor. If, after discussing the matter with both individuals, the student decides to drop, an **ADD/DROP** form should be obtained from the Registrar's Office. The form must be completed by the student and submitted to the Registrar's Office. Any student who officially drops from a course...
- any time prior to the end of the eighth calendar day of the semester, will receive no grade in the course, and no notation will appear on his/her academic record.
- up to the end of the 10th week of a semester will receive a *"W"* grade on his/her transcript.
- up to 10 days prior to the beginning of the final exam period, will receive Withdraw/Pass *(W/P)* or Withdraw/Fail *(W/F)* on the transcript. The W/P is not calculated in the GPA. The W/F is calculated in the GPA as an *"F."*

When there are fewer than 10 class days remaining to the beginning of the final exam period, students will receive an appropriate grade other than W/P or W/F, and that grade will be computed on the transcript in the student's grade point average.

**NOTE:** The above timeline is specific to classes that meet 16 weeks. Any class that meets fewer than 16 weeks will follow a prorated timeline.

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**If you decide to drop a class….**
**DO NOT JUST STOP ATTENDING.**
**FILL OUT AN ADD/DROP FORM IN THE REGISTRAR'S OFFICE.**

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## Readmission to the College

Students who have withdrawn, or who have been suspended by the college, may apply for readmission. Students may continue to take courses at the college on a non-matriculated basis if space is available. Contact the Office of Admissions for more information.

## Withdrawal from the College

A student who finds it necessary to withdraw from the college must complete an official withdrawal form (available from the Registrar) and participation in an exit interview with the Vice President of Student and Community Services or his/her designee. Failure to withdraw officially will result in a notation on the student's permanent record: Withdrawn-Not-in-Good-Standing.

## VI. Academic Placement Policies
### Academic Placement Policy

Any student admitted into a degree, professional certificate or certificate program at MCC must take placement tests in reading, writing, math and computer skills so that appropriate course placements can be made.

A mandatory assessment tool, the Accuplacer, will be used to identify the appropriate level coursework for math, English and computer skills for courses impacted by one of these competencies. The Accuplacer* is administered by the Center for Academic Placement and Support and can be done on a drop-in basis during Center for Academic Placement and Support open hours.

Students will not be denied admission based on placement test scores. However, students may be required to successfully complete a developmental skills course prior to beginning coursework in the program of study to which they have been admitted.

Placement testing may be waived, in full or in part, for those individuals who have met one or more of the following conditions:

- Earned a minimum score of 500 on the SAT quantitative. This condition applies only to the MATH portion of the Accuplacer; it may not be used to waive English placement requirements. A copy of the SAT scores must be provided when this waiver is requested.
- Completed a computer-based placement test *(CBT)* within the past three years at MCC or another accredited postsecondary institution. After three years, students must retake the Accuplacer to determine appropriate course placement.
- Transferred a math or English course from another accredited institution into an MCC program.

Any student who has a disability that might interfere with his/her ability to take the assessment independently may request special testing accommodations from the Coordinator for Disability Services. Students who are non-native speakers of the English language may access a variation of the placement test *(LOEP)* that will determine course placement based on assessed levels of English proficiency.

*\* Accuplacer is a product of College Board, a division of the Educational Testing Service (ETS). Policy adopted: Dec. 3, 2003.*

## Student Success Placement Policy

**INT101 – College Success Seminar**
The College Success Seminar course must be taken in the first two semesters of attendance.

**INT102 – Learning Community Seminar**
Students who place into two or more English or math classes with a course number less than a 100 level must register for those courses and INT102 during their first semester of attendance.

## English Department Placement Policy

Before students may register for college-level English courses, they must demonstrate mastery of English at the high school level. Placements are found on page 14.

## English Department Placement

| Placement Criteria | Course Placement |
|---|---|
| Accuplacer reading score of 54 or below. | **ENGL 094** |
| Accuplacer reading score of 55-79 **OR** completion of ENGL 094 with grade of C or better. | **ENGL 097** |
| Writeplacer score of 2 or 3 below. | **ENGL 098** |
| 1) Writeplacer score of *(4 OR 2)* *Writeplacer score of 5 or above **COMBINED WITH** Accuplacer reading score less than 80 *(see information below if condition 2 applies)* | **ENGL 099** |
| Writeplacer score of 5-6 **PLUS** college-level reading skills determined by one of the following criteria:<br>• Accuplacer score of 80 or above<br>• Completion of ENGL 097 with a grade of C+ or better | **ENGL 110** |
| Placement into two or more English and/or Math courses below the 100-level | INT 102 **and** English and/or math courses below the 100 level. **MUST** *be taken in the first semester of attendance* |

Students who receive an Accuplacer placement of ENGL 099 because of their score on the Reading Comprehension exam *(RC score <80 COMBINED WITH Writeplacer score of 5 or above)* should complete ENGL 094 and/or ENGL 097 before enrolling in a writing class. If a student completes all required reading coursework with a grade of C or better, he/she may waive ENGL 099 and enroll in ENGL 110.

ENGL 098 is the first in a sequence of developmental writing courses designed to build the requisite skills for success in ENGL 110. A grade of C or better is required to progress from ENGL 098 to ENGL 099 or ENGL 099 to ENGL 110. Students wishing to move directly from ENGL 098 to ENGL 110 must retake Accuplacer and receive a placement of ENGL 110.

## Math Department Placement Policy

Before students may register for college-level math courses, they must demonstrate mastery of math at the high school level.
Placements are determined as follows:

| Accuplacer Placement Criteria | Course Placement |
|---|---|
| AR ≤ 55 and EA ≤ 61 | MATH 070 |
| AR ≥ 56 and EA ≤ 61 | MATH 080 |
| EA ≥ 62 and < 78 | MATH 103 |
| EA ≥ 62 and < 78 | MATH 111 |
| EA ≥ 62 and < 78 | MATH 131 |

**Accuplacer codes:  AR -** Arithmetic;   **EA -** Elementary Algebra
Accuplacer may place students in higher levels of math. Please see CAPS for that information.
Courses with numbers between "0-99" are considered developmental and cannot be used toward graduation requirements. Courses with numbers between "100-199" are considered beginning level courses.

## Computer Skills Placement *(CSP)* Policy

Before students may register for college-level computer course CIS 110 or CIS 111, they must take the Computer Skills Placement assessment. Placements are determined as follows:
• A score of less than 65% placement is CIS 097 Computer Fundamentals designed to build the requisite skills for success in CIS 110. A grade of C or better is required to progress from CIS 097 to CIS 110.

| < 65% | Computer Fundamentals | CIS 097 |
|---|---|---|
| > 65% | Microsoft® Computer Applications | CIS 110 |
| > 65% | Computer Technologies I | CIS 111 |

## Honors English Courses

Honors-level sections of ENGL 110 and a 200-level ENGL elective will be offered each semester. To be admitted into an honors section, students must meet the following criteria:
• **ENGL 110 / Honors:**
• Writeplacer score of 7-8; Reading Comprehension score 80 or above
• Writeplacer score of 7-8; ENGL 097 with a grade of B or higher
• Writeplacer score of 6: by permission of department chair for English
• **200-level English Elective / Honors:**
• ENGL 110 with a grade of B or higher PLUS recommendation of
• ENGL 110 instructor or permission of the department chair for English

## English Courses for English as a Second Language Students

Targeted sections of ENGL 094, 097, 098, 099 and 110 are offered each semester; these courses are identical to non-ESL sections but include additional supports for student success. Students whose native language is not English are strongly encouraged to register for one of these sections.

## VII. Advanced Standing

A matriculated student who can present evidence supporting education in one or more courses applicable to the student's program of study may request that those credits/experience be evaluated and applied to graduation requirements. Four methods of gaining advanced standing are:

**1. Transfer of Credit from Another Institution**
The student must furnish the college with official transcripts and course descriptions of academic courses from each college they have attended. Grades of C or better in courses judged by the college to be equivalent in nature and content to MCC program offerings will be accepted.

Students seeking a degree/professional certificate at MCC must fulfill residency requirements. A student must have a minimum of 64 credits to complete a degree and must complete all required courses for their academic program. Transfer of a course to MCC does not guarantee transfer of that same course to subsequent institutions. See individual academic program descriptions for specific program transfer policies.

**2. High School Advanced Placement Coursework**
Students requesting credit for Advanced Placement Exams taken in high school, offered by the College Entrance Examination Board, must submit official documentation including score reports from CEEB, in order to have examinations evaluated for transfer credit. MCC will accept Advanced Placement scores of "4" or higher.

**3. College Level Examination Program** *(CLEP)*
MCC is an approved testing site for CLEP, providing examinations in the areas of Composition and Literature, Foreign Languages, Social Sciences, History, Science and Mathematics. A complete list of CLEP exams accepted for credit by MCC, along with corresponding course names and credits, is available in CAPS.

Students must request their scores be sent to MCC for review. This request is made to the College Board and can be done during or after the exam. Acceptance of CLEP exams for transfer credits will be based on the following criteria:
• The student has earned a passing score as defined by The College Board and the college.
• The student has been accepted into a program.
• There is a course within the student's program of study that is equivalent to the CLEP exam.

CLEP scores are not calculated into a student's GPA or in any way interpreted as a grade and may not be applied towards MCC's 25% residency requirement. Students may not transfer CLEP credits for a course they have successfully completed or for a course that is more advanced than the subject of the exam. Any student who fails an MCC course and wishes to take a CLEP exam in lieu of retaking the course must realize that the original grade received will remain on his/her transcript and will be counted in the CGPA. The CLEP exam score does not replace a grade for an MCC course.

CLEP exams are administered on the computer *(CLEP CBT)* in CAPS.

**4. Credit by Examination** *(Internal)*
Credit by examination may be earned only by a matriculated student who, by study, training or experience outside MCC has acquired skill or knowledge equivalent to that acquired by a student enrolled at MCC and has a CGPA of 2.0 or higher.  A student is eligible for a maximum of 16 credits through credit by examination.

If the student passes the exam, appropriate credits shall be applied to the student's academic record. Credit will not be given for grades below C. A student receiving a grade below C is ineligible for another special examination in that course.

Students who have previously taken a course and failed it are not eligible for an examination for credit in that course. For more information, contact the Office of Academic Affairs.

**5. Credit for Prior Learning -- 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 program. A student must be matriculated at MCC to apply for experiential credit. Not all programs provide the experiential credit option; students should consult with their academic advisor.

A request for Credit by Prior Learning should initiate with the faculty advisor or instructor who normally teaches the course. After initial discussion, the student should submit a portfolio minimally containing a cover letter and resume, extensive work experience explanations, letters from employers, certificates of accomplishment, samples of work, as well as any other information deemed appropriate. The responsibility of proof will be on the student requesting evaluation. The portfolio is then reviewed by an appropriate instructor, the department chair, and the Associate Vice President of Academic Affairs. If credit is granted, the student will be charged a fee for credit for prior learning based on the formula below.

**Fee for Credit for Prior Learning - 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 x current tuition rate x 12 credits).*

## Student Success
The college is committed to providing an opportunity for students to: understand themselves as people and as learners, understand the expectations and rigors of college and understand the resources available to help them succeed.  The College Success Seminar and Learning Community Seminar courses are designed to do this and provide specific skills to maximize academic performance.

## College Success Seminar
College Success Seminar *(INT101)* is designed for students who are entering college level coursework and **must be taken in the first two semesters of attendance.**

## Learning Community Seminar
Learning Community Seminar *(INT102)* is designed for students who are required to take two or more English or math classes with a course number less than a 100 level. These students **must register for those courses and INT102 during their first semester of attendance.**

At times, students come to the college possessing the skills discussed in this course. Students must demonstrate their level of skill if seeking credit or a waiver for the course. This is accomplished in one of the three ways:

1. The student has previously completed an associate or a bachelor degree from an accredited college or university.
2. The student has previously attended an accredited college or university and has completed a minimum of 15 credits with at least a 3.0.
3. The student successfully passes the challenge exam for College Success Seminar. Students will be required to demonstrate familiarity with MCC academic support resources.

Exceptions will be handled on a case-by-case basis.

## Transfer to Other Institutions
Transfer policies vary from institution to institution. When transfer to another institution is sought, the number of transfer credits granted for courses completed at MCC is determined entirely by the institution to which the student transfers.

## VIII. Commencement Requirements
Commencement occurs once a year in May. Students must complete all degree requirements with a CGPA of 2.0 before being awarded a degree. Complete information about graduation is on the MCC website.

## IX. Academic Standards
Students falling below the following standards will be designated as not meeting satisfactory academic 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 will be required to reduce their course load to part time and meet regularly with their academic advisor.  Additionally students will develop a Personal Study plan to support future academic success.
Students meeting the criteria below will be placed on Academic Probation.

| | | |
|---|---|---|
| 0-13  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 college and is usually for one semester. Suspension from the program means that a student may continue to take courses as a non-matriculated student and will not be eligible for Financial Aid. Suspension from the college prohibits a student from taking classes during the period of suspension. In addition students will be required to register for College Success Seminar (if they have not already done so); develop a Personal Study Plan to support their future academic success; meet monthly with their academic advisor and seek academic support and tutoring.

Students meeting the criteria below will be put on Academic Suspension.

| | | |
|---|---|---|
| 0-13  Credits Accumulated: | below | .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 |

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.

## Grade Appeal Procedure
Any appeal of a grade must be initiated by the student with the instructor before an ensuing semester has elapsed. In most instances a grade may be changed only by the instructor. Only in a case of obvious computational error or blatant abuse of the grading prerogative can the Vice President of Academic Affairs, the only other individual on campus empowered to change a grade, alter a student's grade.

Students who believe they have a valid basis for a grade appeal will use the following process to resolve the issue:

**1. Meet with the instructor.**
The student shall contact the instructor and schedule a meeting to discuss the grade appeal and attempt to resolve the conflict. The instructor and student shall meet within the next five work days.

**2. Meet with the Department Chairperson.**
If the issue was not resolved in Step 1 above, the student has three work days from the date of the instructor's decision to file a written appeal with

the instructor's Department Chair. Within three work days, the Department Chair will mediate the dispute either through discussion with the instructor or with the student in the company of the instructor.

**3. Meet with the Vice President of Academic Affairs** *(VPAA)***.**
If the issue is not resolved in Step 2 above, the student has three work days to file a written appeal with the VPAA. The VPAA will meet with all parties concerned within the next three work days to attempt to resolve the dispute. The VPAA will have three work days from the last meeting to render a decision on the grade appeal. The decision of the VPAA is final.

**NOTE:** During the summer, when faculty are not on campus, students may begin the grade appeal process with the Office of Academic Affairs. Every attempt will be made to have the faculty member contact and meet with the student within the specified time. On occasion, however, these times may need to be adjusted.

## Academic Warning
The instructor may give a student an academic warning at any time if the student is failing or in danger of failing a course.

## X. Academic Privacy
1. Family Education Rights and Privacy Act
In compliance with the Family Rights and Privacy Act of 1974, it is the policy of the college to protect the educational/academic records of its learners, former learners and alumni. All personally identifiable information in a learner's education record is considered confidential. Other than the information listed below, referred to as "directory information," no one will have access to such records without written consent of the learner.

**2. Directory Information**
Directory Information is information which may be released by the college unless a student notifies the Registrar that such information in part or in whole is not to be released. MCC considers the following to be directory Information: Student's name, address, telephone number, email, date of birth, major field of study, dates of attendance, enrollment status, degrees, awards, honors, and most recent educational institution attended.

If you do not wish disclosure of any or all of the categories of identifiable directory information, you must notify the Registrar in writing.

## XI. Academic Amnesty
To be eligible for Academic Amnesty, a student must meet all of the following conditions:
• The student has not taken any courses at original college of enrollment for at least three (3) years from the last semester of attendance.
• The student applies for Academic Amnesty before the start of his/her second semester after readmission.
•.The student has never before received Academic Amnesty.
•.The student achieved a CGPA below 1.7 during previous attendance.

## XII. Additional Associate Degrees
Students may earn additional associate degrees either by concurrent completion of the requirements of the several degrees or by subsequent study after the first degree is received. The requirements for earning additional degrees are as follows:
• Complete all requirements of each program of study, including general education requirements; and
• Earns a minimum of 15 additional credits at the college beyond those required for the first and subsequent degrees.

## XIII. Independent Study
Opportunities for credit-bearing Independent Study are available to matriculated students to explore areas of a discipline not covered in the normal curriculum but related to the student's program. Independent Study is not available to non-matriculated students. Matriculated students must have a minimum CGPA of 2.0 to be eligible for Independent Study.

The intent of the Independent Study is to expand a student's learning experience beyond the normal program curriculum. Typically undertaken for 1-2 credits, an Independent Study may not be done in lieu of any course existing in MCC's catalog. Students wishing to pursue existing MCC courses on an independent basis should consult the MCC policy on Directed Study.

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## XIV. Directed Study
Under certain circumstances, a matriculated student may take a course in a semester when the course is not offered. A directed study allows a matriculated student to pursue the learning objectives/outcomes for a course independently under the guidance of a qualified faculty member. A matriculated student must have a minimum CGPA of 2.0 to be eligible.

The student must demonstrate compelling reasons why the course could not be taken in a subsequent semester or was not taken in the semester when it was originally offered. Barring exceptional circumstances, a directed study will not be granted for a course currently being offered.

## XV. CCSNH Computer Use Policy
This document contains guidelines regarding the use of computing and networking facilities located at or operated by MCC. The complete policy is available on the college website.

## XVI. Elective Course Information
In addition to the required courses in a student's program, students may select from a variety of elective courses. Each program offers a different set of electives, so please refer to each individual program for specific options. All academic subject codes and course numbers refer to courses only offered by MCC.

**English Elective:** any course with the academic subject code of ENGL and a course number of at least 100.

**Social Science Elective:** any course with the academic subject code of AN, ECON, GEOG, HIST, POL, PSYC, SOC, and a course number of at least 100.

**Foreign Language/Humanities/Fine Arts Elective:** any course with the academic subject code of ARTS, ENGL courses listed below*, ASL, FREN, GERM, HIST120, HIST130, HUMA, PHIL, SPAN, and a course number of at least 100.
*ENGL Literature Courses: ENGL200, ENGL201, ENGL205, ENGL218, ENGL220, ENGL225, Other ENGL courses: ENGL113, ENGL210, ENGL213, ENGL214.

**Math Elective:** any course with the academic subject code of MATH and a course number of at least 100.

**Science Elective:** any course with the academic subject code of BIOL, CHEM, ESCI, PHYS and a course number of at least 100.

**Liberal Arts Elective:** any course listed under the categories of English elective, Social Science elective, Foreign Language/Humanities/Fine Arts elective, Math elective or Science elective with a course number of at least 100.

**Business Elective:** any course with the academic subject code of ACCT, BUS, FINC, MKTG and a course number of at least 100.

**Open Elective:** any course that the college offers with a course number of at least 100. With the exception of the successful completion of ESL120, ESL courses are not considered open electives and cannot be counted toward graduation requirements.

## Academic Opportunities
The college provides special academic initiatives designed to enrich students' educational experiences.

## Honors Program
The college's Honors Program is designed to challenge the level of the student's performance in the classroom. Courses within the Honors Program will incorporate greater complexity and sophistication in thinking and will be assessed with a higher level of intellectual outcomes.

Developmental courses, courses that do not count toward graduation, or are generally not transferable, will not be considered for the Honors Program. Honors courses or components will be indicated by an Honors designation on a transcript. They do not carry extra credit.

## Honors Coursework

Decisions on whether to offer honors coursework in a department or discipline are made by the department. Honors Program courses are not intended to have a different set of objectives from similar courses in the discipline. Each department will develop criteria for differences between the honors' and regular curriculums and assessments.

New England College is a "Honors" partner with MCC and will offer advanced placement to students who successfully complete Honors coursework.  Contact the Transfer Advisor for more details.

## Learning Communities

A learning community is a combination of courses in different disciplines organized around a common theme or a specific group. Learning Communities have been shown to increase student retention and academic achievement, increase student involvement and motivation, improve students' time toward degree completion, and enhance educational development.
• The connection between subject matter in the separate courses is emphasized so that information and skills learned in one class can be applied to the other courses.
• The same students enroll in all of the courses in a learning community. As a result, the same students and teachers are together in two or more classes each week. They get to know each other more than students in regular classes and sometimes work together on various projects and help each other learn.
• At the end of the semester, each student gets a grade for each of the courses that are part of the learning community.

## Service Learning

Service learning combines community service with academic instruction. Students enrolled in courses with a service-learning component are guided through a critical analysis of what they observe in the field and what is presented in class.

This service-learning approach enhances the breadth and depth of student learning in at least three domains: academics/higher order cognitive skills; life skills, and sense of civic responsibility and ability to be effective members of their communities.

The program focuses on promoting service learning as an effective teaching strategy within the existing curricula. Course learning outcomes are the basis for integrating projects that serve the college or the community at large. To preserve the academic integrity of the service-learning opportunity, students are not graded on simply "putting in the hours." Rather, they are graded on specific assignments and/or projects that demonstrate learning from the service-learning experience. Some courses provide built-in experiential projects; others require the student to identify his/her own project. Service-learning activities have been demonstrated as positive learning experiences for students and faculty.

# Academic Advising and Student Success

### Academic Advising

Advising is an important aspect of the student's educational experience. Students are more likely to succeed if they fully understand the realities, rigors, and expectations of college, understand and access the resources available to help them succeed, and are directly connected to a faculty academic advisor who supports their efforts.

### Faculty Advisor

A student's faculty advisor is one of the most significant partnerships s/he will experience at MCC. The role of the faculty advisor is to help students form accurate perceptions and have realistic expectations to enhance their college experience. In addition, advisors will provide information to help students make informed choices about their academic experience.

The faculty advisor is the student's partner for implementing the Student Success Plan, which is developed in the College Success/Learning Community Seminar class.  Students are expected to seek out their faculty advisor at least twice a semester to review their Success Plan and support successful progression of their educational goals.

The student is ultimately responsible for his/her own success, should maintain contact with the faculty advisor, and should take advantage of and actively seek information from all areas of the college.

## Liberal Arts Advising Center

**Faculty serve as the primary academic advisors for all matriculated students**. However, the Liberal Arts Advising Center can serve as a secondary academic advising source for matriculated students, when faculty advisors are not available in a reasonable amount of time.  Further, the Liberal Arts Advising Center is the location for Liberal Arts student advising and for all non-matriculated student advising.

The Liberal Arts Advising Center will assist faculty advisors as they work with students to develop retention strategies linking to the *"Student Success Plan."* Students who receive academic warnings, who are on academic probation or suspension will receive follow-up support from faculty advisors and/or Center staff to address these issues.

The student is ultimately responsible for his/her own success, and should initiate contact with their **faculty** advisor at least twice a semester.

# Academic Support Services
## Center for Academic Placement and Support

Academic planning and support services are available to both student and community members through the Center for Academic Placement and Support.  Services include: peer and professional tutoring, computerized instruction, workshops, disability and ESL/ESOL support services, and assessment. Support is also available in the Center's open lab where computer proctors are on call  to help students with homework assignments and special projects. There is no charge to students enrolled in credit-bearing courses. Community members may access the Center for Academic Placement and Support  on a fee-per-service basis.

Students are encouraged to visit the Center for Academic Placement and Support during their first week of classes to familiarize themselves with services and staff.

### Project STRIDE

Project STRIDE is an education grant for single parents, displaced homemakers and single pregnant women. The program is designed to provide career assessment, personal, group and academic support. Funds may be available through this program to help with books, tuition, fees, and supplies. Students apply annually for this grant.

### Career Development

The Center for Academic Placement and Support houses a computerized guidance system, **CHOICES**, which allows students to explore different career paths and make informed decisions based on numerous factors, including interest, ability, and financial need.

### Disabilities Support Services

Under the Americans with Disabilities Act *(ADA)* of 1990 and Section 504 of the Rehabilitation Act of 1973, individuals with disabilities are protected from discrimination and entitled to academic adjustments with appropriate documentation. Students are entitled to equal access to programs and services for which they are otherwise qualified. Disability Support Services are available to MCC students with documented disabilities through the campus coordinator of disability services. MCC has a responsibility to maintain confidentiality of the documentation and may not release any part of the documentation without the student's informed consent or under compulsion of legal process. As each student's needs are unique, the provisions of services are designed individually each semester. Change to academic adjustments are determined by the nature of the disability, requirements of the curriculum or program of study, expectations in the classroom, and the timeliness of the request.

### MCC'S Section 504 and Title II Grievance Policies and Procedures
**Appeal Process for a Student Denied Disability Services:**
Students denied disability services may submit a written appeal of the decision to the MCC Director of the Center for Academic Placement and Support and the Vice President of Academic Affairs within 10 working days of the receipt of the decision from the Disabilities Counselor. If the student does not agree with the decision of the Director and the VPAA, the student may submit the written appeal to the MCC President. The original documentation and recommendation of the Disabilities Counselor will be reviewed by the President *(or designee)* who will communicate his/her decision in writing within 15 working days of receipt of the written appeal.

The student may appeal this decision to the Chancellor of the Community College System of NH.

Inquiries may also be directed to the US Dept. of Education, Office of Civil Rights, J. W. McCormack Post Office & Courthouse, Room 701, 01-0061, Boston MA 02109-4557; 617-223-9662, TDD: 617-223-9695

### English as a Second Language *(ESL)* and International Services
ESL and international students are provided with academic support and advising services. For ESL students, this includes English language proficiency assessment and placement, individual help and computer assistance to improve skills in oral and written communication, reading, study skills, and test preparation, tutoring in academic subjects, and both formal and informal language proficiency evaluation. For international students, this includes advising on immigration status, employment eligibility, health insurance, travel, taxes, and legal referral. Students are encouraged to discuss any cultural, social and professional concerns with the ESL/International counselor. In addition, MCC also has many organizations and activities in which all students can participate to promote cross-cultural understanding.

### Tutoring Services - Math/Writing Lab
Both peer and professional tutors are available in many subject areas to help students complete their coursework successfully. Tutoring is free for MCC students in credit-bearing courses and may be accessed by the community on a fee-per service basis. All tutoring is offered in our Math/Writing Lab, and includes tutor-facilitated study groups; one-to-one tutoring; online help; and video and software programs. Schedules for tutoring are posted each semester in the Center for Academic Placement and Support and on the website. The tutor program trains and certifies its tutors via the College Reading & Learning Association *(CrLA)* national standards. For more information about receiving tutoring or becoming a tutor, contact the Center for Academic Placement and Support

### Library
Information about the library, its resources and services can be found at the library website: www.manchestercommunitycollege.edu/Library.

### Transcripts
Copies of official transcripts are provided for $3 per copy. An additional $5 per transcript is charged if the transcript is to be faxed to the recipient. There is no fee to send a transcript within the Community College System of NH. A student's transcript is private information. No third party may receive a copy of a student's transcript without the student's written consent. Student accounts must be paid in full in order to receive a transcript. Students may print unofficial transcripts from the Student Information System.

## Student Services

### Bookstore
The college contracts with a private vendor to run our campus bookstore. The bookstore is stocked with textbooks, supplies, novelty items, and college clothing articles. Students who have questions about pricing, books, or any issues should direct their inquiries directly to the MCC bookstore at (603) 622-9941.

### Bus Service
MCC students ride Manchester Transit Authority buses free with their valid college ID Card. Bus service is available Monday-Friday. Schedules are available in the Student Services Office.

### Cafeteria
A private vendor to run the cafeteria, which is located on the main floor. Students can buy hot or cold foods and drinks. Cafeteria hours are posted each semester. Vending machines are available when the grill is closed.

### Housing and Living Expenses
MCC does not maintain residence halls or assume responsibility for housing. Students are advised to check on campus to see if information about local options is available or has been posted. Arrangements and contracts for housing are solely between the student and the landlord.

### Insurance
A special accident and illness insurance policy is available to all students enrolled with the CCSNH System. Enrollment information is provided through a mailing during the summer months or at new student orientation. The basic policy covers illness and accidents occurring in and out of school. Other details are available within the policy information. The college is not liable for personal injuries incurred by students who are in attendance. Students are encouraged to either provide their own coverage or purchase the insurance provided by the System.

Students enrolled in programs in the Department of Human Services must have some form of accident and illness insurance. Information about this coverage is available in the Business Office. All Nursing and Allied Health Students who have a clinical must have accident and illness insurance, as well as professional liability coverage. Information regarding this professional liability coverage is available in the Nursing Department.

### Student Handbook
The college's student handbook is available to all students on the college website. The student handbook documents academic and student policies and procedures. Students are responsible for familiarizing themselves with the information in the student handbook.

## Student Life

### Student Life Mission Statement
Student life implements programming, events and cultural experiences in order to provide students with:
• Leadership development
• Exposure to new experiences
• A voice in determining their future
• A sense of self
• Opportunities for play and recreation
• Experiences that build a connection to campus and a respect for diversity
• An understanding of the importance of civic engagement

Students are encouraged to take advantage of the many leadership opportunities, social activities, and community service involvement offered at MCC. The college believes the rewards of meaningful relationships, development of skills gained through participation as a student leader, and the many benefits to community service are an important part of the collegiate experience.

For complete information about the Student Life opportunities at MCC, visit the college website.

## Transfer Opportunities & Articulation Agreements
As a comprehensive community college, MCC has developed partner-ships with public and private four-year institutions within and outside New Hampshire. These partnerships include individual course acceptance, formal articulation agreements, and dual admissions opportunities. MCC is accredited by the New England Association of Schools & Colleges, Inc.'s Commission on Institutions of Higher Education.

### Transfer Opportunities
**Formal Articulation Agreements**
Formal articulation agreements outline courses and their equivalents at the receiving institution. Many articulation agreements allow graduates of MCC associate degree programs to enter the four-year institution with junior status. Students must earn a grade of *'C'* or better and meet all other admissions criteria.

**Individual Course Acceptance**
Most colleges – from American University to Worcester Polytechnic Institute and hundreds of colleges in between -- accept MCC credits. Students must earn a grade of *'C'* or better and meet all other admissions criteria. While some courses are transferred in as program requirements, others are transferred as general education courses or open electives.

**Dual Admission**

In addition to articulation agreements, many four-year institutions also offer dual admission with MCC.

Following is a list of formal articulation agreements by MCC academic program. For more information regarding these agreements, contact the Career/Transfer Counselor in CAPS..

**Formal Articulation Agreements**

**BUILDING CONSTRUCTION**

| | |
|---|---|
| Southern NH University | UMASS Amherst |

**BUSINESS STUDIES**

| | |
|---|---|
| Franklin Pierce University | Franklin University |
| Granite State College | New England College |
| Plymouth State University | Rivier College |
| Southern NH University | UNH Durham |
| UNH Manchester | |

**COMPUTER SCIENCE**

| | |
|---|---|
| Franklin University | New England College |

**EARLY CHILDHOOD EDUCATION**

| | |
|---|---|
| Granite State College | Plymouth State University |
| Southern NH University | |

**EDUCATION**

| | |
|---|---|
| Granite State College | Keene State College |
| New England College | Plymouth State University |
| Southern NH University | |

**EXERCISE SCIENCE**

New England College

**FINE ARTS**

| | |
|---|---|
| Chester College of New England | New England College |

**GRAPHIC DESIGN**

| | |
|---|---|
| Chester College of New England | New England College |

**HVAC**

| | |
|---|---|
| Ferris State University | Southern NH University |

**LIBERAL ARTS**

| | |
|---|---|
| American College of History & Legal Studies | Daniel Webster College |
| Franklin Pierce University | Franklin University |
| Keene State College *(see NH Transfer Connections Program)* | New England College *(Honors Program partner)* |
| Plymouth State University *(see NH Transfer Connections Program)* | Rivier College |
| Southern NH University | UNH Durham *(see NH Transfer Connections Program)* |
| UNH Manchester *(see NH Transfer Connections Program)* | |

**NURSING**

| | |
|---|---|
| Emmanuel College | Endicott College |
| Franklin Pierce University – dual enrollment option | New England College |
| New England School of Practical Nursing *(LPN to RN)* | Rivier College |
| St. Joseph's College of Maine | UNH |

**TECHNICAL PROGRAMS**

| | |
|---|---|
| Granite State College | Southern NH University |

**WELDING**

| | |
|---|---|
| Ferris State University | Southern NH University |

## NH Transfer Connections Program

University System of New Hampshire *(USNH)*

The NH Transfer Connections Program enables students to attend MCC or one of the state's other community colleges and, if they meet certain standards, be automatically accepted into Keene State College, Granite State College, Plymouth State University, UNH-Manchester, or the University of New Hampshire.

Through the NH Transfer Connections Program, students originally not accepted at Keene State College, Plymouth State University or UNH are able to attend one of the state's community colleges as a Liberal Arts major and, if they meet certain standards, be automatically accepted into their original school of choice without having to reapply or pay a fee. Students must maintain a 2.8 CGPA *(GSC's & KSC's minimum is 2.5)* and earn at least a *C* in every class. It is recommended that program participants take a minimum of 12 credits for two consecutive semesters.

Students who wish to begin their academic careers at one of the Community Colleges and then transfer to UNH, UNH-M, Granite State College or Plymouth State University can also opt-in to this program.

Please see the MCC Office of Admissions or Meg Hamm, Career/Transfer Advisor at (603) 668-6706 for more information.

## Transfer Advising

CAPS offers a Career/Transfer Counselor to work with students who are considering continuing their education at four-year institutions. Academic Department Chairs are also available for advice and assistance regarding affiliations for their specific programs.

**Community Affiliations: Clinical, Internship And Practicum Sites**

Many of our programs have courses that offer practical experience. We have agreements with a multitude of businesses in the Manchester area and surrounding towns. Following is a partial list by program.

**AUTOMOTIVE**

| | |
|---|---|
| Amoskeag European Auto Specialist | AutoServ Plymouth |
| Bill Dube Ford Toyota | Bob Mariano Dodge Jeep |
| Bonneville & Son | Clark Chrysler |
| Contemporary Chrysler Jeep Dodge | Foss Motors |
| Grappone Ford | Hurlburt Toyota |
| IRA Toyota | Irwin Ford |
| Manchester VW | McFarland Ford |
| Merchant's Auto | Merrimack Street Volvo |
| Mom's Garage | Nashua Toyota |
| Port City Dodge | Port City Nissan |
| Rockingham Toyota | Subaru of Manchester |
| VIP | Wall's Ford |
| White River Toyota | |

**EARLY CHILDHOOD EDUCATION**

| | |
|---|---|
| Atkinson Elementary School | Children's Center at St. Paul's |
| Early Head Start/Manchester | Glen Lake Elementary School |
| Head Start Manchester | Kindercare/ Merrimack |
| Nutfield Cooperative Preschool | Sunrise Childcare |
| Children's World Learning Center/ Manchester | |

**EXERCISE SCIENCE**

| | |
|---|---|
| Center for Physical Therapy/ Exercise | Concord Hospital |
| Elliot Hospital | Hampshire Hills |
| Hillcrest | Merrimack Spine Center |
| Next Level Performance | Performance Rehab, Inc |
| RSVP/Senior Counts | Synergy |
| YMCA/Manchester | Training Effects |
| The Complete Athlete - Sports Performance Clinics | |

**GRAPHIC DESIGN**

| | |
|---|---|
| Aleuromedia LLC | BIGraphics |
| Breathe NH | Cellular Specialties |
| CoEd Sportwear | Corton Design Group |
| Cummings Printing | Original Gourmet Food Co. |
| Print Savy | Printers Square |
| Sign-A-Rama of Concord | Special Olympics NH |

**MEDICAL ASSISTANT**

| | |
|---|---|
| Ammonoosuc Community Health | Bedford Commons OB-GYN, PA |
| Capital Reg. Family Health Ctr., Assoc. | Concord Hospital |
| Dartmouth-Hitchcock Clinic | Derry Medical Center |
| The Doctor's Office | Family Physicians of Pembroke |
| Family Physicians of Penacock | Foundations Partners/SNHMC |
| Huggins Hospital | Manchester Community Health Ctr |
| Manchester Obstetrical Assoc. | Merrimack Medical Center |
| Parkland Physician Services | Seacoast Family Practice |
| Southern NH Internal Med. Assoc. | Wentworth Douglas Hospital |
| Wright & Asso. Family Healthcare | |

**NURSING**

| | |
|---|---|
| Catholic Medical Center | Dartmouth-Hitchcock Manchester |
| Easter Seals | Elliot Hospital |
| Exeter Health Resources | Greenbriar Terrace Healthcare |
| Infusion Solution | Manchester Health Department |
| Manchester School Department | Northeast Rehab Health Network |
| New Horizons Shelter | Rockingham VNA & Hospice |
| Parkland Medical Center | Southern NH Medical Center |
| St. Joseph Hospital | Veterans Administration Hospital. |
| Take Care Health Systems - BAE | |
| VNA Home Health & Hospice | |

**PHLEBOTOMY**

| | |
|---|---|
| Avis Goodwin Comm. Health Ctr | Catholic Medical Center |
| Concord Hospital | Elliot Hospital |
| Frisbee Memorial Hospital | LRG Healthcare |
| New London Hospital Assn, Inc. | Path Laboratory |
| Portsmouth Regional Hospital | St. Joseph Hospital |
| Speare Memorial Hospital | Veteran's Admin. Medical Ctr. |
| Wentworth Douglas Hospital | Wolfeboro Hospital |

## Workforce Development
### Professional Development

The Workforce Development Center at MCC responds quickly to the changing needs of business and industry and provides lifelong learing and professional development opportunities for people who need to sharpen their existing skills or learn new ones, maintain professional licenses or certifications, and for people who are looking for advancement or a new career challenge. Some of the many innovative and exciting workshops, seminars, courses, and certificates address the educational requirements of computer and information technology professionals, business professionals, managers and supervisors, teachers, medical professionals, electricians, and office staff.

For more information about the WDC at MCC, call Kathy DesRoches at (603) 668-6706 ext. 302 or kdesroches@ccsnh.edu.
Or visit www.manchestercommunitycollege.edu/WDC

### Corporate and Customized Training

The Workforce Development Center collaborates with organizations to assess their training needs and provides high-quality customized credit, non-credit, and certificate courses and programs, which can be delivered at MCC or on site. Programs include, but are not limited to:

• BPI Certification
• Basic Mechanics Machinery
• Business Skills
• CETP Training
• Communication Skills
• Computer and Information Technology
• Customer Service
• ESL *(English as a Second Language)*
• EKG Technician
• Flagger Training
• Home Inspection
• Leadership
• Manufacturing Courses
• OSHA -10
• Pharmacy Technician
• Project Management
• Safety

For more information about corporate and customized training, call (603) 668-6706 ext. 302. For more information about open enrollment non-credit courses, call (603) 668-6706 ext. 302.

## Running Start Program

The New Hampshire Running Start *(RS)* Program is a unique higher education initiative for high school students that enables them to enroll in selected college courses offered by the Community College system of New Hampshire at a significant reduction in tuition. College courses are offered during the day at high schools throughout New Hampshire.

The cost to enroll in a CCSNH course through Running Start is $100 per course, plus books and supplies *(if not provided by the student's high school)*. This represents a substantial savings in college tuition costs.

For more information on:



**Running Start Program**

**www.ccsnh.edu/prs**

## Accreditation Statement

Manchester Community College is accredited by the New England Association of Schools and Colleges Commission, Inc., a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

Manchester Community College has been granted accreditation from the New England Association of Schools & Colleges, Inc.'s Commission on Institutions of Higher Education. Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college 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 the quality of every course or program offered, or competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

## Specialized Accreditations

**Business Programs -** *(Accounting, Accounting Operations - Specialization, Finance, Management, Marketing,  Small Business Management )*,  Association of Collegiate Business Schools and Programs *(ACBSP)*.

**Medical Assistant -** Manchester Community College's Medical Assistant Programs are accredited by the Commission on Accreditation  of Allied Health Education Programs *(www.caahep.org)* upon the recommendation of the Medical Assisting Education Review Board *(MERB)*: Commission on Accreditation of Allied Health Education Program, 1361 Park Street, Clearwater, FL 33756, (727) 210-2350:

**Nursing -** National League for Nursing Accrediting Commission *(NLNAC)*, full accreditation; New Hampshire Board of Nursing (NHBON), full  accreditation.

# Manchester Community College

# Accounting

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## Accounting
## Associate in Science

### Program Mission
The student will be able to transfer to a four-year college or university with a solid accounting and overall business studies foundation to continue their accounting education in a seamless manner, or become employed in an entry-level accounting position.

### Program Goal/Objectives
Graduates with an A.S. degree in Accounting will:
• Have a practical working knowledge of financial and managerial accounting.
• Know how to operate at least one accounting software program.
• Know how to prepare a complex individual tax return.
• Be able to prepare accurate and well-organized financial statements.
• Be able to make the adjustments needed to create financial statements in accordance with generally accepted accounting principles.
• Demonstrate proficiency in analytical thinking, oral and written communication, and applied mathematical skills.
• Be able to transfer to a four-year college or university with a solid accounting and overall business studies foundation to continue their accounting education in a seamless manner.

### Program Description
Accounting is a field that offers challenging and meaningful work, a great deal of career opportunity, good working conditions, and a rewarding salary. According to the 2008 Occupational Outlook Handbook published by the U.S. Department of Labor, there is a faster than average projected growth rate in the number of jobs created through the year 2016. Increased job creation is expected over the next decade.
According to the National Association of Colleges and Employers in their Job Outlook for 2009, accounting is again the top degree in demand.

The Accounting curriculum is continually modified and updated to keep pace with ever-changing rules, laws, and technology. The program focuses on providing the student with the accounting skills needed for the job, as well as on the analytical skills needed to evaluate situations and look at the *"big picture."* The degree provides a foundation in economics, law, management, finance, and computer technology.

### Admissions Requirements
Although the Accounting Program does not have any specific admissions requirements, individuals with criminal charges may not be able to become a Certified Public Accountant *(CPA)*. Please check with the NH Board of Accountancy before pursing a degree in accounting if you have been convicted of a criminal charge and want to become a CPA.

### Transfer Policy
Students may transfer credits earned at other accredited institutions with a grade of *C* or better in courses with equivalent content. Appropriate transfer credits may be accepted within a ten-year period.

### Accreditation
The Department of Business Studies is nationally accredited by the Association of Collegiate Business Schools and Programs *(ACBSP)*. Our national accreditation allows our graduates to transfer to four-year colleges and universities in all regions of the country.

### Employment Opportunities
MCC has a working partnership with Robert Half International *(placement agency for accounting professionals)*, where they can assist accounting students to find temporary and permanent placement in accounting-related jobs. Graduates of the program are ready for entry-level positions in public accounting, private industry, government, non-profit organizations, and international arenas. Accounting careers include jobs in such areas as cost accounting, taxes, auditing, internal auditing, management accounting, consulting, personal advisor, general ledger, and forensic accounting.

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## Finance Certificates

### Transfer Opportunities
The Accounting Associate degree transfers in its entirety to many four-year colleges and universities. SNHU accepts 90 credits from MCC and awards scholarships to MCC accounting graduates based on academic performance. Locally, Plymouth State University, UNH-Manchester, and Franklin Pierce University accept accounting graduates. Credits also transfer nationally to ACBSP-accredited colleges.

### Accounting Degree
**DEGREE PROGRAM - FIRST YEAR**

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting & Financial Reporting I | 3 | 0 | 3 |
| BUS114 | Management | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | Total | 16 | 2 | 17 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT123 | Accounting & Financial Reporting II | 3 | 0 | 3 |
| ECON134 | Macroeconomics | 3 | 0 | 3 |
| MATH202 | Probability and Statistics *(proper placement)* | 4 | 0 | 4 |
| | English Elective | 3 | 0 | 3 |
| | Science Elective | 3 | 0 | 3 |
| | Total | 16 | 0 | 16 |

**DEGREE PROGRAM - SECOND YEAR**

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT213 | Cost Accounting I | 3 | 0 | 3 |
| ACCT216 | Software Systems Applications | 2 | 2 | 3 |
| ACCT220 | Intermediate Accounting I | 3 | 0 | 3 |
| ACCT243 | Federal Income Taxes - Individual | 3 | 0 | 3 |
| BUS212 | Business Law I | 3 | 0 | 3 |
| ECON135 | Microeconomics | 3 | 0 | 3 |
| | Total | 17 | 2 | 18 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT215 | Cost Accounting II | 3 | 0 | 3 |
| ACCT221 | Intermediate Accounting II | 3 | 0 | 3 |
| ACCT222 | Intermediate Accounting III | 3 | 0 | 3 |
| BUS210 | Organizational Communications | 3 | 0 | 3 |
| BUS221 | Business Finance | 3 | 0 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Total | 18 | 0 | 18 |

**Total Credits - 69**

### Accounting Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting & Financial Reporting I | 3 | 0 | 3 |
| ACCT123 | Accounting & Financial Reporting II | 3 | 0 | 3 |
| ACCT213 | Cost Accounting I | 3 | 0 | 3 |
| ACCT215 | Cost Accounting II | 3 | 0 | 3 |
| ACCT216 | Software Systems Applications | 2 | 2 | 3 |
| ACCT220 | Intermediate Accounting I | 3 | 0 | 3 |
| ACCT221 | Intermediate Accounting II | 3 | 0 | 3 |
| ACCT222 | Intermediate Accounting III | 3 | 0 | 3 |
| ACCT243 | Federal Income Taxes - Individual | 3 | 0 | 3 |
| BUS221 | Business Finance | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |

**Total Credits - 33**

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## Accounting Operations-Specializations Description

MCC offers a series of classes focusing on specialized accounting skills. that prepare you for entry level jobs and for national certification in one of the specialized areas of Accounting Operations. These classes also feature a service learning component with a minimum of 30 hours of hands-on work experience at an approved site. Both the independent national certification and job experience add credibility to your skill set and increase your chances of being hired. Students completing an individual class *(Accounts Payable-Entry Level, Accounts Payable Professional-Advanced or Payroll)* will receive a document of completion that can be presented to prospective employers**.**

**These individual classes prepare a student for national certification examinations:**

**ACSP101    Payroll Fundamentals-Entry Level          3-0-3**
Covers the skills needed to work in entry-level payroll and sit for the Fundamental Payroll Certification Examination offered by the American Payroll Association.

**ACSP103    Accounts Payable-Entry level          2-.5-2**
Covers the skills needed in entry-level accounts payable positions and to sit for the Accounts Payable-Entry Level Exam offered by The Accounts Payable Network.

**ACSP104    Accounts Payable Professional-Advanced          2-0-2**
*(requires 3 years of prior work experience)*
Covers the skills needed as an upper level or manager of Accounts Payable and to sit for the Accredited Payable Specialist Certification Exam offered by The Accounts Payable Network.

### Bookkeeping Certificate

The Bookkeeping Certificate covers the skills needed to work as a bookkeeper and to sit for the National Certified Bookkeepers exam offered by the American Institute of Professional Bookkeepers.

### Program Goal/Objectives

Upon successful completion of this certificate, students will:
• Be able to function in relevant positions in business settings.
• Be familiar with the relevant applications in QuickBooks.
• Be prepared to sit for national certifications in accounts payable, payroll and bookkeeping and be prepared for entry-level work as a bookkeeper.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT100 or | Bookkeeping for Small Business | 3 | 0 | 3 |
| ACCT216 | Software Systems Applications | 2 | 2 | 3 |
| ACCT113 | Accounting & Financial Reporting I | 3 | 0 | 3 |
| ACCT123 | Accounting & Financial Reporting II | 3 | 0 | 3 |
| ACSP101 | Payroll Fundamental - Entry Level | 3 | 0 | 3 |
| ACSP103 | Accounts Payable - Entry Level | 2 | .5 | 2 |
| ACSP110 | Bookkeeping Internal Controls & Adv. Topics | 2 | 0 | 2 |
| ACSP111 | Advanced Bookkeeping Applications | 3 | 0 | 3 |

**Total Credits - 19**



# Finance Certificates

MCC offers two Finance Certificates, one for corporate executives and one for personal finance. Financial analysts and personal financial advisors provide investment analysis and guidance to businesses and individuals to help with investment decisions. The certificates focus on the finance, accounting and analytical skills needed to evaluate the situational details while still taking into account the *"big picture."* These certificates prepare students for jobs as entry-level financial analysts or as financial managers, depending on work experience, and also prepare them to continue their education and earn an associate or bachelor degree in accounting/finance. Finance provides stable employment with challenging, rewarding work and above-average salaries. The need for financial analysts and personal financial advisors is expected to grow much faster than the average for other occupations *(U.S. Department of Labor, Occupational Outlook Handbook 2008-2009)*.

### Executive Corporate Finance

### Program Goal/Objectives

Upon successful completion of the certificate, the student will:
• Have a practical working knowledge of financial accounting and financial statements, understand corporate tax laws as they apply to financial decision making.
• Analyze financial scenarios, apply capital budgeting tools, prepare financial forecasts, prepare a comprehensive case analysis for decision making purposes.
• Understand investment options and select optimal financing mix for the company, evaluate the impact of international financial considerations on profitability.
• Be prepared for a job as a financial analyst for a company or a financial manager depending on prior work experience.

### Admissions Requirements

In addition to college wide admissions requirements, students must have completed ACCT113 and ACCT123 with a C or better, prior to acceptance into the program.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT244 | Fed. Income Taxes-Corporations Partnerships | 3 | 0 | 3 |
| BUS221 | Business Finance | 3 | 0 | 3 |
| FINC213 | Applied Problems in Managerial Financial & Financial Policy | 3 | 0 | 3 |
| FINC215 | Introduction to Investment Analysis | 3 | 0 | 3 |
| FINC216 | Budgeting and Forecasting | 3 | 0 | 3 |
| FINC217 | International Corporate Finance | 3 | 0 | 3 |

**Total Credits - 18**

### Personal Finance Certificate

### Program Goal/Objectives

Upon successful completion of the certificate, the student will:
• Have a basic understanding of company financial statements in relation to investment selection.
• Identify the components necessary to evaluate and prepare a personal financial plan and how tax laws apply to preparing the plan, and understand investment options and how to build an investment portfolio.
• Identify the components necessary for retirement, trusts, wills and estate planning, and be prepared for an entry level position in an investment firm.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting & Financial Reporting I | 3 | 0 | 3 |
| ACCT123 | Accounting & Financial Reporting II | 3 | 0 | 3 |
| ACCT115 or | Concepts of Personal Federal Income Taxes | 2 | 0 | 2 |
| ACCT243 | Federal Income Taxes - Individual | 3 | 0 | 3 |
| FINC120 | Personal Financial Management | 3 | 0 | 3 |
| FINC215 | Introduction to Investment Analysis | 3 | 0 | 3 |
| FINC225 | Survey of Retirement, Trusts, Wills & Estate Planning | 2 | 0 | 2 |

**Total Credits - 16/17**

# Automotive Technology
## Associate in Applied Science

**Program Mission**

The Automotive Technology Program provides a strong foundation for a successful and financially rewarding career in a very complex field.

**Program Goal/Objectives**

MCC's partnerships with Chrysler, Toyota, local dealerships, and independent businesses, provide exceptional training, which leads to an Associate's Degree and an invaluable opportunity for full-time employment.

**Program Description**

Today's automotive technicians need a high level of skill and knowledge to diagnose and service increasingly complex systems. The evolution from yesterday's mechanic to a skilled technician requires that today's technicians are competent with highly sophisticated systems as well as with the traditional mechanical areas. Automotive Technology is a state-of-the-art, two-year program combining classroom and practical training with paid, on-the-job co-op experience leading to an Associate's Degree. Curriculums designed to meet an individual student's area of interest include a comprehensive path covering Asian, European, and domestic makes. Additionally, Chrysler *(CAP)*, and Toyota *(T-Ten)* specialized curriculums focus on manufacturer-specific products and provide manufacturer technician training certification.

The Ford MLR *(Maintenance and Light Repair)* program is an alliance between MCC and Ford Motor Company. The MLR curriculum includes training and factory certification in Electrical Systems and Power Accessories, Heating and Air Conditioning, Alignment, Suspension and Steering, and Automotive Brakes. Students will be required to pay an additional $150 fee to use the MLR program resources and training.

Students are required to complete approximately thirty weeks of work experience at an approved co-op site. Part of the program is spent in the classroom and labs at the college, and part is spent working full time at the co-op site. Students become familiar with the latest technology while working as a paid technician trainee.

**Admission Requirements**

In addition to the college-wide admissions requirements, the following requirements apply to both the degree and the certificate programs:
- Must possess a valid driver's license and have a driving record that meets industry insurability standards.
- Must have college assessment results that indicate that placement into College Composition *(ENGL 110)* and college math *(100 level or higher)* is applicable.
- Are required to have a personal interview with one of the automotive department advisors.

**Transfer Credit Policy**

Automotive coursework proposed for transfer must be completed no more than 10 years prior to acceptance into the program.

**Accreditation/Certifications**

The Chrysler CAP and Toyota T-Ten programs are NATEF Certified.

**Employment Opportunities**

Job placement for successful graduates begins with the co-op part of our program. Students often find full-time employment with their co-op sponsors. All students have the personnel skills and experience to find successful employment in a new situation.

**Technical Standards**

Students should also be aware of the following technical standards when applying to the degree or certificate programs:
- It is strongly recommended that students have driving experience with a manual transmission.
- Students should have strength to lift automotive parts, equipment, and perform manual tasks.

- Students must complete approximately 30 weeks of work experience at an approved co-op site.
- Students must possess a specified tool set.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| AUTO111 | Introduction to Automotive Service | 1 | 6 | 3 |
| AUTO112 | Steering Suspension & Alignment | 2 | 4 | 3 |
| AUTO113 | Electrical Systems | 3 | 3 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | **Total** | **10** | **13** | **14** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| AUTO121 | Brake Systems | 2 | 3 | 3 |
| AUTO122 | Engine Theory, Diagnosis, & Repair | 2 | 3 | 3 |
| AUTO123 | Electronics I | 2 | 3 | 3 |
| AUTO124 | Automotive Co-op I | 0 | 15 | 1 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| | Math Elective *(100 level or higher)* | 3 | 0 | 3 |
| | **Total** | **11** | **26** | **16** |

| First Year | Summer Session | TH | LAB | CR |
|---|---|---|---|---|
| AUTO131 | Climate Control Systems | 2 | 3 | 3 |
| AUTO132 | Electronics II | 2 | 3 | 3 |
| AUTO133 | Customer Service | 1 | 0 | 1 |
| AUTO134 | Automotive Co-op II | 0 | 15 | 1 |
| | Science Elective | 3 | 0 | 3 |
| | **Total** | **8** | **21** | **11** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| AUTO211 | Manual Transmissions & Transaxles | 2 | 4 | 3 |
| AUTO214 | Powertrain & Emission Controls | 2 | 3 | 3 |
| AUTO215 | Advanced Vehicle Systems | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| | **Total** | **11** | **7** | **13** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| AUTO220 | Automotive Co-op III | 0 | 15 | 1 |
| AUTO221 | Automatic Trans. Hyd. & Mech. Syst. | 2 | 3 | 3 |
| AUTO223 | Driveability & Performance | 2 | 3 | 3 |
| AUTO224 | Automatic Transmission Electronics | 2 | 3 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | **Total** | **12** | **24** | **16** |

**Total Credits - 70**

### Automotive Technology Certificate

In the Certificate program, students learn the skills necessary for an entry-level technician's position. The program combines classroom and practical training with on-the-job work experience. Students become familiar with the latest technology, earn a certificate, and work as an apprentice technician. Students gain skills that directly apply to the field of study, prepare for ASE exams, and work towards full-time employment. All certificate students must complete an internship course with a minimum of 244 hours of work experience at an approved site.

| | | TH | LAB | CR |
|---|---|---|---|---|
| AUTO101 | Introduction to Service & Maintenance | 1 | 6 | 3 |
| AUTO102 | Suspension & Steering Systems | 2 | 3 | 3 |
| AUTO103 | Basic Electrical | 3 | 3 | 4 |
| AUTO104 | Automotive Brakes | 2 | 3 | 3 |
| AUTO105 | Automotive Engines | 2 | 2 | 3 |
| AUTO106 | Electronic Systems | 2 | 3 | 3 |
| AUTO107 | Automotive Climate Control | 2 | 3 | 3 |
| AUTO108 | Automotive Co-op | 0 | 15 | 1 |
| | **Total** | **14** | **38** | **23** |

**Total Credits - 23**

# Building Construction Technology
## Associate in Applied Science

## Program Mission
The mission of the Building Construction Technology program is to provide students with the knowledge, skills and technical expertise in all phases of light residential construction.

## Program Goals/Objectives
• Demonstrate knowledge of construction of a modular home or similar project.
• Demonstrate skills in framing and installation of exterior and interior finish
• Produce millwork projects
• Articulate safety guidelines and terminology

## Program Description
The Building Construction curriculum provides technical training in all phases of light residential construction. Architectural drafting, blueprint reading, estimating, codes and regulations, energy efficiency, site work and foundations, principles of framing and finish carpentry, and the proper choice and sizing of materials are part of the learning process. To qualify as a wage earner in the modern day construction field, a person must possess technical knowledge of construction design and the skills to apply that knowledge. Laboratory experiences in millwork projects and specialized methods of construction are also provided.

## Admission Requirements
In addition to college wide admissions requirements, students must:
• Successfully complete high school algebra I and geometry with a C or better.

## Certification
Students are eligible to obtain certification in ACI Flatwork Technician, ACI Field Tester Level I, and 10-hour OSHA Training in Construction Safety & Health.

## Employment /Transfer Opportunities
Graduates can find immediate employment as carpenters, estimators, buidling material representatives, can be self-employed or find related positions in the field. Graduates have successfully transferred into four-year degree programs in Small Business Management *(SNHU),* Building Materials Technology *(UMASS Amherst)* and Construction Management *(Wentworth Institute of Technology).*

## Technical Standards
• Adequate hearing for detection of changes in tone or sound of power equipment *(Adaptive equipment acceptable.)*
• Physical strength for maneuvering and/or lifting heavy objects.
• Good manual dexterity.
• Adequate vision for reading blueprints and other printed instruction, working with tools and equipment, and for maneuvering on job sites, scaffolding and areas in various stages of completion. *(Adaptive equipment acceptable.)*
• Ability to visualize and portray ideas graphically.
• Ability to exercise initiative and judgment while dealing while dealing with changing situations.

## Building Construction Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| BLDG112 | Methods of Construction I Theory | 4 | 0 | 4 |
| BLDG113 | Methods of Construction I Lab | 0 | 6 | 2 |
| BLDG122 | Methods of Construction II Theory | 4 | 0 | 4 |
| BLDG123 | Methods of Construction II Lab | 0 | 6 | 2 |
| BLDG225 | Blueprint Reading/ Estimating | 3 | 3 | 4 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |

**Total Credits - 19**

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| BLDG111 | Construction Drafting I | 1 | 3 | 2 |
| BLDG112 | Methods of Construction I Theory | 4 | 0 | 4 |
| BLDG113 | Methods of Construction I Lab | 0 | 6 | 2 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 13 | 9 | 16 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| BLDG121 | Construction Drafting II | 1 | 3 | 2 |
| BLDG122 | Methods of Construction II Theory | 4 | 0 | 4 |
| BLDG123 | Methods of Construction II Lab | 0 | 6 | 2 |
| CIS110 | Microsoft Computer Applications | 2 | 2 | 3 |
| MATH135 | Numerical Algebra and Trigonometry | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 13 | 11 | 17 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| BLDG212 | Methods of Construction III Theory | 3 | 0 | 3 |
| BLDG213 | Methods of Construction III Lab | 0 | 6 | 2 |
| BLDG214 | Energy Efficient Building Construction | 3 | 0 | 3 |
| BLDG230 | Construction CAD I | 2 | 2 | 3 |
| BLDG240 | Introduction to Precision Estimating | 1 | 2 | 2 |
| PHYS100 | Introductory Physics | 2 | 3 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Total | 14 | 13 | 19 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| BLDG222 | Site Work and Foundations | 3 | 0 | 3 |
| BLDG223 | Methods of Construction V Theory | 3 | 0 | 3 |
| BLDG224 | Methods of Construction V Lab | 0 | 6 | 2 |
| BLDG225 | Blueprint Reading/Estimating | 3 | 3 | 4 |
| BLDG235 | Construction CAD II | 2 | 2 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Total | 14 | 11 | 18 |

**Total Credits - 70**

### Architectural Drafting Technology Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| BLDG111 | Construction Drafting I | 1 | 3 | 2 |
| BLDG121 | Construction Drafting II | 1 | 3 | 2 |
| BLDG230 | Construction CAD I | 2 | 2 | 3 |
| BLDG235 | Construction CAD II | 2 | 3 | 3 |

**Total Credits - 10**

### Computer Aided Design *(CAD)* Certificate

The Computer Aided Design *(CAD)* Certificate provides short-term training for job skill development and advancement leading to employment. The courses prepare students to work in engineering environments to create drawings for manufacture and to help solve engineering problems through graphic communication. The skills will prepare students to be continuous learners and be adaptable to other CAD system software. This certificate will address all of the skills needed to support disciplines locally and globally with the focus on architectural and mechanical drafting.

| | | TH | LAB | CR |
|---|---|---|---|---|
| CAD110 | CAD I - Fundamentals | 2 | 2 | 3 |
| CAD120 | CAD II - Intermediate | 2 | 2 | 3 |
| CAD210 | CAD III - Advanced | 2 | 2 | 3 |

**Total Credits - 9**

# Business Communications Degree
## Associate in Science

## Program Mission
The mission of the Business Communications degree is to prepare students for transfer to a four-year college or university or become employed in an entry-level business communications position. Students will possess a solid business communications and business studies foundation

## Program Goal/Objectives
Students who graduate from this program will be able to:
• Demonstrate knowledge of various advertising mediums such as print, radio, television, e-commerce, etc.
• Develop integrated marketing communication skills in the areas of product, place, price and promotion
• Demonstrate excellent written communication skills to be applied to business settings
• Demonstrate team work principles and techniques
• Demonstrate excellent oral and presentation communication skills
• Articulate global business communications perspectives

## Program Description
Every organization requires some form of effective business communications, which is a vital skill for today's graduates. Whether communicating with co-workers and colleagues or prospects and clients, business graduates must use various communication skills and techniques in their professions on a daily basis.

Students are introduced to basic business communication concepts, theories, and techniques. They will also engage in organizational behavior exercises and team building activities as well as have the opportunity to apply their business communication knowledge using hands-on, real-world projects. This may include Service-Learning projects, integrated marketing communication plans, marketing research projects, advertising campaigns, as well as case studies and business communication simulations. Students will obtain a well-rounded education in business theory and application

## Admissions Requirements
Applicants for admission to the Business Communications degree program must comply with the college admission requirements; no specific program requirements apply.

## Employment Opportunities
According to the National Association of Colleges and Employers *(NACE)*, job prospects for business graduates are strong. Students with a business background can find entry-level jobs in the service, government, and non-profit sectors.

## Transfer Policy
Students may transfer credits earned at other accredited institutions provided a grade of C or better has been earned in courses with equivalent content. Appropriate transfer credits may be accepted within a 10-year time frame.

## Accreditation
The Department of Business Studies is nationally accredited by the Association of Collegiate Business Schools and programs *(ACBSP)*. Our national accreditation allows our graduates to transfer to four-year colleges and universities in all regions of the country.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| BUS120 | Introduction to Communications Media | 3 | 0 | 3 |
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH132 | Business Math | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 17 | 0 | 17 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| BUS114 | Management | 3 | 0 | 3 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| ENGL203 | Introduction to Journalism | 3 | 0 | 3 |
| | OR | | | |
| ENGL214 | Creative Nonfiction | 3 | 0 | 3 |
| | Science Elective | 3 | 0 | 3 |
| | Total | 15 | 0 | 15 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT105 | Managerial Accounting | 3 | 0 | 3 |
| MKTG210 | Advertising | 3 | 0 | 3 |
| BUS216 | Organizational Behavior | 3 | 0 | 3 |
| CDI111 | Electronic Publishing | 3 | 0 | 3 |
| PHIL240 | Ethics | 3 | 0 | 3 |
| ENGL113 | Oral Communications | 3 | 0 | 3 |
| | Total | 18 | 0 | 18 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| MKTG135 | Global Consumer Behavior | 3 | 0 | 3 |
| MKTG205 | International Marketing | 3 | 0 | 3 |
| BUS200 | Team Building | 3 | 0 | 3 |
| BUS210 | Organizational Communications | 3 | 0 | 3 |
| MKTG282 | Marketing Research | 3 | 0 | 3 |
| | Liberal Arts Elective | 3 | 0 | 3 |
| | Total | 18 | 0 | 18 |

**Total Credits - 68**

### Business Communications Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| BUS120 | Introduction to Communications Media | 3 | 0 | 3 |
| BUS200 | Team Building | 3 | 0 | 3 |
| BUS210 | Organizational Communications | 3 | 0 | 3 |
| BUS216 | Organizational Behavior | 3 | 0 | 3 |
| MKTG282 | Marketing Research | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| MKTG135 | Global Consumer Behavior | 3 | 0 | 3 |
| MKTG210 | Advertising | 3 | 0 | 3 |

**Total Credits - 28**
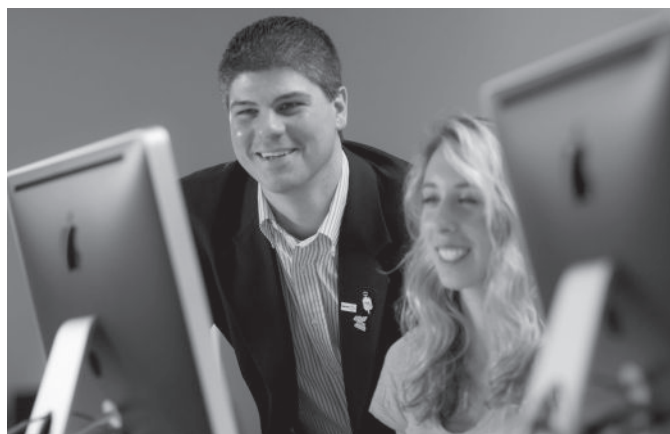
# Computer Science
## Associate in Science

## Program Mission
The Computer Science program provides foundation-level preparation and logic common to all computer science areas, rather than on specific application programs. In the second year of the program, students are able to focus on one of several functional areas, including applications, database, networking/web development, programming, or web graphics.

## Program Goals/Objectives
• Demonstrate proficiencies in the foundation of programming languages, object oriented databases and networking.
• Demonstrate expertise in one area of computer science: programming, data structures, databases or networking.
• Demonstrate proficiency in state-of-the-art technology, within the student's area of concentration.
• Demonstrate problem solving and critical thinking skills.
• Demonstrate knowledge in social, legal and ethical implications for computer science.
• For non-CS majors provide fundamental understanding of Microsoft® Office Suite™ applications.

## Program Description
The Computer Science Associate's Degree Program offers students technical and professional preparation for careers in computer science as well as transfer to a four-year degree program. All degree candidates study core computer science competencies including various programming, Internet, networking and operating system courses.

## Admissions Requirements
In addition to college-wide admissions requirements
• proof of satisfactory completion of high school algebra 2 or higher.
• interview with Program Coordinator

## Technical Standards
Most physical requirements necessary for this program can be accommodated with appropriate documentation.

## Transfer Policy
• Any computer course being considered for transfer cannot be more that 10 years old from the date of matriculation into the Computer Science program.
• Any Microsoft® course being considered for transfer cannot be more than five years old from the date of matriculation into the Computer Science program.

## Employment Opportunities
Computer Science remains one of the fastest growing fields, with a projected shortage of qualified job candidates for the foreseeable future for programmers, networkers, database professionals and web designers. These areas have been noted by the U.S. Dept. of Labor's Bureau of Labor Statistics as 'high growth' areas.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| CIS111 | Foundations of Computer Technologies | 2 | 2 | 3 |
| CIS | Programming Language-choose one CIS118 or CIS148 or CIS158 | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH141 | Advanced Algebra & Trig. | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 12 | 2 | 14 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| CIS113 | Database Design & Management Using SQL | 3 | 3 | 4 |
| CIS210 | Data Structures & Elem. Algorithms | 3 | 3 | 4 |
| MATH170 | Discrete Mathematics | 4 | 0 | 4 |
| ENGL206 | Professional Communication | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 16 | 6 | 18 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| CIS | Concentration Elective - choose one CIS116, CIS124, CIS220, CIS233 | 2 | 2 | 3 |
| CIS | Technical Elective (Any Level) | 2 | 2 | 3 |
| CIS | Technical Elective (Any Level) | 2 | 2 | 3 |
| MATH171 | Pre-Calculus | 4 | 0 | 4 |
| HUMA150 | Critical Thinking | 3 | 0 | 3 |
| | Total | 13 | 6 | 16 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| CIS274 | XML Programming I | 2 | 2 | 3 |
| CIS291 | Capstone Senior Seminar | 2 | 2 | 3 |
| CIS | Technical Elective (200 level) | 2 | 2 | 3 |
| CIS | Technical Elective (any level) | 2 | 2 | 3 |
| | Lab Science Elective | 3 | 3 | 4 |
| | Liberal Arts Elective | 3 | 0 | 3 |
| | Total | 12 | 9 | 19 |

**Total Credits - 67**

## Microsoft® Applications Certificate
This certificate is designed to respond to the needs for effective and efficient retraining of individuals who have been displaced or seek retaining for a office environment. This certificate has two goals:
• To provide training necessary for the modern workplace.
• To provide the knowledge necessary for the student to take the MS Office® Certification exam.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ADMN111 or | Keyboarding I | 3 | 0 | 3 |
| CIS109 | Operating Systems & Desktop Prob. Resol. | 2 | 2 | 3 |
| CIS110 | Microsoft® Computer Applications I | 2 | 2 | 3 |
| CIS120 | Microsoft® Computer Applications II | 2 | 2 | 3 |
| CIS221 | Advanced Word® | 2 | 2 | 3 |
| CIS231 | Advanced Worksheets | 3 | 3 | 4 |
| | Total | 11/12 | 11 | 16 |

**Total Credits - 16**

## Programming Certificate
Designed to prepare students for careers in computer programming, this certificate provides the skills necessary for entry-level positions in the field. Students will also be prepared to transfer these courses into the Computer Science degree program.

| | | TH | LAB | CR |
|---|---|---|---|---|
| CIS111 | Foundations of Computer Technologies | 2 | 2 | 3 |
| CIS118 | Visual Basic.Net Programming | 2 | 2 | 3 |
| CIS148 | JAVA Programming | 2 | 2 | 3 |
| CIS158 | C # Programming | 2 | 2 | 3 |
| CIS210 | Data Structures & Elementary Algorithms | 3 | 3 | 4 |
| CIS220 | Object Oriented Programming | 2 | 2 | 3 |
| | Total | 13 | 13 | 19 |

**Total Credits - 19**

## Web Programming Certificate
Designed for students interested in developing current key skills for careers in the Internet application development, this certificate will focus on the technical skills necessary to prepare students for jobs as entry-level Web Programmers. As the World Wide Web continues to impact business and education, developers must be prepared for the new challenges in the ever-evolving world of Internet technology.

| | | TH | LAB | CR |
|---|---|---|---|---|
| CIS111 | Foundations of Computer Technologies | 2 | 2 | 3 |
| CIS113 | Database Design & Management Using SQL | 3 | 3 | 4 |
| CIS124 | Web Programming I | 2 | 2 | 3 |
| CIS148 | Java Programming | 2 | 2 | 3 |
| CIS224 | Web Programming II | 2 | 2 | 3 |
| CIS234 | PHP & MySQL® Web Development | 2 | 2 | 3 |
| | Total | 13 | 13 | 19 |

**Total Credits - 19**

# Education

## Early Childhood Education
## Associate in Applied Science

### Early Childhood Education
**MCC'S ECE Degree Program is the first and only ECE Associate Degree in New Hampshire accredited by the National Association for the Education of Young Children.**

### Program Mission
The mission of the Early Childhood Education program is to provide students with the knowledge, skills, and dispositions that will enable them to become exemplary early childhood educators. To do so we maintain high academic and professional expectations which adhere to the standards of quality set forth by the National Association for the Education of Young Children *(NAEYC)*. Students will learn to be competent, reflective practitioners able to:
• Demonstrate an understanding of the early childhood profession and a commitment to its Code of Ethical Conduct
• Demonstrate understanding of the diverse developmental, cultural, and individual needs of all children
• Create high quality, inclusionary, positive, and nurturing learning environments & curriculum for young children
• Demonstrate skillful observation, documentation, and assessment of children's progress
• Build and maintain positive, productive, and reciprocal relationships with children, families, and colleagues
• Serve as an advocate on behalf of young children and their families to improve the quality of early childhood programs and services.

### Program Goal/Objectives
By the completion of the program, students will be able to:.
• Explain and demonstrate knowledge of the multiple interacting influences on children's development and learning, and demonstrate the ability to support the physical, social, emotional, and cognitive development of young children from birth to age twelve, including those with unique developmental or learning needs.
• Establish and maintain safe, healthy, supportive, inclusionary, and culturally pluralistic learning environments for young children.
• Demonstrate an understanding of the goals, benefits, and purposes of assessment and the ability to utilize a variety of assessment and evaluation strategies and tools effectively to observe and document children's development and behavior in a positive and constructive manner, noting each child's strengths and interests as well as needs.
• Design, implement and evaluate a meaningful, challenging, and developmentally appropriate curriculum that demonstrates a wide array of teaching practices reflecting the spectrum of content areas as well as taking into consideration the individual needs, learning styles, and interests of young children.

### Program Description
The ECE program is designed to prepare individuals to be competent professionals. Graduates meet the New Hampshire Child Care Licensing *(NHCCL)* requirements for a lead teacher and center director *(with some job-related experience)*. The campus offers flexibility in scheduling and course and career options.

The Associate of Applied Science *(AAS)* degree program provides a combination of theory and practical experience to prepare graduates for immediate entry into the ECE field or for transfer to a bachelor degree program for those who wish to teach in the public schools. Graduates have approximately 300 hours of supervised experience with children of two different age levels *(infant/toddler, preschool, primary grade)*, adhering to the NAEYC standards.

In addition, the program offers four certificates that provide training for different aspects of early childhood education: Lead Teacher Certificate, Infant/Toddler Certificate; Special Education Certificate and Early Childhood Professional Certificate.

## Liberal Arts/Education
## Associate in Arts

### Admission Requirements
In addition to college-wide admission requirements, ECE applicants:
• Are required to attend an informational session before acceptance into the program
• Must provide a copy of health form required by NHCCL for childcare personnel indicating the individual is "recommended to work with young children."
**Note:** Students in the ECE programs must be free from criminal felony convictions. All students enrolled in any practicum class must complete a criminal records check through the practicum site that includes fingerprinting. There is a $40-$50 charge for this for each practicum. Applicants who are unsure of their status in this area should discuss the matter with their academic advisor, as it may impact their ability to participate in practicum, observation assignments, and to be employed in the field of childcare or early childhood education.

### Technical Standards
Technical Standards provide insight for students into the skills and abilities required to function successfully in the ECE program and eventually the profession. Applicants who do not feel they can meet these standards should contact the ECE program coordinator before applying.
Students enrolling in the ECE program must have sufficient strength, stamina and motor coordination to:
• Stand for sustained periods of time, walking, running, bending, sitting on the floor and on child-size furniture to meet the child's needs and accomplish tasks.
• Lift, move and transfer children, especially infants and toddlers.
In addition, students should have:
• Sufficient visual and hearing acuity to ensure a safe environment and the ability to respond quickly in an emergency.
• Sufficient verbal ability to express and exchange information and ideas and to interpret instructions to children, co-workers and parents.
• The ability to work with frequent interruptions, to respond appropriately in unexpected situations, and to cope with extreme variations in workload and stress levels.

### Early Childhood Education Transfer Credit Policy
In addition to MCC transfer credit policies, transfer of courses in early childhood education more than 10 years old will be evaluated by the Department Chair on an individual basis.

### Early Childhood Professional Certificate
*(Core courses must be taken first.)*

Designed for students who already hold an associate or bachelor's degree, or 60 college credits from an accredited college in another field who wish to become center director qualified in NH *(with work experience)*.

| Core Courses | | TH | LAB | CR |
|---|---|---|---|---|
| ECE100 | Early Childhood Growth and Development | 3 | 0 | 3 |
| ECE104 | Foundations of Early Childhood Education | 3 | 0 | 3 |
| ECE112 | Preschool Practicum: Learning Environments | 2 | 3 | 3 |
| ECE116 | Child Health, Safety & Nutrition | 3 | 0 | 3 |
| ECE201 | Children's Individual & Special Needs | 3 | 0 | 3 |
| ECE250* | Childcare Administration and Management | 3 | 0 | 3 |
| **Curriculum Elective** | *Choose one* | | | |
| ECE110 | Children's Literature and Language Arts | 3 | 0 | 3 |
| ECE200 | Math and Science for Young Children | 3 | 0 | 3 |
| **Relationship Elective** | *Choose one* | | | |
| ECE210 | Child, Family and Community Relations | 3 | 0 | 3 |
| ECE214 | Developmentally Appropriate Guidance & Discipline for Young Children | 3 | 0 | 3 |

**Total Credits - 24**

*Required for Center Director Credential in New Hampshire.

## Early Childhood Education
## Associate in Applied Science
### DEGREE PROGRAM

| | General Requirements | TH | LAB | CR |
|---|---|---|---|---|
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | or | | | |
| MATH103 | Topics in Applied College Mathematics | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| PHIL240 | Ethics | 3 | 0 | 3 |
| EDU205 | Technology in Education | 2 | 2 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Science Elective | 3 | 0 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |

| | ECE Core Requirements | TH | LAB | CR |
|---|---|---|---|---|
| ECE100 | Early Childhood Growth and Development | 3 | 0 | 3 |
| ECE104 | Foundations of Early Childhood Education | 3 | 0 | 3 |
| ECE105 | Creative Activities & Cur. for Early Childhood | 3 | 0 | 3 |
| ECE110 | Children's Literature and Language Arts | 3 | 0 | 3 |
| ECE111 | Infant/Toddler Practicum: Nurturing Environ. | 2 | 2 | 3 |
| or | | | | |
| ECE112 | Preschool Practicum:  Learning Environments | 2 | 3 | 3 |
| ECE116 | Child Health, Safety and Nutrition | 3 | 0 | 3 |
| ECE200 | Math and Science for Young Children | 3 | 0 | 3 |
| ECE201 | Children's Individual and Special Needs | 3 | 0 | 3 |
| ECE202 | Student Teaching Practicum | 1 | 9 | 4 |
| ECE210 | Child, Family and Community Relations | 3 | 0 | 3 |
| ECE212 | Professional Development Practicum | 1 | 9 | 4 |
| ECE214 | Developmentally Appropriate Guidance and Discipline for Young Children. | 3 | 0 | 3 |
| ECE250 | Childcare Administration & Mangement | 3 | 0 | 3 |
| | **ECE Elective Courses** | **TH** | **LAB** | **CR** |
| | *(Minimum 3 credits - Choose one course)* | | | |
| ECE204 | Developmentally Appropriate Curriculum for Infants and Toddlers | 3 | 0 | 3 |
| ECE205 | Developmentally Appropriate Programs for School Age Children | 3 | 0 | 3 |

**Total Credits - 70**

**\*NOTE:** Students planning to transfer to a 4-year degree program should take MATH131 and a 4 credit science course.

## Early Childhood Lead Teacher Certificate

This certificate will enable students to qualify as lead teachers in an early childhood program according to NH state child care program licensing rules. All courses in this program transfer directly into the associate degree program for students who wish to continue their education.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ECE100 | Early Childhood Growth and Development | 3 | 0 | 3 |
| ECE104 | Foundations of Early Childhood Education | 3 | 0 | 3 |
| ECE112 | Preschool Practicum:  Learning Environments | 2 | 2 | 3 |
| ECE116 | Child Health, Safety and Nutrition | 3 | 0 | 3 |
| ECE201 | Children's Individual and Special Needs | 3 | 0 | 3 |
| ECE Elective | Choose one: ECE110, ECE200, or ECE214 | 3 | 0 | 3 |

**Total Credits - 18**

## Infant/Toddler Lead Teacher Certificate

Quality infant/toddler care is a critical need in New Hampshire, and more caregivers are needed who are specifically trained in developmentally appropriate practices for this age group. As evidence of this need, for the past several years the state has offered 100% funding for the infant/toddler curriculum course to encourage more caregivers to improve their skills. This certificate meets the licensing requirements of the State of NH for lead teachers *(18 credits)*. All courses in this certificate program will transfer to the associate degree program.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ECE100 | Early Childhood Growth and Development | 3 | 0 | 3 |
| ECE104 | Foundations of Early Childhood Education | 3 | 0 | 3 |
| ECE111 | Infant/Toddler Practicum: Nurturing Environ. | 2 | 3 | 3 |
| ECE116 | Child Health, Safety, and Nutrition | 3 | 0 | 3 |
| ECE201 | Children's Individual and Special Needs | 3 | 0 | 3 |
| ECE204 | Dev. Appropriate Curriculum-Infant/Toddlers | 3 | 0 | 3 |

**Total Credits - 18**

## ECE Special Education Certificate

Teachers and paraprofessionals are increasingly working in inclusive settings and are responsible for meeting students' Individualized Educational Plans *(IEP)*. They are members of the IEP or IFSP teams and need adequate training to effectively work with children with unique learning characteristics. This certificate trains individuals interested in working as paraprofessionals in Early Intervention or Early Childhood Special Education and Inclusionary classrooms.

**Birth-Grade 3 Option**

| | | TH | LAB | CR |
|---|---|---|---|---|
| ECE100 | Early Childhood Growth and Development | 3 | 0 | 3 |
| ECE104 | Foundations of Early Childhood Education | 3 | 0 | 3 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| ECE112 | Preschool Practicum: Learning Environments | 2 | 2 | 3 |
| ECE201 | Children's Individual and Special Needs | 3 | 0 | 3 |
| EDU215 | Behavioral Challenges in the Classroom | 3 | 0 | 3 |
| EDU220 | Families & Professionals in Special Education | 3 | 0 | 3 |
| EDU225 | Curriculum Planning and Implementation for Children with Unique Learning Characteristics | 3 | 0 | 3 |

**Total Credits - 24**

# Liberal Arts/Education
## Associate in Arts

### Program Mission
The mission of the Liberal Arts/Education Program is to provide students with the foundation to become effective educators. Students will gain a firm understanding of schools and their functions, the teaching process, effective techniques, and the art of reflection in order to meet the needs of all children. Students will be able to experience elementary, middle, and high school levels. The program is aligned with national standards and four-year colleges with education degrees.

### Program Goal/Objectives
Graduating students will:
- Develop an appreciation for the act of reflective practice and recognize the impact of ongoing reflection in order to become an effective educator.
- Be exposed to elementary, middle, and secondary school systems while developing an understanding of the importance of meeting the individual needs of all children.
- Acquire an understanding of various educational theories and their application to the real-world classroom.
- Be exposed to a variety of teaching techniques used in today's classrooms to meet the individual needs of all children.

### Program Description
The Liberal Arts/Education degree is designed to allow students to transfer to a four-year college to become teachers. The program allows students to experience elementary, middle, and high school education, and has a common first year of coursework. In the second year, students choose courses in any one of the following areas: math, science, social science, English, foreign languages, elementary education, and special education. Completion of these courses demonstrates the content expertise required to become eligible for certification once the bachelor degree is completed. Elective courses are selected in consultation with the student's advisor. This degree is eligible to transfer to four-year institutions with teacher preparation or liberal arts degrees. It also meets the requirements for paraprofessionals seeking an associate degree to fulfill national and state requirements.

### Admission Requirements
Students interested in applying for the Liberal Arts/Education program are required to attend an informational session before acceptance into the program.

### Transfer Policy
In addition to MCC transfer credit policies, appropriate education courses will be accepted if taken within a five-year period. Exceptions to this policy, based on professional experience, may be granted at the discretion of the Department Chair. Proper documentation will be required to initiate this process.

### Technical Standards
- Individuals expecting to pursue their teacher certification and/or seek employment in the educational system are required to undergo criminal backgrounds checks and fingerprinting.
- Students who expect to transfer to a four-year degree program must take the Praxis I exam for admission to the college and pass the test for approval for student teaching.
- Students seeking employment as a "highly qualified" paraprofessional or teacher assistant must pass the Praxis I exam. MCC has an online tutoring program to prepare students for the Praxis I.
- Students seeking a career in education should be physically and mentally fit to withstand a physically active work environment and the stress of ever-changing circumstances, and have the ability to respond quickly and appropriately when events require.

Students are also expected to have the maturity to accept direction and guidance, exercise sound judgment, maintain confidentiality, and maintain sensitive interpersonal relationships with teachers, fellow students, children and their families.

## DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| EDU101 | Introduction to Exceptionalities | 3 | 0 | 3 |
| EDU104 | Foundations of Education | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| EDU205 | Technology in Education | 2 | 2 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| | **Total** | **16** | **2** | **17** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| EDU201 | Teaching and Learning | 3 | 0 | 3 |
| PSYC210 | Human Growth & Development | 3 | 0 | 3 |
| Elective | Social Science (AN101, PSYC230, SOC 109,110, 250) | 3 | 0 | 3 |
| Elective | English Literature (ENGL200, 205, 218, 220, 225) | 3 | 0 | 3 |
| Elective | Foreign Language/Humanities/Foreign Lang. (ARTS117, 127, 130, HIST120, 130, HUMA105, 210, 220, ENGL113, ASL, FREN, GERM, SPAN) | 3 | 0 | 3 |
| | **Total** | **15** | **0** | **15** |

## DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| MATH131 | College Algebra I | 3 | 0 | 3 |
| Elective | Education Transfer Focus (EDU200,215,220, 225) | 3 | 0 | 3 |
| Elective | Lab Science (BIOL101, ESCI110, PHYS110) | 3 | 3 | 4 |
| Elective | Foreign Language/Humanities/Foreign Lang. (ARTS117, 127, 130, HIST120, 130, HUMA105, 210, 220, ENGL113, ASL, FREN, GERM, SPAN) | 3 | 0 | 3 |
| Elective | Social Science (AN101, PSYC230, SOC 109,110, 250) | 3 | 0 | 3 |
| | Open Elective | 3 | 0 | 3 |
| | **Total** | **18** | **3** | **19** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| Elective | History/Government (HIST202, 204, POL110) | 3 | 0 | 3 |
| Elective | Mathematics (MATH200, 202) | 4 | 0 | 4 |
| Elective | Lab Science (BIOL101, ESCI110, PHYS110) | 3 | 3 | 4 |
| Elective | Philosophy (PHIL100, 215, 240) | 3 | 0 | 3 |
| | Open Elective | 3 | 0 | 3 |
| | **Total** | **16** | **3** | **17** |

**Total Credits - 68**

## School Age Special Education Certificate
May be earned independently or as part of the education degree, and includes three courses that fulfill the requirements of the Education Focus Transfer electives. Students completing the certificate may be eligible for employment as paraprofessionals for children with special needs.

| | Required Core Courses | TH | LAB | CR |
|---|---|---|---|---|
| EDU101 | Introduction to Exceptionalities | 3 | 0 | 3 |
| EDU104 | Foundations of Education | 3 | 0 | 3 |
| EDU201 | Teaching & Learning | 3 | 0 | 3 |
| EDU215 | Behavioral Challenges in the Classroom | 3 | 0 | 3 |
| EDU220 | Families & Professionals in Special Education | 3 | 0 | 3 |
| EDU225 | Curriculum Planning & Implementation for Children with Unique Learning Characteristics | 3 | 0 | 3 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| PSYC210 | Human Growth and Development | 3 | 0 | 3 |

**Total Credits - 24**
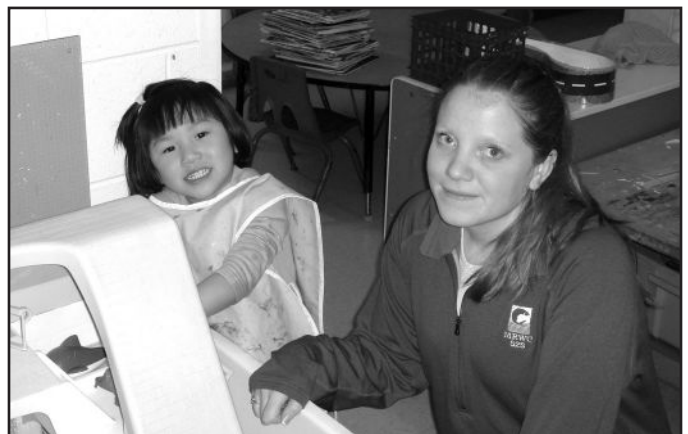
# Electrical Technology
## Associate in Science

## Program Mission
The mission of the Electrical Technology program is to provide students with the foundation to become effective electrical technicians.

## Program Goals/Objectives
Students who successfully complete the Electrical Technology program will:
- Be prepared with the required theory training for an electrician apprenticeship.
- Be well versed in fundamental electrical theory.
- Demonstrate safe and appropriate use of electrical equipment.
- Possess in-depth knowledge of the National Electrical Code.
- Be prepared for entry-level positions.

## Program Description
The electrical field continues to grow in its scope and employment opportunities due to technological advances as well as economic changes and expansion. Electrical work is becoming more complex with electronics, microprocessor based controls, and data communications integrated into residential, commercial, and industrial electrical systems. This increasing complexity is creating an ever-growing need for well trained and qualified licensed electricians and electrical technicians.

Classroom instruction highlights contemporary and evolving electrical technologies applications. This program meets the requirements for electrical apprentice training, and in some areas, it will exceed those requirements.

The Associate Degree classes are held during the day and in the evening to accommodate a variety of scheduling needs. Students who attend full time during the day are able to complete the program in two calendar years, once any necessary developmental coursework is completed. Evening students will take a minimum of four years to complete the program.

## Admission Requirements
In addition to college-wide admissions requirements:
- Read at the college level based on Accuplacer testing.
- Place into MATH131, College Algebra.
- Interview with Program Coordinator.

## Employment Opportunities
Students who successfully complete this program can seek employment as electrical maintenance technicians, industrial electrical technicians or electrical field service technicians.

## Technical Standards
It is highly recommended that applicants have:
- The physical strength necessary to maneuver and lift moderately heavy objects.
- Good manual dexterity.
- Adequate vision for reading printed instructions and electrical diagrams and should not have color blindness.*(Adaptive equipment is acceptable.)*
- Adequate hearing to distinguish various sounds and changes in pitch. *(Adaptive equipment is acceptable.)*
- Ability to visualize and portray ideas graphically.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ETEC110 | Electrical Fundamentals I (8 wks) | 3 | 3 | 4 |
| ETEC120 | Electrical fundamentals II (8 wks) | 3 | 3 | 4 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 10 | 6 | 12 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ETEC150 | Power, transformers, & Rotary Machinery | 3 | 3 | 4 |
| ETEC160 | Residential, commercial & Industrial Wiring | 3 | 3 | 4 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH141 | Advanced Algebra & Trigonometry | 3 | 0 | 3 |
| | Total | 12 | 9 | 15 |

| | Summer Semester | TH | LAB | CR |
|---|---|---|---|---|
| PHYS135 | College Physics I | 3 | 3 | 4 |
| | Foriegn Language/Humanities/Fine Arts Elect. | 3 | 0 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Business Elective | 3 | 0 | 3 |
| | Total | 12 | 3 | 13 |

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ETEC210 | Power, Transformers, and Rotating Machinery | 3 | 3 | 4 |
| ETEC220 | Comm. & Low Voltage Building Systems | 3 | 3 | 4 |
| CIS158 | C++ Programming | 2 | 2 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 11 | 8 | 14 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ETEC250 | Advanced Control Systems I | 3 | 3 | 4 |
| ETEC260 | Advanced Control Systems II | 3 | 3 | 4 |
| | Math or Science Elective (must be 4 credits) | 4 | 0 | 4 |
| | Total | 10 | 6 | 12 |

**Total Credits - 65**

## Electrical Technology Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| ETEC110 | Electrical Fundamentals I | 3 | 3 | 4 |
| ETEC120 | Electrical Fundamentals II | 3 | 3 | 4 |
| ETEC150 | Power Transformers/Rotating Mach. | 3 | 3 | 4 |
| ETEC160 | Residential, Comm/Ind/Wiring | 3 | 3 | 4 |
| ETEC210 | Electrical & Electronic Motor Control | 3 | 3 | 4 |
| ETEC220 | Comm/Low Voltage Building Systems | 3 | 3 | 4 |
| ETEC250 | Advanced Control Systems I | 3 | 3 | 4 |
| ETEC260 | Advanced Control Systems II | 3 | 3 | 4 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| MATH141 | Advanced Algebra and Trigonometry | 3 | 0 | 3 |

**Total Credits - 38**

# English As A Second Language

## Program Mission
The mission of the ESL program is to help non-native English speakers improve their English language skills and proficiency for personal, professional, and academic advancement.

## Program Goal/Objectives
• English language fluency & integration of all language skills
• Use of authentic materials
• Understanding and valuing different cultures
• Peer and self-assessment
• Computer literacy

## Program Description
The English as a Second Language *(ESL)* Program at MCC serves students from more than 50 different countries. The range of sequenced non-credit and credit courses provides instruction and support  at multiple levels from beginning to advanced. This sequencing format provides students the opportunity to build on the foundation of their language skills and further develop these skills within a comprehensive, cohesive program of English-language instruction.

## Assessment
Students must complete an English language assessment/placement test before they can enroll in any ESL course. Assessments are administered through the Center for Academ*ic Placement and Support.*
No appointment is necessary.

## International Students
International students studying in the United States under a student visa must provide a TOEFL score for admission. See International Student Applicants – Admission Requirements.

## Non-credit Courses
Students receive a certificate of completion after each course.
ESL070 ESL – Beginning I
ESL080 ESL – Beginning II
ESL050 ESL – Listening, Speaking, and Pronunciation
ESL090 ESL – Intermediate I
ESL091 ESL – Intermediate II
ESL065 Test of English as a Foreign Language *(TOEFL)* Preparation

## Credit Courses
Credits count for Financial Aid purposes only and do not apply to graduation requirements.
ESL097 Pronunciation for Non-Native Speakers
ESL098 ESL – Intermediate
ESL120 ESL – Advanced*
*ESL120 may be used to fulfill the Foreign Language requirement for students who earn a final grade of C or better, and for students for whom English is a foreign language.

## Specialized ESL Courses
Specialized ESL courses are offered for specific areas such as medical/allied health and business, and can be offered on campus or at companies. Contact the Director of Workforce Development at (603) 668-6706 for more information.

# Exercise Science
## Associate in Science

### Program Mission
The mission of the Exercise Science program is to prepare students to become leaders within the health/fitness industry by providing them with fundamental knowledge, skills and ability in the areas of health/fitness assessment, exercise analysis, programming and leadership so that they may safely and effectively develop and implement exercise programs for various populations throughout the community and private industry settings.

### Program Goal/Objectives
Students who graduate from the Exercise Science program will:
• Possess the knowledge, skills and abilities needed to safely and effectively assess, analyze, prescribe and lead exercise for various populations and successfully complete industry leading *(ACSM, ACE, NSCA)* certification exams.
• Possess an appreciation for and knowledge of the human body systems as well as understanding of the acute and chronic effects within the body resulting from physical activity and exercise.
• Demonstrate strengths in interpersonal skills, professional integrity and responsibilty, independent thinking and problem solving.
• Demonstrate an awareness of and involvement in local business, community and industry organizations.

### Program Description
Exercise Science is a cross-disciplinary subject area involving the scientific study of human performance and the acute and chronic changes within the body resulting from physical activity, and exercise. Students will apply this scientific foundation to practical application of health/fitness assessment, programming and leadership through a variety of hands-on labs and service-learning opportunities.

### Admission Requirements
Due to the physical aspects of this program students must possess health insurance and submit report of a current physical exam.

### Employment Opportunities
Students are prepared for an entry-level position in a field that has a broad choice of career options. Graduates seek employment in health/fitness facilities, corporate fitness centers, sports medicine clinics, community/older adult health programs and as personal fitness trainers/consultants. Completion of the degree prepares students for transfer into exercise physiology, physical therapy, kinesiology and athletic training programs.

### Transfer Policy
There is no time limit on courses eligible for transfer into the Exercise Science program.

### Technical Standards
• Students must complete American Heart Association HeartSaver CPR/AED or American Red Cross equivalent and obtain professional liability insurance (available at the college) prior to participation in internships. Students are responsible for any travel to and from internship sites, community service sites and site visits for EXER111.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| EXER111 | Introduction to Exercise Science Industry | 1 | 3 | 2 |
| BIOL110 | Human Anatomy and Physiology I | 3 | 3 | 4 |
| BIOL150 | Nutrition | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | **Total** | **14** | **8** | **17** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| EXER113 | Physiology of Exercise | 3 | 2 | 4 |
| EXER213 | Resistance Training Essentials | 2 | 3 | 3 |
| BIOL120 | Human Anatomy and Physiology II | 3 | 3 | 4 |
| MATH131 | College Algebra | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | **Total** | **14** | **8** | **17** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| EXER116 | Health Fitness Assessment & Programming | 2 | 4 | 4 |
| EXER200 | Advanced Physiology of Exercise | 3 | 2 | 4 |
| EXER230 | Kinesiology | 3 | 2 | 4 |
| | Business, Math, Science or Allied Health Elective | 3 | 0 | 3 |
| | English Elective | 3 | 0 | 3 |
| | **Total** | **14** | **8** | **18** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| EXER110 | Group Exercise Leadership | 1 | 3 | 2 |
| EXER212 | Physical Activity and Aging | 3 | 0 | 3 |
| EXER221 | Exercise Science Internship | 0 | 9 | 3 |
| EXER240 | Injury Prevention & Post Rehab Exercise | 3 | 2 | 4 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | **Total** | **10** | **14** | **15** |

**Total Credits - 67**

## Personal Training Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| EXER113 | Physiology of Exercise | 3 | 2 | 4 |
| EXER116 | Health Fitness Assessment & Programming | 2 | 4 | 4 |
| EXER213 | Resistance Training Essentials | 2 | 3 | 3 |
| | Exercise Science Elective *(choose one)* *(EXER200, EXER212, EXER230)* | 3 | 0 | 3 |
| BIOL110 | Human Anatomy and Physiology I | 3 | 3 | 4 |
| BIOL120 | Human Anatomy and Physiology II | 3 | 3 | 4 |
| BIOL150 | Nutrition | 3 | 0 | 3 |
| | **Total Credits - 25** | | | |
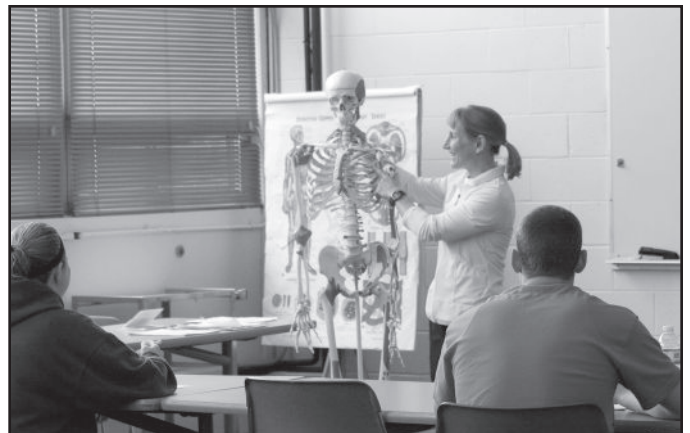
# Fine Arts
## Associate in Arts

## Program Mission
The Fine Arts Degree program offers students a strong foundation in the fine arts, and includes the general education requirements to transfer to a four-year college. The program provides an educational background that is broad enough for the student to continue their education and training according to society's changing needs, and provides an educational experience ensuring flexibility of occupational choice.

## Program Goal/Objectives
Graduates from this program will:
• Have the working knowledge and the appropriate vocabulary of art terms and techniques including the principles and elements of art.
• Be able to draw, paint, weld and photograph following specific instructions.
• Participate in events including a fine arts exhibition, art museum field trip and portfolio reviews.
• Develop a portfolio for transfer to a four-year college

The Fine Arts degree will help develop the student's artistic interest and strengths, with the flexibility to transfer to other college programs. The Fine Arts program explores a wide range of experiences through a studio-oriented program of study, and encourages students to develop creativity through discovery along with ability to observe and analyze visual images. Exposure to career opportunities and educational options is an integral part of the program.

The curriculum provides students with a thorough exploration of a variety of visual art fundamentals. Throughout their curriculum students will expand their ability to use verbal, written and visual language effectively, use critical thinking, think logically, and solve problems practically. Students will learn to examine issues in a historical context and develop the ability to make ethical choices. Coursework within the Fine Arts concentration will reinforce these liberal arts goals and students will become aware of how the arts fit and shape the larger society, making the student more connected with the world and a more well-rounded individual.

The curriculum requirements for the Associate of Arts in Fine Arts Degree offer the equivalent of the first two years of a four-year Bachelor of Arts degree. The Associate in Arts Fine Arts Degree Program meets the needs of our transfer students by preparing them to pursue a four-year bachelor degree in studio arts, arts, fine arts, photography, art history and art education.

## Admission Requirements
In addition to college-wide admission requirements, applicants must have:
• A C or better in high school level algebra, English, reading and writing.

## Technical Standards
Applicants must have:
• Eye-hand and fine hand motor coordination, good vision and manual dexterity to perform drawing, painting, photography and welding techniques and operations. *(Adaptive equipment is acceptable.)*
• Capacity to stand or sit for extended periods of time. *(Adaptive equipment is acceptable.)*
• Effective communication skills that include the ability to orally communicate English at the college level.
• Ability to follow written instructions with minimal supervision, meet deadlines and work in a project-based environment.
• Ability to accept critique of artwork and make changes based on constructive criticism.

## Transfer Policy
Appropriate transfer credits for courses within the major may be accepted within a 10-year time frame. The Department Chair, on an individual basis, will evaluate transfer of courses more than 10 years old.

## Employment Opportunities
Though most graduates of the Fine Arts program would transfer into a four-year college Fine Arts program, they will posses the skills and knowledge to obtain entry-level positions in art management.

## Transfer Opportunities
Students who graduate from MCC's Fine Arts program will have the opportunity to transfer to several four-year colleges including: University of New Hampshire, New Hampshire Institute of Art, Keene State College, Plymouth State University, Colby-Sawyer College, New England College, Massachusetts College of Art, Maine College of Art, Franklin Pierce University, Endicott College, Chester College of New England, Art Institute of Boston, The New England Institute of Art and University of Massachusetts at Lowell.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| ARTS123 | Drawing I | | 2 | 3 | 3 |
| ARTS210 | Painting I | | 2 | 3 | 3 |
| ARTS130 | Introduction of Art | | 3 | 0 | 3 |
| ENG110 | College Composition | | 4 | 0 | 4 |
| MATH | Math Elective | | 3 | 0 | 3 |
| INT101 | College Success Seminar | | 1 | 0 | 1 |
| | | Total | 15 | 6 | 17 |

| First Year | Spring Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| ARTS223 | Drawing II | | 2 | 2 | 3 |
| ARTS120 | Digital Photography | | 2 | 3 | 3 |
| ARTS117 | Art History I | | 3 | 0 | 3 |
| ENGL214 | Creative Nonfiction | | 3 | 0 | 3 |
| | Science Elective | | 3 | 3 | 4 |
| | | Total | 13 | 9 | 16 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| ARTS125 | Watercolor | | 2 | 3 | 3 |
| ARTS115 | Photography I | | 2 | 3 | 3 |
| ARTS110 | Welding for the Artist | | 2 | 3 | 3 |
| | Math Elective | | 3 | 0 | 3 |
| | Social Science Elective | | 3 | 0 | 3 |
| | | Total | 12 | 9 | 15 |

| Second Year | Spring Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| ARTS212 | Painting II | | 2 | 3 | 3 |
| ARTS215 | Photography II | | 2 | 3 | 3 |
| ARTS127 | Art History II | | 3 | 0 | 3 |
| | Science Elective | | 3 | 3 | 4 |
| | Social Science Elective | | 3 | 0 | 3 |
| | | Total | 13 | 9 | 16 |

**Total Credits - 64**

# General Studies
## Associate in Science

### Program Mission
The mission of the General Studies program is to offer a flexible curriculum tailored to the student's professional needs.

### Program Goals/Objectives
This program will allow students:
• to complete a specialized degree program;
• to complement their work experiences with academic coursework, and
• the opportunity to receive credit for significant prior life experience in a technical or occupational specialty.

### Program Description
The General Studies program is available in a technical or occupational specialty in an area other than a current degree program at the college. Students may receive up to 20 credits for prior work experience toward the completion of their degree.

In addition to a core set of liberal arts courses, students select a 'major', which will be comprised of a series of technical specialty courses and/or life experience credit. Further, students will select a set of related technical support courses, designed to complement their specialty courses.

Students accepted in this program must register for GA101, Assessment of Prior Learning, as one of their first courses at MCC. This one-credit course is designed to help clarify a student's career goals and how those goals will be achieved through the General Studies degree program. Additionally, students will prepare a detailed resume, a proposed checklist of courses, and appropriate proposals for consideration of credit for prior learning experiences. Final approval of the student's proposed program will be granted, and an academic advisor assigned, by the Office of Academic Affairs at the completion of the course. More detailed information about the General Studies Degree and a General Studies Information Packet can be obtained from the Office of Admissions.

### Admissions Requirements
In addition to college-wide admissions requirements, students must participate in a personal interview with the Associate Vice President of Academic Affairs

### Employment Opportunities
Due to the nature of this degree, the vast majority of students are already employed when they are accepted into the program. In many fields, a degree is required for advancement in that field and the General Studies degree affords students that opportunity.

### Program of Study
A minimum of 66 credits is required for graduation, distributed in the following manner:

| | |
|---|---|
| Technical Specialty Courses | 20 credits |
| Related Technical Support Courses | 16 credits |
| Liberal Arts Courses | 30 credits |
| **Total Credits - 66** | |

Students shall earn a minimum of 16 credit hours at this college and eight of these credits must be 200-level courses in the student's technical specialty as approved by the Office of Academic Affairs.

### LIBERAL ARTS COURSE REQUIREMENTS - 30 CREDITS

| | | |
|---|---|---|
| ENGL110 | College Composition | 4 credits |
| GA101 | Assessment of Prior Learning | 1 credit |
| INT101 | College Success Seminar | 1 credit |
| | English Elective | 3 credits |
| | For. Lang./Humanities/Fine Arts Elective | 3 credits |
| | *(AMER, ASL, ARTS, ENGL Literature, ENGL113, 210, 213, FREN, GERM, HIST120, 130, HUMA, PHIL, SPAN)* | |
| | Math Elective | 3 credits |
| | Science Elective *(BIOL, CHEM, ESCI, PHYS)* | 3 credits |
| | Social Science Elective | 3 credits |
| | *(AN, ECON, GEOG, HIST, POL, PSYC, SOC)* | |
| | Liberal Arts Electives | 6 credits |
| | Open Elective | 3 credits |

# Graphic Design
## Associate in Applied Science

**Program Mission**
The mission of the Graphic Design program is to prepare students for a career in print and web design in the graphic arts industry.

**Program Goal/Objectives**
Graduates from this program will:
• Have working knowledge of the principals of design, color theory, typography in order to create comprehensive layouts.
• Be able to draw, illustrate and design following specific instructions.
• Have the ability to accurately measure using a variety of measurement systems.
• Possess working knowledge of essential graphic design software.
• Correctly prepare designs for print.
• Have completed a graphic design internship.
• Have participated in related industry events including a juried exhibition and portfolio review.
• Develop a professional portfolio and self-promotion package for entering the design field or for transfer to a four-year college.

**Program Description**
The graphic design industry is constantly changing, with technological advances that require designers to take on more pre-press responsibilities. Students will use their creative talents to design and execute comprehensive pieces that promote public consumption of materials, products or services, and to influence the opinions of individuals or organizations through printed communications.

The program is designed to give students an understanding of color, design, typography, layout and advertising principles. They will develop manual as well as digital drawing, illustration, and layout techniques to create solutions to marketing communication problems. The latest industry standard computer applications will be taught to give students hands-on skills in creating digital layouts, along with scanning and manipulating manually created images. Students will develop an understanding of the use of various media in printed communications and identify marketing trends and target markets.

During the internship course, students will practice the skills learned in the classroom/lab, acquire professional job attitudes, and explore career opportunities in graphic design. In some cases, the internship may lead to job placement for graduating students.

Completion of projects for the program will require additional time outside of scheduled classes and labs. Students will need to attend open lab sessions and work on projects independently. Students are strongly encouraged to purchase hardware and software for home use.

**Admission Requirements**
In addition to college-wide admission requirements, applicants must have:
• A C or better in high school level algebra, English, reading and writing.

**Transfer Credit Policy**
Appropriate transfer credits for courses within the major may be accepted within a five-year time frame. Transfer of courses more than five years old will be evaluated by the Department Chair on an individual basis.

**Employment Opportunities**
Graduates of the Graphic Design program possess the skills and knowledge to obtain entry-level positions in advertising agencies, printing companies, publishing firms and companies that maintain in-house design departments.

**Transfer Opportunities**
Graduates of MCC's Graphic Design program have transferred to the University of New Hampshire, New Hampshire Institute of Art, Keene State College, Plymouth State University, The New England Institute of Art, and UMass at Lowell.

**Technical Standards**
Applicants must have:
• Eye-hand coordination to perform intensive project construction.
• Capacity to stand or sit for extended periods of time *(Adaptive equipment is acceptable.)*
• Effective communication skills that include the ability to orally communicate English at the college level.
• Ability to follow written instructions with minimal supervision. ,
• Ability to accept critique of artwork and make changes based on constructive criticism.
• Basic computer skills
• Ability to work in teams to find solutions for design problems
• Ability to meet deadlines and work in a stressful environment.
• Good vision and manual dexterity to perform drawing operations *(Adaptive equipment is acceptable.)*

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| CDI111 | Electronic Publishing I | 2 | 3 | 3 |
| CDI112 | Print Design Basics | 2 | 3 | 3 |
| CDI114 | 2-D Design for Graphic Arts | 2 | 3 | 3 |
| ARTS123 | Drawing I | 2 | 3 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | **Total** | **13** | **12** | **17** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| CDI121 | Electronic Publishing II | 2 | 3 | 3 |
| CDI122 | Color Theory for Graphic Arts | 2 | 3 | 3 |
| CDI124 | Typography | 2 | 3 | 3 |
| CDI222 | Computer Illustration | 2 | 3 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | **Total** | **11** | **12** | **15** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| CDI211 | Illustration I | 2 | 3 | 3 |
| CDI213 | Commercial Design I | 2 | 3 | 3 |
| CDI215 | Digital Publishing Methods | 2 | 3 | 3 |
| CDI227 | Internship Seminar | 1 | 0 | 1 |
| ENGL113 | Oral Communications | 3 | 0 | 3 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| MKTG210 | Advertising | 3 | 0 | 3 |
| | **Total** | **16** | **9** | **19** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| CDI225 | Commercial Design II | 2 | 3 | 3 |
| CDI226 | Portfolio Preparation | 2 | 3 | 3 |
| CDI228 | Internship | 0 | 8 | 2 |
| MATH132 | Business Math | 3 | 0 | 3 |
| | Science Elective | 3 | 0 | 3 |
| | Humanities Elective- *(Choose One)* *(HUMA114, 200, ARTS110, 115, 117, 120, 127, 130, 210, 223)* | 3 | 0 | 3 |
| | **Total** | **13** | **14** | **17** |

**Total Credits - 68**

# Graphic Design Certificate

Students with prior experience or education in design may qualify for the Graphic Design Certificate. Co/prerequisite requirements for courses listed in the certificate will be handled on a case-by-case basis. If students do not have current experience or degrees, CDI112 will be required before CDI215 can be taken.

This certificate allows students to update their computer skills and hone their design skills to grow personally and professionally. Successful graduates of the Graphic Design Certificate will be able to add to their professional portfolio and are expected to complete an internship. They will be prepared for continued growth in their career field and for jobs in advertising agencies, printing companies, publishing firms, and companies that maintain in-house commercial design departments.

|        |                             | TH | LAB | CR |
|--------|-----------------------------|----|-----|----|
| CDI111 | Electronic Publishing I     | 2  | 3   | 3  |
| CDI114 | 2-D Design for Graphic Arts | 2  | 3   | 3  |
| CDI121 | Electronic Publishing II    | 2  | 3   | 3  |
| CDI122 | Color Theory for Graphic Arts | 2 | 3  | 3  |
| CDI124 | Typography                  | 2  | 3   | 3  |
| CDI213 | Commerical Design I         | 2  | 3   | 3  |
| CDI215 | Digital Publishing Methods  | 2  | 3   | 3  |
| CDI222 | Computer Illustration       | 2  | 3   | 3  |
| CDI225 | Commerical Design II        | 2  | 3   | 3  |
| CDI227 | Internship Seminar          | 1  | 0   | 1  |
| CDI228 | Internship                  | 0  | 8   | 2  |

**Total Credits - 30**

# Graphic Illustration Certificate

Students with prior experience or an education in graphic art or illustration may qualify for the Graphic Illustration Certificate. Co/prerequisite requirements for courses listed in the certificate will be handled on a case-by-case basis. If students do not have current experience or degrees, CDI213 will be required before CDI225 can be taken.

This certificate allows students to add to their skills in mechanical and computer-generated illustration and provides them with entry-level electronic layout skills so they can grow personally and professionally. Successful graduates of the Graphic Illustration Certificate will be able to add to their professional portfolio and will be prepared for continued growth in graphic illustration with job possibilities in permanent or freelance illustration for advertising agencies, publishing firms and companies that maintain in-house graphic design departments.

|         |                             | TH | LAB | CR |
|---------|-----------------------------|----|-----|----|
| CDI111  | Electronic Publishing I     | 2  | 3   | 3  |
| CDI114  | 2-D Design for Graphic Arts | 2  | 3   | 3  |
| CDI122  | Color Theory for Graphic Arts | 2 | 3 | 3  |
| CDI211  | Illustration I              | 2  | 3   | 3  |
| CDI221  | Illustration II             | 2  | 3   | 3  |
| CDI222  | Computer Illustration       | 2  | 3   | 3  |
| CDI225  | Commerical Design II        | 2  | 3   | 3  |
| CDI226  | Portfolio Preparation       | 2  | 3   | 3  |
| ARTS123 | Drawing I                   | 2  | 3   | 3  |
| ARTS210 | Painting I                  | 2  | 3   | 3  |
| ARTS223 | Drawing II                  | 2  | 3   | 3  |

**Total Credits - 33**

# Graphic Design for Web Certificate

Students with prior experience or education in graphic design may qualify for the Graphic Design for Web certificate. Co/prerequisite requirements for courses listed in the certificate will be handled on a case-by-case basis. If students do not have current experience or degrees, CDI 111 will be required before CDI 124 can be taken.

The Graphic Design for Web certificate draws on theory and principle classes offered in the Graphic Design Associate Degree program and includes courses in using the applications and correct file formats specific to designing web sites.

The certificate is an innovative approach to providing students with the opportunity to be educated in two areas of design and for meeting the emerging need in the graphic design industry for employees trained to create for print and web mediums.

|        |                             | TH | LAB | CR |
|--------|-----------------------------|----|-----|----|
| CDI114 | 2-D Design for Graphic Arts | 2  | 3   | 3  |
| CDI122 | Color Theory for Graphic Arts | 2 | 3  | 3  |
| CDI124 | Typography                  | 2  | 3   | 3  |
| CDI230 | Time Based Design           | 2  | 3   | 3  |
| CDI235 | Web Design                  | 2  | 3   | 3  |
| CIS124 | Web Programming I           | 2  | 3   | 3  |
| CIS224 | Web Programming II          | 2  | 3   | 3  |

**Total Credits - 21**

# Health Information Management
## Associate in Science

### Program Mission
The mission of the Health Information Management program is to prepare confident, ethical, and competent entry-level health information technicians who will become valued members of a multifaceted, ever-changing health care delivery system. We will provide graduates with the skills, knowledge, and desire for lifelong learning required to meet the needs of our community and to succeed in the fields of health informatics and information management systems.

### Program Goals/Objectives
The successful graduate of this program will be able to:
• Code diagnostic and procedural data for optimal reimbursement and assist with maintaining revenue cycle and compliance with third party payer guidelines;
• Manage, process and analyze health data *(electronic, paper or scanned)* to ensure an accurate and complete medical record and cost effective processing;
• Formulate and implement health information policies and systems that meet with all national and state laws and regulatory guidelines;
• Apply principles of management and provide leadership to staff.
• Participate in Performance Improvement and other quality initiatives.

### Program Description
Under the American Recovery and Reinvestment Act, 19 billion dollars will be spent over the next five years to bring electronic record programs to physician practices and hospitals across the country. HIM professionals have a unique set of skills that will enable them to assist with selection of a viable electronic record system and be a valuable member of the implementation team.

This program will provide an overview of health care organizations and delivery systems, foundations in Health Information Management and many career enhancing courses such as Medical Terminology, Medical Coding, Insurance and Reimbursement and Legal Issues in Healthcare. Along with developing a strong foundation in HIM through coursework, students will have access to coding and chart management lab software and an opportunity for gain hands-on field experience through internships.

### Admission Requirements
• Complete the Accuplacer Course Placement Assessment.
• Contact the Office of Admissions to schedule an appointment.
• Submit a report of a current physical exam, including all required health screenings and immunizations (*as indicated on the physical examination form).*
• Complete all developmental course work prior to enrollment in the HIM program.
• Participate in a personal interview with the HIM Program Director

### Transfer Credit Policy
Students may transfer credits earned at other accredited institutions provided a minimum grade of C has been earned in courses in medical terminology and allied health (AH), coding (MCOD) and science (BIOL) Appropriate transfer credits may be accepted within a three-year time frame.

### Accreditation
The program is currently applying for Candidacy Status and accreditation by CAHIIM. Once accredited, HIM graduates will be eligible to take the national qualifying exam for certification as a Registered Health Information Technician through AHIMA.

### Employment Opportunities
The field of Health Information is projected to grow at a rapid pace and, according to the U.S. Dept. of Labor's Bureau of Labor Statistics , employment of health information technicians is expected to increase by 20% through 2018,  much faster than the average for all occupations. Graduates of the program will have employment options that include:

Coding Specialist, HIM Department Director, Assistant Director or Supervisor; Clinical Data Analyst; Privacy, Information Security or Compliance Officer and Quality Improvement Specialist and others. Choices for employment range from hospitals to physician practices, ambulatory care centers, rehabilitation facilities, insurance and pharmaceutical companies, consulting firms, software and IT vendors and government agencies.

### Technical Standards
• Have the ability to walk, sit, and stand for long periods of time *(2 hours)* in succession.
• 20-20 vision *(with or without accommodation).*
• Successfully pass a criminal background check (*cost incurred by student).*
• Possess and maintain professional liability insurance while on Practicum *(available through college).*
• Possess and maintain personal health insurance while on Practicum.
• HIM students are required to confer with HIM program faculty prior to course selection and registration every semester.

### Progression
• Grade of C or better required for all AH, MCOD, BIOL, and HIM courses.
• Courses may be retaken only once.

#### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| HIM110 | Health Care Delivery Systems | 3 | 0 | 3 |
| AH110 | Medical Terminology | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| BIOL106 | Human Body | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 16 | 2 | 17 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| HIM120 | Computer in Health Care | 1 | 3 | 2 |
| HIM125 | Health Data Content & Structure | 3 | 0 | 3 |
| BIOL112 | Human Diseases | 3 | 0 | 3 |
| MATH131 | College Algebra | 3 | 0 | 3 |
| MCOD100 | ICD M-9 Coding | 3 | 0 | 3 |
| MEDA123 | Introduction to Pharmacology | 3 | 0 | 3 |
| | Total | 16 | 3 | 17 |

| First Year | Summer Semester | TH | LAB | CR |
|---|---|---|---|---|
| HIM115 | Legal Aspects of Health Information | 3 | 0 | 3 |
| ENGL113 | Oral Communications | 3 | 0 | 3 |
| | Liberal Arts Elective | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 12 | 0 | 12 |

#### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| HIM200 | HIM Practicum I | 1 | 8 | 3 |
| HIM215 | Health Care Statistics | 3 | 0 | 3 |
| HUMA150 | Critical Thinking | 3 | 0 | 3 |
| MCOD110 | CPT Coding | 3 | 0 | 3 |
| | Total | 10 | 8 | 12 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| HIM210 | Health Information Organization & Supervisor | 3 | 0 | 3 |
| HIM220 | Quality Improvements in Healthcare | 3 | 0 | 3 |
| HIM225 | HIM Practicum II | 1 | 9 | 4 |
| MCOD215 | Classification Systems and Reimbursement | 3 | 0 | 3 |
| | Total | 10 | 9 | 13 |

**Total Credits - 71**

# Heating, Ventilation & Air Conditioning
## Associate in Applied Science

### Program Mission
This multi-disciplinary program includes heating, ventilation, refrigeration, air conditioning, and electricity, and prepares students to become industry leaders by providing a foundation of knowledge, skills and the ability to critically think. Upon satisfactory completion, the graduate is prepared to enter the field to design, install, service, maintain and troubleshoot residential and commercial HVAC systems.

### Program Goals/Objectives
Students who successfully complete the HVAC program will be able to:
• Read and interpret electrical diagrams, wire control systems from electrical diagrams, set controls, design controls systems and diagnose and repair faults in electrical control systems.
• Properly size HVAC systems, design HVAC systems, correctlly install HVAC system components, install HVAC systems following the relevant codes and industry practice, and think critically.
• Articulate the purpose and operation of HVAC system components, the operation of HVAC systems, diagnose, repair faults and perform maintenance on HVAC systems.
• Demonstrate positive work traits and good customer skills, and continue to upgrade their knowledge and skills.

### Program Description
The HVAC program provides students with the education and training to enter careers as climate control technicians. It is offered with a two-year or three-year track, because of the large number of credits required.

### Admissions Requirements
In addition to college-wide admissions requirements, students must:
• successfully complete courses in Algebra I, Algebra II and science. Advanced levels of math and a physics course are preferred;
• participate in an individual faculty interview.

### Technical Standards
• The physical strength to maneuver and/or lift heavy objects.
• Good manual dexterity. Be able to climb a ladder.
• Adequate vision for reading instructions and blueprints and should not have color blindness *(Adaptive equipment acceptable.)*
• Ability to visualize and portray ideas graphically.
• Students will need to become certified under Section 608 of the Clean Air Act. *(Exam required at end of first year of program)*
• Meet license requirements to earn a NH gas license.
• Students should be aware that many employers will require criminal background checks and a clean driving record.

### Transfer Policy
Students may transfer credits earned at other accredited institutions when a grade of *C* or better has been earned in HVAC courses. Appropriate transfer credits may be accepted within a 10-year time frame.

### Accreditation/Certification Information
Students will be required to become members of two professional HVAC associations, RSES and ASHRAE.

### Employment Opportunities
HVAC contractors, gas utilities, oil companies, manufacturers, and wholesale and retail sales and design. Specialty areas include DDC controls, cryogenics, clean room and operating room systems.

### Transfer Opportunities
The program has articulation agreements that allow graduates to enter as a junior: Southern New Hampshire University, Granite State College, Ferris State University, and Penn State College.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| HVAC111 | Fundamentals of Refrigeration I Theory | 3 | 0 | 3 |
| HVAC112 | Fundamentals of Refrigeration I Lab | 0 | 3 | 1 |
| HVAC113 | Related Electricity I | 3 | 3 | 4 |
| HVAC114 | Fundamentals of Heating Theory I | 3 | 0 | 3 |
| HVAC115 | Fundamentals of Heating Lab I | 0 | 3 | 1 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | **Total** | **17** | **9** | **20** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| HVAC121 | Fundamentals of Refrigeration II Theory | 3 | 0 | 3 |
| HVAC122 | Fundamentals of Refrigeration II Lab | 0 | 3 | 1 |
| HVAC123 | Related Electricity II | 3 | 3 | 4 |
| HVAC124 | Fundamentals of Heating II Theory | 3 | 0 | 3 |
| HVAC125 | Fundamentals of Heating II Lab | 0 | 3 | 1 |
| MATH135 | Numerical Algebra and Trigonometry | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | **Total** | **15** | **9** | **18** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| HVAC211 | Commercial Refrigeration Theory | 3 | 0 | 3 |
| HVAC212 | Commercial Refrigeration Lab | 0 | 6 | 2 |
| HVAC213 | Hydronic and Steam Systems Theory | 3 | 0 | 3 |
| HVAC214 | Hydronic and Steam Systems Lab | 0 | 6 | 2 |
| PHYS100 | Introductory Physics | 2 | 3 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| | **Total** | **10** | **17** | **16** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| HVAC221 | Residential and Commercial Air Conditioning and Heat Pumps Theory | 3 | 0 | 3 |
| HVAC222 | Res./Com. AC & Heat Pumps Lab | 0 | 6 | 2 |
| HVAC223 | Warm Air Systems Theory | 3 | 0 | 3 |
| HVAC224 | Warm Air Systems Lab | 0 | 6 | 2 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | English Elective | 3 | 0 | 3 |
| | **Total** | **12** | **12** | **16** |

**Total Credits - 70**

## Air Conditioning/Refrigeration Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| HVAC111 | Fundamentals of Refrigeration I Theory | 3 | 0 | 3 |
| HVAC112 | Fundamentals of Refrigeration I Lab | 0 | 3 | 1 |
| HVAC113 | Related Electricity I | 3 | 3 | 4 |
| HVAC121 | Fundamentals of Refrigeration II Theory | 3 | 0 | 3 |
| HVAC122 | Fundamentals of Refrigeration II Lab | 0 | 3 | 1 |
| HVAC123 | Related Electricty II | 3 | 3 | 4 |
| HVAC211 | Commercial Refrigeration Theory | 3 | 0 | 3 |
| HVAC212 | Commercial Refrigeration Lab | 0 | 6 | 2 |
| HVAC221 | Residential and Commercial Air Conditioning and Heat Pumps Theory | 3 | 0 | 3 |
| HVAC222 | Res./Com. AC & Heat Pumps Lab | 0 | 6 | 2 |

**Total Credits - 26**

## Heating Services Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| HVAC113 | Related Electricity I | 3 | 3 | 4 |
| HVAC114 | Fundamentals of Heating I Theory | 3 | 0 | 3 |
| HVAC115 | Fundamentals of Heating I Lab | 0 | 3 | 1 |
| HVAC123 | Related Electricity II | 3 | 3 | 4 |
| HVAC124 | Fundamentals of Heating II Theory | 3 | 0 | 3 |
| HVAC125 | Fundamentals of Heating II Lab | 0 | 3 | 1 |
| HVAC213 | Hydronic and Steam Systems Theory | 3 | 0 | 3 |
| HVAC214 | Hydronic and Steam Systems Lab | 0 | 6 | 2 |
| HVAC223 | Warm Air System Theory | 3 | 0 | 3 |
| HVAC224 | Warm Air System Lab | 0 | 6 | 2 |

**Total Credits - 26**

# Interior Design
## Associate in Applied Science

**Program Mission**
The mission of the Interior Design program is to prepare the student with marketable skills for entry into a career devoted to the quality of designing the interior built environment.

**Program Goals/Objectives**
The interior design graduate will:
• Demonstrate knowledge of the process involved in the implementation of the interior built environment from concept development, presentation, construction documentation and final project completion.
• Possess the technical knowledge and skills for professional entry-level employment opportunities within the field of interior design and the related construction industry.
• Apply critical thinking and problem solving necessary for thoughtful, creative and innovative solutions for the interior built environment.
• Demonstrate competency in oral and written skills.
• Possess knowledge of basic codes, life safety and ADA compliance for public safety and those with special needs.
• Produce basic interior construction drawings using AutoCad® or other electronic mediums.
• Demonstrate design intent through the use of visual methods such as sketches, perspective, rendering techniques and material choices on display boards.
• Possess knowledge of business practices, professional standards and related work ethics as in the field of interior design.
• Successfully complete an internship related to the business of interior design.
• Assemble a well rounded portfolio and resume which exhibits meaningful skills to potential employers.

**Program Description**
The Interior Design program at MCC is centered on activity-based learning to develop technical, analytical and reasoning skills while simultaneously guiding the student's own creative abilities. Exciting studio sessions will move the student through the process of real world project assignments while related courses will support the methods for communicating and implementing design solutions. Relevant industry related learning, academic excellence and personalized attention by a dedicated faculty will provide the student with the skills needed to succeed in a career in interior design. The portfolio preparation course and an internship in the interior design field complete the course of study in preparing the student for career employment or for transfer to a bachelor's degree program.

Curriculum content includes study in commercial and residential interior design, drawing techniques, AutoCad®, lighting, construction documentation, business practice and a field related design internship.

**Admissions Requirements**
In addition to college-wide admission requirements, applicants must have: minimum grade of C in high school level algebra, English, reading and writing.

**Transfer Policy**
Appropriate transfer credits for courses within the major may be accepted within a five-year time frame. Transfer of courses more than five years old will be evaluated by the Interior Design Program Coordinator on an individual basis.

**Job Opportunities**
Employment opportunities for the graduate reach across many industry sectors. Entry-level positions with interior design firms, architects or building construction contractors can be pursued within the New England area. Potential specialized career paths include contract/commercial design with jobs in offices, hospitality, retail, healthcare and facilities or residential design with opportunities as an individual practitioner, kitchen and bath, manufacturer's representative and retail showroom consultant.

**Technical Standards**
Applicants must have:
• Effective communication skills that include the ability to orally communicate English at the college level.
• Basic computer skills.
• Ability to work in teams to find solutions for design problems.
• Ability to follow written instructions with minimal supervision.
• Ability to accept critique of designs and make changes based on constructive criticism.
• Ability to meet deadlines and work in a stressful environment.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ID101 | Interior Design Technology Studio I | 2 | 3 | 3 |
| ID102 | Technical Drawing for Interiors I | 2 | 3 | 3 |
| ID103 | Visual Presentation for Interior Design | 1 | 3 | 2 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| | Humanities Elective (HUMA) | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 13 | 9 | 16 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ID121 | Interior Design Technology Studio II | 2 | 3 | 3 |
| ID122 | Technical Drawing for Interiors II | 2 | 3 | 3 |
| ID123 | The Built Environment: Codes and Standards | 2 | 3 | 3 |
| ID124 | Arch and ID Movements: 1900 - Present | 3 | 0 | 3 |
| ID200 | Materials and Components | 3 | 0 | 3 |
| | Total | 10 | 9 | 15 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ID201 | Interior Design Technology Studio III | 2 | 3 | 3 |
| ID205 | Interior Contract Documentation | 2 | 3 | 3 |
| ID212 | Lighting Design | 3 | 0 | 3 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| ENGL113 | Oral Communications | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 17 | 3 | 18 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ID221 | Interior Design Technology Studio IV | 2 | 3 | 3 |
| ID224 | Professional Practice in Interior Design | 3 | 0 | 3 |
| ID225 | Interior Design Internship | 1 | 8 | 3 |
| ID226 | Portfolio Preparation for Interior Design | 1 | 3 | 2 |
| MATH132 | Business Mathematics | 3 | 0 | 3 |
| | Science Elective | 3 | 0 | 3 |
| | Total | 13 | 14 | 17 |

**Total Credits - 66**

## Interior Design Certificate
The Interior Design Certificate program prepares students to identify, research and creatively solve problems relating to the functions and aesthetics of living and working environments. Students are expected to complete an internship. The internship experience and certificate training will prepare the individual for work as an entry-level interior design assistant.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ID101 | Interior Design Technology Studio I | 2 | 3 | 3 |
| ID102 | Technical Drawing for Interiors I | 2 | 3 | 3 |
| ID103 | Visual Presentation for Interior Design | 1 | 3 | 2 |
| ID121 | Interior Design Technology Studio II | 2 | 3 | 3 |
| ID123 | The Built Environment: Codes and Standards | 2 | 3 | 3 |
| ID200 | Materials & Components | 3 | 0 | 3 |
| ID212 | Lighting Design | 3 | 0 | 3 |
| ID225 | Interior Design Internship | 1 | 8 | 3 |

**Total Credits - 23**

# Liberal Arts
## Associate in Arts

## Program Mission
The primary objective of the Liberal Arts Degree program is transfer. The Associate of Arts degree program provides a solid foundation in arts and sciences, allowing students to transfer with confidence to baccalaureate programs at four-year colleges and universities.

## Program Goal/Objectives
The Liberal Arts Program is designed to give students a solid foundation in the following areas:
• Human Relationship Skills: The application of values, collaboration skills, standards, and ethical judgment required for personal and professional interaction.
• Communication Skills: The ability to express ideas and share knowledge in a clear, focused, and organized manner.
• Critical Thinking: The ability to analyze, synthesize, and evaluate information in a logical and coherent manner.
• Global Perspectives: The ability to examine a concept in contexts and from perspectives other than one's own.
• Quantitative Reasoning: The application of computational methods and numerical data interpretation to solve problems.
• Scientific Processes: The application of scientific methods to gain knowledge and examine the laws, theories, and processes of physical and biological phenomena.
• Technical Skills: The theoretical and applied knowledge for career entry and continued professional development.
• Study Skills: The application of strategies, resources, and attitudes to find solutions and gain knowledge.

## Program Description
The Liberal Arts degree is representative of the first two years of a bachelor degree program. Students will find the program flexible enough to tailor their program of study to their individual needs and interests. A variety of choices exists for students to explore content areas in arts and sciences:
• English: writing courses, literature and oral communications
• Social Science: anthropology, economics, history, geography, political science, psychology and sociology
• Foreign Language: American Sign Language, French, German and Spanish
• Humanities: courses in western civilization, literature, philosophy, communications and creative writing
• Fine Arts: drawing, painting, and photography
• Math: traditional theoretical and applied courses
• Science: biological sciences, chemistry, earth science and physics

Students wishing to focus their liberal arts studies in a specific discipline are able to concentrate their elective credits in that discipline. Each student's program is developed in consultation with a Liberal Arts faculty advisor.

## Admissions Requirements
Applicants for admission to the Liberal Arts program must meet college admission requirements; no specific program requirements apply.

## Transfer Policy
Courses will be considered for transfer to the Liberal Arts program under the following conditions:
• The college's minimum grade requirement is met.
• Science, English Composition, math, and foreign language coursework must be completed no more than 10 years prior to acceptance into the Liberal Arts program.
• The English Composition course proposed for transfer must be college-level, including a research paper. The 10-year stipulation may be waived under the following conditions
    • Placement into ENGL110 on the Accuplacer Placement Test OR
    • Permission of English department faculty
Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions.

## Transfer Opportunities
Students in the Liberal Arts program successfully transfer to colleges and universities around the country. Examples include American University, Boston College, Boston University, Clark University, Emerson College, Granite State College, Keene State College, Plymouth State University, Rivier College, Southern NH University, University of New Hampshire, University of Massachusetts.

## New Hampshire Transfer Connections
The NH Transfer Connections Program enables students to attend MCC or one of the state's other community colleges and, if they meet certain standards, be automatically accepted into Keene State College, Granite State College, Plymouth State University, UNH-Manchester, or the University of New Hampshire.

Through the NH Transfer Connections Program, students originally not accepted at Keene State College, Plymouth State University or UNH are able to attend one of the state's community colleges as a Liberal Arts major and, if they meet certain standards, be automatically accepted into their original school of choice without having to reapply or pay a fee. Students must maintain a 2.8 CGPA *(GSC's & KSC's minimum is 2.5)* and earn at least a *C* in every class. It is recommended that program participants take a minimum of 12 credits for two consecutive semesters.

Students who wish to begin their academic careers at one of the Community Colleges and then transfer to UNH, UNH-M, Granite State College or Plymouth State University can also opt-in to this program.

Please see the MCC Office of Admissions or Meg Hamm, Career/Transfer Advisor at (603) 668-6706 for more information.

## Liberal Arts Degree Program of Study
The Liberal Arts Degree is comprised of Core Requirements and Liberal Arts and Sciences Electives as noted below:

**Core Requirements:**

| | | |
|---|---|---|
| INT101 | College Success Seminar | 1 credit |
| ENGL110 | College Composition | 4 credits |
| ENGL113 | Oral Communication | 3 credits |
| | ENGL213 or 214 | 3 credits |
| BIOL | Life Science Lab Elective *(BIOL)* | 4 credits |
| | Science Lab Elective *(BIOL, CHEM, ESCI, PHYS)* | 4 credits |
| HUMA150 | Critical Thinking | 3 credits |
| | PSYC110 or SOC109 or SOC110 | 3 credits |
| | POL110 or HIST202 or HIST204 | 3 credits |
| | Social Science Elective *(AN, ECON, GEOG, HIST, POL,PSYC, SOC)* | 3 credits |
| | Math Elective | 4 credits |
| | Math Elective | 3/4 credits |
| | Foreign Language Elective *(ASL, GERM, FREN, SPAN)* | 3 credits |
| | Fine Arts Elective | 3 credits |

**Liberal Arts & Sciences Electives**
Art, English, Geography, History, Humanities, Languages, Philosophy, Psychology, Social Sciences, Sciences, Math and can include two Open Electives as appropriate to transfer institution's prerequisites at the 100 or 200 level– must include at least three courses at the 200 level.

| | |
|---|---|
| Any Level Liberal Arts & Science Electives | 12 credits |
| 200 Level Liberal Arts & Science Electives | 9 credits |
| | **Total Credits  65/66** |

# Liberal Arts
## Associate in Arts

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| INT101 | College Success Seminar | 1 | 0 | 1 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| HUMA150 | Critical Thinking | 3 | 0 | 3 |
| | Fine Arts Elective | 3 | 0 | 3 |
| | Math Elective | 3/4 | 0 | 3/4 |
| | Liberal Arts & Science Elective *(any level)* | 3 | 0 | 3 |
| | **Total** | **17/18** | **0** | **17/18** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ENGL113 | Oral Communication | 3 | 0 | 3 |
| | ENGL 213 or ENGL214 | 3 | 0 | 3 |
| | PSYC110 or SOC109 or SOC110 | 3 | 0 | 3 |
| | Life Science Elective *(BIOL)* | 3 | 3 | 4 |
| | Liberal Arts & Science Elective *(any level)* | 3 | 0 | 3 |
| | **Total** | **15** | **3** | **16** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| | POL110 or HIST202 or HIST204 | 3 | 0 | 3 |
| | Foreign Language Elective | 3 | 0/2 | 3/4 |
| | Math Elective | 4 | 0 | 4 |
| | Social Science Elective | 3 | 0 | 3 |
| | Liberal Arts & Science Elective *(any level)* | 3 | 0 | 3 |
| | **Total** | **15** | **0/2** | **16/17** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| | Lab Science Elective *(BIOL, CHEM, ESCI, PHYS)* | 3 | 3 | 4 |
| | Liberal Arts & Science Elective (any level) | 3 | 0 | 3 |
| | Liberal Arts & Science Elective *(200 level)* | 3 | 0 | 3 |
| | Liberal Arts & Science Elective *(200 level)* | 3 | 0 | 3 |
| | Liberal Arts & Science Elective *(200 level)* | 3 | 0 | 3 |
| | **Total** | **15** | **3** | **16** |

**Total Credits - 65/67**

# Liberal Arts/Business
## Associate in Arts

### Program Mission
The student will be able to transfer to a four-year college or university with an overall business studies foundation or become employed in an entry-level in business.

### Program Goals/Objectives
Graduates of the AA Degree in Liberal Arts/Business Studies will:
• Possess the framework necessary for successful careers in: banking, communications, health care, high-tech industries, management, manufacturing, marketing, service industries, and non-profit organizations.
• Articulate the fundamentals of accounting, economics, management and marketing.
• Demonstrate a command of English composition.
• Demonstrate a command of business communications.
• Demonstrate a command of team work.

### Program Description
The Department of Liberal Arts and the Department of Business Studies have collaborated to provide students with an Associate Degree in Liberal Arts/ Business. The AA in Liberal Arts/Business Studies degree is designed to facilitate transfer to a four-year institution for continued study in either liberal arts or business administration.

### Transfer Policy
Students may transfer credits earned at other accredited institutions provided a grade of C or better has been earned in courses with equivalent content. Appropriate transfer credits may be accepted within a 10-year time frame.

### Accreditation
The Department of Business Studies is nationally accredited by the Association of Collegiate Business Schools and Programs *(ACBSP)*. Our national accreditation allows our graduates to transfer to four-year colleges and universities in all regions of the country.

### Employment Opportunities
According to the National Association of Colleges and Employers *(NACE)*, job prospects for business graduates are strong. Students with a business background can find entry-level jobs in the service, government, and non-profit sectors.

### Transfer Opportunities
The Associate in Arts in Liberal Arts/Business degree transfers in its entirety to many four-year colleges and universities. Southern New Hampshire University accepts 90 credits from MCC and awards scholarships to our graduates based on academic performance. Additionally, credits transfer nationally to ACBSP-accredited colleges and universities.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| BUS114 | Management | 3 | 0 | 3 |
| BUS110 | Introduction to Business | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | **Total** | **16** | **2** | **17** |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT123 | Accounting and Financial Reporting II | 3 | 0 | 3 |
| ENGL214 | Creative Nonfiction | 3 | 0 | 3 |
| ECON134 | Macroeconomics | 3 | 0 | 3 |
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | Business Elective* | 3 | 0 | 3 |
| | **Total** | **18** | **0** | **18** |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ECON135 | Microeconomics | 3 | 0 | 3 |
| MATH200 | Finite Mathematics | 4 | 0 | 4 |
| PHIL240 | Ethics | 3 | 0 | 3 |
| | Lab Science Elective | 4 | 0 | 4 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | **Total** | **17** | **0** | **17** |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| | Lab Science Elective | 4 | 0 | 4 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Business Elective* | 3 | 0 | 3 |
| | Business Elective* | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | **Total** | **16** | **0** | **16** |

**Total Credits - 68**

***Business Elective:** Choose one of the following:
*(ACCT213, ACCT215, BUS210, BUS212, BUS213, BUS221, BUS224, MKTG205, MKTG210)*

# Management
## Associate in Science

### Program Mission
The student will be able to transfer to a four-year college or university with a solid management and overall business studies foundation or become employed in an entry-level management position.

### Program Goal/Objectives
Graduates with a degree in Management will:
• Articulate the fundamentals of management theory and practices.
• Demonstrate written and oral proficiency in business communications.
• Demonstrate knowledge of the foundations and importance of business ethics.
• Demonstrate competency in fundamental areas of business: accounting, marketing, human resources, finance, computers, economics, and business law.
• Articulate the necessity for a commitment to life-long learning to ensure employability.

### Program Description
The degree in Management emphasizes broad management competencies in finance, marketing, human resources, economics, law, and computers. All of these competencies are needed in industry, non-profit, and service organizations. The study of management focuses on how organizations develop and use strategies to compete in domestic and global arenas within the increasingly complex and changing social, political, economic, and technological environment.

Students in the program are encouraged to relate theoretical learning to practice and establish bridges between the classroom and the work environment. The degree provides the framework for successful management careers in high-tech industries, manufacturing, banking and finance, health care, communications, service industries, and non-profit organizations. According to the National Association of Colleges and Employers in the Job Outlook, management is in the top five degrees in demand.

### Admissions Requirements
Applicants for admission to the Management degree program must comply with the college admission requirements; no specific program requirements apply.

### Transfer Policy
Students may transfer credits earned at other accredited institutions provided a minimum grade of C has been earned in courses with equivalent content. Appropriate transfer credits may be accepted within a 10-year time frame.

The Management degree transfers in its entirety to many four-year colleges and universities. Southern New Hampshire University accepts 90 credits from MCC and awards scholarships to MCC management graduates based on academic performance. Additionally, credits transfer nationally to ACBSP-accredited colleges.

### Accreditation
The Department of Business Studies is nationally accredited by the Association of Collegiate Business Schools and Programs (ACBSP). Our national accreditation allows our graduates to transfer to four-year colleges and universities in all regions of the country.

### Employment Opportunities
According to the National Association of Colleges and Employers (NACE), job prospects for management graduates remain strong. Management ranks in the top five targeted degrees in the service, government, and non-profit sectors.

#### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| BUS114 | Management | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | Total | 16 | 2 | 17 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT123 | Accounting and Financial Reporting II | 3 | 0 | 3 |
| BUS212 | Business Law I | 3 | 0 | 3 |
| ECON134 | Macroeconomics | 3 | 0 | 3 |
| MATH202 | Probability and Statistics | 4 | 0 | 4 |
| | Science Elective | 3 | 0 | 3 |
| | Total | 16 | 0 | 16 |

#### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| BUS124 | Small Business Management | 3 | 0 | 3 |
| BUS224 | Human Resource Management | 3 | 0 | 3 |
| ECON135 | Microeconomics | 3 | 0 | 3 |
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| PHIL240 | Ethics | 3 | 0 | 3 |
| | Total | 15 | 0 | 15 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| BUS210 | Organizational Communications | 3 | 0 | 3 |
| BUS221 | Business Finance | 3 | 0 | 3 |
| MKTG282 | Marketing Research | 3 | 0 | 3 |
| | Business Elective (ACCT, BUS, FINC, MKTG) | 3 | 0 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Total | 18 | 0 | 18 |

**Total Credits - 66**

## Management Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| ACCT123 | Accounting and Financial Reporting II | 3 | 0 | 3 |
| BUS114 | Management | 3 | 0 | 3 |
| BUS212 | Business Law I | 3 | 0 | 3 |
| BUS224 | Human Resource Management | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| | Business Elective (ACCT, BUS, FINC, MKTG) | 3 | 0 | 3 |
| | Business Elective (ACCT, BUS, FINC, MKTG) | 3 | 0 | 3 |

**Total Credits - 24**

## Small Business Management Certificate

This certificate teaches the student to set up and manage a business. It will cover all aspects of running a business from creating a successful business plan, setting up and maintaining the books, hiring and managing employees, to promoting the business. This certificate is designed for the technical trade person or small business owner who has the technical skills and now wants to learn how to run the business.

| | | TH | LAB | CR |
|---|---|---|---|---|
| ACCT100 | Bookkeeping for Small Business. | 2 | 2 | 3 |
| BUS114 | Management | 3 | 0 | 3 |
| BUS124 | Small Business Management | 3 | 0 | 3 |
| BUS212 | Business Law I | 3 | 0 | 3 |
| BUS224 | Human Resource Management | 3 | 0 | 3 |
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |

**Total Credits - 18**

# Marketing
## Associate in Science

### Program Mission
The students will be able to transfer to a four-year college or university with a solid marketing and overall business studies foundation or become employed in an entry-level marketing position.

### Program Goal/Objectives
Graduates with a degree in Marketing will:
• Identify the marketing mix variables: product, price, place, and promotion.
• Create and develop an integrated marketing communication plan, including marketing objectives, strategies, and tactics.
• Analyze consumer decision making as it relates to consumer buying behavior and marketing decisions.
• Analyze the decision-making process in marketing products internationally and understand the role marketing plays in a global economy.
• Identify the components of a successful advertising campaign and implement the campaign; create and develop an advertising brief.
• Demonstrate knowledge of various advertising media such as print, radio, television, outdoor advertising, direct response, etc.
• Apply the strategic selling model to personal selling activities.
• Engage in a personal selling situation with emphasis on the customer relationship and deliver a personal sales presentation using a sales portfolio and other sales tools.

### Program Description
In an era of global, digitized, interactive business environments, marketing offers one of the best career opportunities for today's business students. Marketing is a broad field, which includes activities related to selecting, designing, packaging, pricing, advertising, selling, distributing, and servicing a product in the domestic and/or international marketplace. It is the driving force in most businesses.

Companies realize that understanding the marketplace and consumer wants and needs requires competent marketing personnel, from marketing researchers to creative advertisers. The degree to which a company responds to customer demands greatly impacts an organization's success. Marketing classes integrate theory and practical applications while applying related business knowledge of computers, accounting, and management principles.

Marketing personnel are employed in retail, industrial and commercial firms, schools and hospitals, both locally and internationally. Marketing offers something for every business student --a desk job as a market research analyst, or travel and excitement with the public as a salesperson, retailer, or public relations person. According to the National Association of Colleges and Employers in the Job Outlook for 2009, marketing is again in the top ten degrees in demand.

### Admissions Requirements
Applicants for admission to the Marketing degree program must comply with the college admission requirements; no specific program requirements apply.

### Transfer Policy
Students may transfer credits earned at other accredited institutions provided a grade of *C* or better has been earned in courses with equivalent content. Appropriate transfer credits may be accepted within a 10-year time frame.

### Accreditation
The Department of Business Studies is nationally accredited by the Association of Collegiate Business Schools and Programs *(ACBSP)*. This national accreditation allows marketing graduates to transfer to accredited four-year colleges throughout the country.

### Transfer Opportunities
The Marketing degree transfers in its entirety to many four-year colleges and universities. Southern New Hampshire University accepts 90 credits from MCC and awards scholarships to MCC marketing graduates based on academic performance. Plymouth State University, UNH-Manchester, and Franklin Pierce University are other local colleges that accept marketing graduates. Additionally, credits transfer to ACBSP-accredited colleges.

### Employment Opportunities
Graduates of the marketing program are ready for positions such as marketing coordinator, marketing assistant, account executive, retail associate, sales assistant, event planner, as well as many other dynamic and rewarding marketing-related careers.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | Total | 16 | 2 | 17 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| ACCT123 | Accounting and Financial Reporting II | 3 | 0 | 3 |
| BUS212 | Business Law I | 3 | 0 | 3 |
| ECON134 | Macroeconomics | 3 | 0 | 3 |
| MATH202 | Probability and Statistics | 4 | 0 | 4 |
| | Science Elective | 3 | 0 | 3 |
| | Total | 16 | 0 | 16 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| MKTG210 | Advertising | 3 | 0 | 3 |
| BUS155 | Retailing Management | 3 | 0 | 3 |
| CDI111 | Electronic Publishing I | 2 | 3 | 3 |
| ECON135 | Microeconomics | 3 | 0 | 3 |
| ENGL113 | Oral Communications | 3 | 0 | 3 |
| | Total | 14 | 3 | 15 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| MKTG135 | Global Consumer Behavior | 3 | 0 | 3 |
| MKTG205 | International Marketing | 3 | 0 | 3 |
| MKTG224 | Sales and Sales Management | 3 | 0 | 3 |
| BUS210 | Organizational Communications | 3 | 0 | 3 |
| MKTG282 | Marketing Research | 3 | 0 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Total | 18 | 0 | 18 |

**Total Credits - 66**

## Marketing Certificate

| | | TH | LAB | CR |
|---|---|---|---|---|
| MKTG125 | Principles of Marketing: A Global Perspective | 3 | 0 | 3 |
| MKTG135 | Global Consumer Behavior | 3 | 0 | 3 |
| MKTG205 | International Marketing | 3 | 0 | 3 |
| MKTG210 | Advertising | 3 | 0 | 3 |
| MKTG224 | Sales and Sales Management | 3 | 0 | 3 |
| ACCT113 | Accounting and Financial Reporting I | 3 | 0 | 3 |
| MKTG282 | Marketing Research | 3 | 0 | 3 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| | Business Elective *(ACCT, BUS, FINC, MKTG)* | 3 | 0 | 3 |

**Total Credits - 27**

# Medical Assistant
## Associate in Science

### Program Mission
The program's mission is to prepare competent entry-level medical assistants in the cognitive *(knowledge)*, psychomotor *(skills)*, and affective *(behavior)* learning domains, incorporating values, ethics, and professionalism. The program promotes an interdisciplinary approach to the study of medical office administration, clinical procedures, and the ethics and values associated with such a career. The program's foundation provides a basis for analytical skills leading to national certification, life-long learning, and a successful career.

### Program Goal/Objectives
The successful graduate will:
- Be eligible to sit for the national certification exam for medical assistants *(CMA-AAMA)*.
- Demonstrate proficiency in administrative medical office procedures, such as processing insurance claims, scheduling appointments, and completing referrals
- Demonstrate proficiency in clinical procedures such as patient intake, taking vital signs, giving injections, administering EKGs, drawing blood, and assisting with patient exams, clinical procedures and office surgeries.
- Demonstrate proficiency in electronic medical records management.

### Program Description
Medical assistants are multi-skilled health professionals educated to work in ambulatory settings performing administrative and clinical duties. The practice of medical assisting requires mastery of a complex body of knowledge and specialized skills requiring both formal education and practical experience that serve as standards for entry into the profession. Our nationally accredited Medical Assistant *(MA)* programs emphasize the skills and knowledge needed for employment in doctors' offices, clinics, insurance companies, and other medical facilities.

Students may choose the professional certificate, which focuses mainly on the medical courses, or the associate degree, which includes advanced training in clinical procedures and the choice of electives that will enhance your education and training.

### Admissions Requirements
- In addition to college-wide admission requirements, applicants must interview with a member of the full-time faculty to determine appropriateness for admission to the program.
- 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, peers and other ancillary medical personnel. Potential MA students will be assessed by the program director at the time of their interview. Those not meeting program standards may be referred to classes to improve their diction, vocabulary, and/or writing skills.
- Submit a report of a current physical exam including all required health screening and immunizations *(as indicated on physical exam form)*.

### Program Policies
Students must abide by the following policies in order to be accepted and stay in the Medical Assistant Program.
- Students must place into College Composition based on Accuplacer scores before registering for any AH or MEDA courses.
- A grade of C is required in all AH, MEDA, and BIOL106/107 courses to continue in the program. Students may retake a course once if the minimum grade is not earned.
- All MEDA, AH, and BIOL106/107 courses must be taken within three years of Practicum.
- Students will be required to repeat a course if they do not demonstrate sufficient maturity to conduct themselves in a professional manner in the performance of clinical procedures.
- Students must demonstrate the emotional intelligence to exhibit empathy and compassion, to maintain productive relationships in the classroom and clinical settings, and to integrate direction, instruction, and constructive criticism into behavior.

- Criminal background checks are required of all students within 30 days of starting the Medical Terminology course. Drug screening may be required upon Practicum placement; this is dependent on the clinical setting. No student will be exempt from either process. Any student found to be chemically impaired at any time will be dismissed from the program. The American Association of Medical Assistants *(AAMA)* and/or medical facilities may restrict candidates from certification, practicum, or employment if involved in civil or criminal legal proceedings.
- Students must possess and maintain both personal health insurance and professional liability insurance *(both available through the college)* while enrolled in MEDA125, MEDA218, AH115, and MEDA223.
- Students must acquire and maintain CPR for the Health Care Provider while enrolled in MEDA125, MEDA218, and MEDA223. Students must provide proof of CPR/AED and First Aid certification prior to starting MEDA125 Clinical Lab Procedures I
- Students who place into MATH070 or MATH080 based on the Accuplacer test must successfully complete MATH080 and successfully pass a basic math test prior to registration for MEDA123 or MEDA125.
- Students who do not possess verifiable touch keyboarding skills of 30-35 cwpm must take ADMN111 prior to ADMN122 Executive Keyboarding.
- Students enrolled in MEDA125 Clinical Lab Procedures I, must purchase required scrubs, shoes, stethoscope, blood pressure cuff, and watch. *(Consult faculty for more information.)*
- Associate degree students must enroll in MEDA218 immediately following MEDA125. MEDA223 must immediately follow MEDA218.

### Transfer Policy
Students transferring from another college or from another program within MCC must have a 2.0 CGPA to be accepted into the Medical Assistant program. This includes developmental courses.

Transfer courses must have been taken within the past three years for AH110, BIOL 106/107, MEDA122, MEDA123, MEDA124, and MEDA126. Exceptions may be made for those with continuous work in the medical field. Transfer credit will not be given for MEDA125, MEDA218, or MEDA223.

### Technical Standards
MCC must ensure that patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in practicum must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances that characterize patient/client care responsibilities. 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 employees, patients/clients and their families.
- Applicants must be in good physical and mental health. Standards have been established to provide guidance to students as to skills and abilities required to function successfully in the profession.
- Applicants who think they may not be able to meet one or more of the technical standards should contact the department chairperson or faculty to discuss individual cases
- Good manual dexterity and sufficient tactile ability to assess pressure temperature, position, vibration, and movement.
- Sufficient hearing to assess patient needs and to understand instructions, identify emergency signals and engage in telephone conversations.
- Sufficient visual acuity to observe patients, manipulate equipment, and interpret data; visual acuity sufficient to ensure a safe environment, identify color changes, read fine print/writing and calculate fine calibrations.
- Sufficient strength to perform CPR and the ability to stand for extended periods of time.

## Accreditations

MCC's MA programs are accredited by the Commission on Accreditation of Allied Health Education Programs *(www.caahep.org)* upon the recommendation of the Medical Assisting Education Review Board *(MAERB)*: Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, (727) 210-2350

## Employment Opportunities

According to the U.S. Department of Labor Bureau of Labor Statistics, "employment of medical assistants is expected to grow 34 percent over the 2008 – 2018 decade, much faster than average for all occupations particularly for those with formal training or experience, and certification." MCC's programs are competency based; graduates are comprehensively prepared to enter any medical office with confidence.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| ADMN122 | Executive Keyboarding | 2 | 2 | 3 |
| AH110 | Medical Terminology | 3 | 0 | 3 |
| BIOL106 | Human Body | 3 | 0 | 3 |
| BIOL107 | Human Body Lab | 0 | 2 | 1 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |
| | Total | 12 | 4 | 14 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| MEDA122 | Medical Office Procedures | 3 | 0 | 3 |
| MEDA123 | Introduction to Pharmacology | 3 | 0 | 3 |
| MEDA124 | Insurance for the Medical Office | 4 | 0 | 4 |
| MEDA125 | Clinical Lab Procedures I | 2 | 6 | 4 |
| MEDA126 | Medical Law and Ethics | 3 | 0 | 3 |
| | Total | 15 | 6 | 17 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| MEDA218 | Clinical Lab Procedures II | 2 | 3 | 3 |
| AH200 | Transcultural Health Care | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH131 | College Algebra I | 3 | 0 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Total | 15 | 3 | 16 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| MEDA223 | Medical Assistant Practicum | 0 | 15 | 5 |
| MEDA225 | Practicum Seminar | 1 | 0 | 1 |
| | English Elective | 3 | 0 | 3 |
| | Liberal Arts | 3 | 0 | 3 |
| | Liberal Arts | 3 | 0 | 3 |
| AH115 | Phlebotomy | 3 | 0 | 3 |
| | Total | 13 | 15 | 18 |

**Total Credits - 65**

## Medical Assistant Professional Certificate
See Associate Degree Admission and Program Policies.

| | | TH | LAB | CR |
|---|---|---|---|---|
| MEDA122 | Medical Office Procedures | 3 | 0 | 3 |
| MEDA123 | Introduction to Pharmacology | 3 | 0 | 3 |
| MEDA124 | Insurance for the Medical Office | 4 | 0 | 4 |
| MEDA125 | Clinical Lab Procedures I | 2 | 6 | 4 |
| MEDA126 | Medical Law and Ethics | 3 | 0 | 3 |
| MEDA223 | Medical Assistant Practicum | 0 | 15 | 5 |
| MEDA225 | Practicum Seminar | 1 | 0 | 1 |
| ADMN122 | Executive Keyboarding | 2 | 2 | 3 |
| AH110 | Medical Terminology | 3 | 0 | 3 |
| AH115 | Phlebotomy | 3 | 0 | 3 |
| BIOL106 | Human Body | 3 | 0 | 3 |
| BIOL107 | Human Body Lab | 0 | 2 | 1 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| PSYC110 | Introduction to Psychology | 3 | 0 | 3 |

**Total Credits - 44**

## Medical Coding Certificate

Health care in the United States has undergone unprecedented changes in the recent past and even more changes are imminent. These changes have created an overwhelming and unmeant demand for qualified medical coders. The U.S. Dept. of Labor's Bureau of Labor Statistics reports a 51% increase in the need for medical coders during the next five years. This national shortage has increased the salary for the coding occupations, and salaries will continue to rise in the future. In addition to medical reimbursement, coding is used for planning and research, to track diseases, and by hospital administrators to determine if hospital facilities are being used effectively and meet the needs of the community.

Medical coding requires the coder to abstract information from the patient record and combine it with their knowledge of reimbursement and coding guidelines to optimize physician payment. This coding curriculum will train participants to code for medical offices, clinics, mental health facilities, and hospitals. Successful completion of this certificate will prepare you to sit for the national Certified Coding Specialist exam.

**Students must achieve a minimum grade of C (73.33) in all courses in order to receive Medical Coding Certificate.**

| | | TH | LAB | CR |
|---|---|---|---|---|
| MCOD100 | ICD-9-CM | 3 | 0 | 3 |
| MCOD110 | CPT Coding | 3 | 0 | 3 |
| MCOD215 | Health Information Service Coding | 3 | 0 | 3 |
| AH100 | Medical Terminology | 3 | 0 | 3 |
| BIOL106 | Human Body | 3 | 0 | 3 |
| BIOL112 | Human Diseases | 3 | 0 | 3 |
| MEDA124 | Insurance for the Medical Office | 4 | 0 | 4 |

**Total Credits - 22**

## Medical Secretary Certificate

Medical secretaries perform a variety of tasks necessary to make an office operate smoothly. They are responsible for scheduling patient appointments, completing referrals for inpatient/outpatient procedures, keeping patient charts updated, accepting and documenting payments, processing insurance claims, typing correspondence, and interacting with health care facilities on a routine basis.

This certificate program provides the essentials needed to work in a medical office. Students will build a strong foundation of medical terminology, human anatomy, and prescription drugs before continuing on to courses requiring their application. Computer courses/applications will prepare graduates to feel comfortable with all types of clerical duties associated with a doctor's office, hospital, or insurance company.

| | | TH | LAB | CR |
|---|---|---|---|---|
| MEDA122 | Medical Office Procedures | 3 | 0 | 3 |
| MEDA123 | Intro to Pharmacology | 3 | 0 | 3 |
| MEDA124 | Insurance for the Medical Office | 4 | 0 | 4 |
| ADMN111 | Keyboarding I | 3 | 0 | 3 |
| ADMIN112 | Executive Keyboarding | 2 | 2 | 3 |
| AH110 | Medical Terminology | 3 | 0 | 3 |
| BIOL106 | Human Body | 3 | 0 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| CIS221 | Advanced Word Processing | 2 | 2 | 3 |

**Total Credits - 32**

# Phlebotomy Certificate

Phlebotomists *(PBT)* are essential members of the health care delivery team who are primarily responsible for collecting blood specimens from patients for laboratory testing. Qualified phlebotomists may be employed in hospital laboratories, private laboratories, doctors' offices, clinics, emergency rooms or blood donor centers.

Students may register for AH115 while completing the requirements for the Phlebotomy Internship if they meet the speech, health, character, and technical standards noted below.

Classroom learning is combined with a 120-hour internship that is performed in a clinical laboratory or other health care facility to provide the skills required of a certified PBT. **Internships are limited and offered as sites become available.**

Fine motor skills are required to successfully perform in most clinical facilities: drawing patient's blood in the inpatient and outpatient settings, processing specimens including operating mechanical and computerized equipment, and performing clinical duties. Good communication skills are critical in dealing with patients, clients, physicians, nurses, and other health care workers.

Students must have complete documentation of physical exam, immunization records, TB testing, health insurance coverage and liability insurance in effect **prior** to registering for AH135. Students who participate in the internship must be available on a full-time basis for three 40-hour weeks. There are no evening or weekend internships. **Only the Phlebotomy Coordinator may register students for AH135, Phlebotomy Internship.**

Students who successfully complete this program and are qualified for immediate employment at independent labs, hospitals, clinics, and are eligible to sit for a national certification examination offered by several professional organizations.

National certification boards, internship sites, and employers may restrict candidates who have been involved in civil and legal proceedings.

## Admission Requirements
Applicants must satisfy the general requirements for admission to the college in addition to program requirements.
• All students must take the Accuplacer test and meet reading level standards prior to registering for AH115, or have passed college-level courses with a C or better *(documentation required.)*
• Students must demonstrate reading and listening comprehension competencies in the English language as well as the ability to speak English clearly and correctly. Applicants whose first language is not English must submit official scores for the Test of English as a Foreign Language *(TOEFL)*. A minimum score of 62 *(internet-based)*, 173 *(computer-based)* or 500 *(paper-based)* is required before taking AH115.
• Students must have sufficient speech and language ability to express, comprehend and exchange information and ideas in English verbally and non-verbally, and to interact clearly and logically with patients, family members, physicians, peers, and other medical personnel. Those not meeting program standards may be referred to classes to improve their diction and vocabulary skills.
• Submit a report of current physical status, including immunization again measles, mumps, rubella, *(MMR),* varicella, and hepatitis B *(at least 2 of the required 3-shot series must be completed);* up-to-date tetanus booster; negative TB test within one year or negative chest x-ray with physician's clearance.
• Based on the physical exam required for entry into the program, students must
  a. Have sufficient hearing to assess patient needs and to understand instructions and identify emergency signals.
  b. Have sufficient visual acuity to observe patients, and interpret data; visual acuity sufficient to ensure a safe environment, identify color changes, read fine print/writing, and calculate fine calibrations.
  c. Be able to stand for long periods of time.

• Criminal background checks are required of all students prior to Internship placement. Drug screening may be required upon Internship placement; this is dependent on the clinical setting. No students will be exempt from either process. National certification boards, internship sites, and employers may restrict candidates who have been involved in civil and criminal legal proceedings.
• As skills and knowledge must be current for an internship, if more than one year elapses before a student seeks an internship, AH115 must be repeated.

## Health and Character Standards
MCC must ensure that patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in internships must demonstrate sufficient emotional stability to withstand the stresses, uncertainties, and changing circumstances that characterize patient/client care responsibilities. Furthermore, the student is expected to have the emotional stability to exercise sound judgment, accept direction and guidance from a supervisor or faculty member and establish rapport and maintain sensitive interpersonal relationships with employees, patients/clients and their families.

MCC believes patient and student safety is of utmost importance. Therefore, if the instructor believes that actions demonstrated by a student in class or on internship jeopardize either the student's own safety or patient safety, that student will be dismissed from the class/program.

Applicants must be in good physical and mental health to qualify for positions in the health care field. Standards have been established to provide guidance to students as to skills and abilities required to function successfully in the program and ultimately in the phlebotomy profession. Applicants who think they may not be able to meet one or more of these health, character or technical standards should contact the department head or faculty to discuss individual cases.

Applicants should have sufficient emotional intelligence to exhibit empathy and compassion to maintain productive relationships in the classroom and clinical settings

|  |  | TH | LAB | CR |
|---|---|---|---|---|
| AH115 | Phlebotomy | 3 | 0 | 3 |
| AH135 | Phlebotomy Internship | 0 | 9 | 3 |

**Total Credits - 6**

# Nursing
## Associate in Science

## Program Mission
The mission of the nursing program is to provide high-quality education and clinical evidence-based practice which enables students to achieve career and life goals through the application of knowledge, judgment and skills necessary to practice as a registered nurse.

## Program Goal/Objectives
Graduates from MCC's nursing program will:
• Utilize knowledge, judgment and skills to practice nursing safely and competently.
• Utilize intellectual, interpersonal and psychomotor competence when providing patient care.
• Utilize the nursing process to assist patients to attain, maintain and retain health.
• Collaborate as member of the health care team.
• Practice nursing within a legal and ethical framework.

## Program Description
The Nursing Program prepares students to provide direct care to patients in acute care, long term care and other structured settings. The program consists of science, general education and nursing courses. Nursing courses include classroom, simulation lab and clinical experiences. Learning experiences and clinical practical may vary in time and in location, and may include days, evenings, and/or weekends.

The program may be completed on a full-time or part-time basis. Classroom and clinical components of the nursing courses must be completed concurrently. All nursing courses must be completed within four years from the date of entry into the first nursing course.

Students admitted into the Nursing program must take nursing courses in sequence, and must achieve a minimum grade of C *(73.33)* in all major theory and science courses *(Nursing, Anatomy & Physiology I & II, and Microbiology)* and a grade of *"Pass"* in clinical courses in order to continue in the program.

## Admissions Requirements
Nursing program applications must be completed by February 1st* to be considered for acceptance in the fall class. If the class is not filled with qualified applicants by that deadline, we will continue to accept completed applications until July 1st. After that point, the program will be closed.

Applications that are complete and received by December 1st may be considered for Early Action Admission into the Nursing Program for fall. *For fall 2012 admission nursing program applications must be completed by January 1*.

A completed application is the responsibility of the nursing candidate. Incomplete applications will not be considered. Candidates must complete the college admission requirements and provide documentation of the following criteria for admission consideration:
• Proof of satisfactory completion of high school algebra, biology and chemistry with grades no lower than a C. If transcript indicates a numerical grade point average with no grade equivalent, a minimum of 73.33 is required.
• Complete the National League for Nursing Pre-Admission Examination-RN* with percentiles of 50 or greater in the *"All"* category in each of the three areas tested: Math, Science and Verbal Ability. Applicants are permitted to take this exam once in any six month period. Test scores are valid for a period of two years.
• Two professional references, work or education related. *(Forms provided by college).*

* The NLN Pre-Admission Examination-RN evaluates the academic ability of prospective RN students. If you would like to receive information regarding the NLN Pre-Admission Exam-RN or to register for a specific exam date, contact the Office of Admissions at (603) 206-8100.

## Selection Criteria
Admission to the nursing program is very competitive. Selection is determined by a cumulative point system that is based on applicable college courses and grades, the NLN scores and references.

Qualified students who are not accepted in the selection process may be assigned to a prioritized waiting list based on the above criteria. They may be subsequently admitted if an opening becomes available prior to the beginning of the fall semester. The waiting list will be discarded once classes begin. Students still desiring admission must reapply for the following year.

### Upon Acceptance
It is understood that acceptance is conditional upon submission of satisfactory evidence in the form of the following documents no later than four weeks prior to the beginning of the semester.
• Submit a report of a current physical examination, including all required health screening and immunizations *(as indicated on the physical examination form).*
• Possess and maintain personal health insurance *(available through the college).* When enrolled in the nursing program, students must notify the Director of any changes with health care coverage.
• Possess and maintain professional liability insurance *(available through the college).*
• Acquire and maintain certification in BLS for Health Care Providers.
• Have a satisfactory criminal background check *(cost to be incurred by student).* MCC's background check is due within 21 days after attending the mandatory nursing program orientation. Students may be required to provide more than one criminal background check throughout the course of the program based on clinical facility requirements.
• Provide documentation of Hepatitis B vaccine or submit a signed waiver.

## Advanced Placement or Transfer
Admission of advanced placement or transfer students is contingent upon space availability. In addition to the general admission criteria, students seeking advanced placement or transfer must have completed all prerequisite coursework by examination, challenge or transfer credit. Transfer credit is determined by Academic Affairs based on course congruence, grade earned and length of time since completion.

Advanced Placement and Transfer are possible through transfer credit and NLN or Excelsior College Examinations. Students may enroll in liberal arts and science courses prior to admission to the Nursing program, however, enrollment in those courses does not guarantee acceptance into the Nursing program.

Excelsior College and NLN examinations are necessary to meet Nursing course requirements as follows:

## Advanced Placement Into NURS112
You must be a currently NH licensed LPN and successfully complete the National League for Nursing Acceleration Challenge Exam Book One: Foundations of Nursing, with a "Decision Score" of 70% or better.

## Transfer Into NURS112
In order to be considered for Transfer from another nursing program students must: have successfully completed *(a minimum course grade C)* a Nursing Fundamentals course within the past 2 years and successfully complete the following: Excelsior College examination; #403: Fundamentals of Nursing with a grade of *C* or better.

Advanced placement and transfer students accepted into NURS 112 must attend Nursing Process Seminar prior to the start of NURS112.

A hybrid Nursing 112 section may be available in the summer semester depending on space availability, student credentials and permission of the Director of Nursing.

## Transfer Credit Policy

In addition to specific nursing course transfer policies noted above and other MCC transfer credit policies, Anatomy & Physiology I and II and Microbiology must be taken within an eight year period from the time of acceptance into the Nursing program.

## Readmission Policy

Students matriculated in the Nursing program who withdraw or do not achieve the required minimum grade in the Nursing or science courses and are not able to continue in the Nursing program may be eligible for readmission consideration. A student may be readmitted to the Nursing program one time only. Readmissions are contingent upon space availability. The student applying for readmission will be required to meet the curriculum requirements in effect at the time of readmission.  In order to be reconsidered for admission, the student must:

• Submit a written, dated letter requesting readmission to the Director of the Department of Nursing. In this letter, briefly outline the reason(s) you were previously unable to continue in the program, identify which Nursing course you are requesting readmission, and your plan for successful completion of the program.

Students who have requested readmission will be ranked according to their Nursing course average. As space availability is determined, students will be readmitted based on their ranking order. Students will then be notified of the status of their request in writing by the Director of the Department of Nursing. Students who are readmitted to the Nursing program will follow the program of study in place at the time they are readmitted.

Students who have failed a Nursing course because of unsafe practice involving actions or non-actions are not eligible for readmission to the Nursing program (see Nursing Course Syllabi: Evaluation Methods).

## Accreditation

The Nursing Program is accredited by the National League for Nursing Accrediting Commission (NLNAC) and approved by the New Hampshire Board of Nursing (NHBON).  Upon satisfactory completion of the program, the graduate is eligible to apply to the NHBON for the National Council Licensing Examination for Registered Nurses (NCLEX-RN). MCC's NCLEX pass rates can be viewed at www.nh.gov/nursing. The NHBON's licensing regulations may restrict candidates who have been involved in civil or criminal legal proceedings. Questions about licensing restrictions should be addressed to the NH Board of Nursing, 21 South Fruit Street, Suite 16, Concord, NH 03301, (603) 271-2323. Questions about the status of accreditation for the Nursing program should be addressed to the National League for Nursing Accrediting Commission (NLNAC), 3343 Peachtree Road NE, Suite 500, Atlantic, GA 30326, (404) 975-5000. www.nlnac.org.

## Employment /Transfer Opportunities

Prior to meeting all program course requirements, matriculated nursing students may be eligible to apply to the NHBON for additional licensure after successful completion (defined as achieving a minimum course grade of C) of the following nursing courses:

Nursing I   -  Licensed Nursing Assistant (LNA)
Nursing III -  Licensed Practical Nurse (LPN)

The nursing program maintains articulation agreements with Emmanuel College, Endicott College, New England College, Rivier College, St. Joseph's College of Maine, University of New Hampshire and articulation and dual admission with Franklin Pierce University.  Further information on application for dual admission can be obtained from FPU or from the Director of Nursing at MCC.

## Technical Standards

MCC must ensure that patient/client safety is not compromised by students during learning experiences.  Therefore the student is expected to demonstrate emotional stability and exercise sound judgment, accept direction and guidance from a supervisor or faculty member and establish rapport and appropriate interpersonal relationships with peers, staff, and patients/clients and their families.

The following technical standards have been established to provide guidance to students as to skills and abilities required to function successfully in the program and ultimately in the profession of nursing. Applicants who think they may not be able to meet one or more of the technical standards, should contact the Director of Nursing to discuss individual cases.
• Sufficient hearing to assess patient needs and to understand instructions, emergency signals and telephone conversations.
• Sufficient visual acuity to observe patients, manipulate equipment, and interpret data: visual acuity sufficient to ensure a safe environment, identify color changes, read fine print/writing and calibrations.
• Sufficient verbal ability to express and exchange information when interacting with patients, family members, physicians, peers and other ancillary medical personnel.
• Ability to work with frequent interruptions, respond appropriately in emergencies or unexpected situations, and to cope with variations in workload and stress levels.
• Sufficient strength and motor coordination to perform the following physical activities:  manual dexterity to operate and handle equipment, moving and transfer of patients; and performing CPR.
• Travel Policy:  Transportation to and from the clinical site is the responsibility of the student.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| NURS111 | Nursing I | | 6 | 12 | 10 |
| BIOL110 | Human Anatomy and Physiology I | | 3 | 3 | 4 |
| INT101 | College Success Seminar | | 1 | 0 | 1 |
| PSYC110 | Introduction to Psychology | | 3 | 0 | 3 |
| | | Total | 13 | 15 | 18 |

| First Year | Spring Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| NURS112 | Nursing II | | 4 | 15 | 9 |
| BIOL120 | Human Anatomy and Physiology II | | 3 | 3 | 4 |
| PSYC210 | Human Growth and Development | | 3 | 0 | 3 |
| | | Total | 10 | 18 | 16 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| NURS211 | Nursing III | | 4 | 15 | 9 |
| BIOL210 | Microbiology | | 3 | 3 | 4 |
| ENGL110 | College Composition | | 4 | 0 | 4 |
| | | Total | 11 | 18 | 17 |

| Second Year | Spring Semester | | TH | LAB | CR |
|---|---|---|---|---|---|
| NURS212 | Nursing IV | | 3 | 18 | 9 |
| MATH131 or | College Algebra I* | | 3 | 0 | 3 |
| MATH202 | Probability and Statistics | | 4 | 0 | 4 |
| | Foreign Language/Humanities/F.A. Elective | | 3 | 0 | 3 |
| | English Elective | | 3 | 0 | 3 |
| | | Total | 12/13 | 18 | 18/19 |

**Total Credits - 69/70**

*Students who wish to continue their education toward the Bachelor or Master of Science in Nursing degrees are encouraged to complete MATH202 as the mathematics requirement.

# Welding
## Associate in Applied Science

### Program Mission
Graduates of this program will be prepared students with marketable skills in a variety of welding processes for entry into the workforce.

### Program Goals/Objectives
Graduates of the Welding degree program will:
• Possess basic competency in the four major welding processes.
• Demonstrate basic concepts and practices of technical drawing and blueprint reading in accordance with industry standards
• Articulate safety guidelines and use of machine tools.
• Produce drawings using Computer Aided Drafting (CAD) software.
• Refine skills to meet code requirements for heavy plate & pipe welding.
• Demonstrate knowledge of materials structures; heat treatment processes; the composition of ferrous and non-ferrous alloys; and the effects of heat-treatments on metals.
• Articulate industrial quality control procedures.
• Demonstrate fabrication techniques and cost estimation, and principles of applied statics and strength of materials.

### Program Description
MCC offers an Associate of Applied Science Degree (A.A.S.) and a Professional Certificate in Welding Technology. Students in the A.A.S. Welding Technology program develop a variety of technical skills and knowledge of industry norms that are informed by theory and built on an academic foundation that includes math and communication. The Professional Certificate in Welding Technology meets entry-level employment objectives for non-code welding and includes the courses required for the first year of the A.A.S. degree.

### Admissions Requirements
In addition to college-wide admission requirements, applicants must
• Have successfully completed courses in algebra and geometry.

### Employment Opportunities
The need for trained welders has grown consistently and will continue to do so until 2016. Based on this trend, it is anticipated that the need will continue to grow beyond 2016. The NH Employment Security Economic and Labor Market Information Bureau reports the need for: welders, cutters, solderers & brazers, machine setters, operators and tenders.•

A predicted wave of retirements nationwide will create a shortage of approximately 20,000 qualified welders by 2014. Graduates are prepared for welder qualification testing which is used throughout the industry.

### Technical Standards
• Normal vision for reading instructions and for performing tasks (adaptive equipment acceptable).
• Manual dexterity with both hands; good hand and eye coordination.
• Ability to visualize and portray ideas graphically.

### DEGREE PROGRAM - FIRST YEAR

| First Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| WELD111 | Gas/Arc Welding Lab | 0 | 12 | 4 |
| WELD112 | GAS/Arc Welding Theory | 3 | 0 | 3 |
| WELD113 | Technical Blueprint Reading | 0 | 3 | 1 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| | Total | 10 | 17 | 16 |

| First Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| WELD121 | MIG/TIG Welding Lab | 0 | 12 | 4 |
| WELD122 | MIG/MIG Welding Theory | 3 | 0 | 3 |
| WELD125 | Manufacturing and Repair Technology | 0 | 3 | 1 |
| WELD186 | Blueprint Reading for Welders | 3 | 0 | 3 |
| CAD113 | CAD for Non-Majors | 1 | 3 | 2 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |
| | Total | 10 | 18 | 16 |

### DEGREE PROGRAM - SECOND YEAR

| Second Year | Fall Semester | TH | LAB | CR |
|---|---|---|---|---|
| WELD211 | Structural Code Welding Lab | 0 | 12 | 4 |
| WELD212 | Code Welding Theory | 3 | 0 | 3 |
| WELD213 | Metallurgy | 2 | 2 | 3 |
| MATH135 | Numerical Algebra and Trigonometry | 3 | 0 | 3 |
| | English Elective | 3 | 0 | 3 |
| | Social Science Elective | 3 | 0 | 3 |
| | Total | 14 | 14 | 19 |

| Second Year | Spring Semester | TH | LAB | CR |
|---|---|---|---|---|
| WELD220 | Fabrication Techniques and Estimating | 2 | 2 | 3 |
| WELD221 | Pipe Code Welding Lab | 0 | 12 | 4 |
| WELD223 | Materials and Testing | 2 | 2 | 3 |
| PHYS100 | Introductory Physics | 2 | 2 | 3 |
| | Foreign Language/Humanities/F.A. Elective | 3 | 0 | 3 |
| | Total | 10 | 20 | 16 |

**Total Credits - 67**

## Welding Technology Professional Certificate
### (Days only)

| | | TH | LAB | CR |
|---|---|---|---|---|
| WELD111 | Gas/Arc Welding Lab | 0 | 12 | 4 |
| WELD112 | Gas/Arc Welding Theory | 3 | 0 | 3 |
| WELD113 | Technical Blueprint Reading | 0 | 3 | 1 |
| WELD121 | MIG/TIG Welding Lab | 0 | 12 | 4 |
| WELD122 | MIG/TIG Welding Theory | 3 | 0 | 3 |
| WELD125 | Manufacturing and Repair Technology | 0 | 3 | 1 |
| WELD186 | Blueprint Reading for Welders | 3 | 0 | 3 |
| CAD113 | CAD for Non-Majors | 1 | 3 | 2 |
| ENGL110 | College Composition | 4 | 0 | 4 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |
| INT101 | College Success Seminar | 1 | 0 | 1 |
| CIS110 | Microsoft® Computer Applications | 2 | 2 | 3 |

**Total Credits - 32**

## Welding Technology Certificate
### (Evenings only)

Successful completion of this program gives you the necessary welding skills required for employment as a combination welder, including SMAW pipe. AWS 3/8" Plate Bend test skills are required to enter the Weld III

Advanced Pipe/Plate course.

| | | TH | LAB | CR |
|---|---|---|---|---|
| WELD180 | Basic Arc and Gas Welding | 1 | 3 | 2 |
| WELD181 | Intermediate Arc and Gas Welding | 1 | 3 | 2 |
| WELD182 | Welder Qualifications and Testing | 1 | 3 | 2 |
| WELD183 | Advanced (SMAW) Pipe/Plate Welding | 1 | 3 | 2 |
| WELD184 | Gas Tungsten Arc Welding (TIG) | 1 | 3 | 2 |
| WELD185 | Gas Metal Arc Welding (MIG) | 1 | 3 | 2 |
| WELD186 | Blueprint Reading for Welders | 3 | 0 | 3 |
| MATH111 | Numerical Geometry | 3 | 0 | 3 |

**Total Credits - 18**

# Course Descriptions

All credit and non-credit courses at Manchester Community College are assigned a course number. Course numbers begin with a letter code designating the course's academic area. The following course descriptions are arranged alphabetically, by academic code, beginning with "ACCT" (Accounting) and ending with "WELD" (Welding).

Courses with numbers between "0 - 99" are considered developmental and any credit awarded cannot be used toward graduation requirements. Courses with numbers between "100 - 199" are considered beginning level courses and courses with numbers between "200 -299" are considered upper level courses.

**Prerequisites for courses are identified after each description and may be waived only by the instructor. A Prerequisite Waiver Form must be completed prior to registration. These forms can be obtained in the Registrar's Office.** Generally, upper level courses have prerequisites.

The college reserves the right to review and modify this information throughout the year.

## Academic Placement Policies

### Student Success Placement Policy
**INT101 – College Success Seminar**
The College Success Seminar course must be taken in the students' first two semester of attendance.

**INT102 – Learning Community Seminar**
Students who place into two or more English or Math classes with a course number less than a 100 level must register for those courses and INT102 during their first semester of attendance.

### English Department Placement Policy
Before students may register for college-level English courses, they must demonstrate mastery of English at the high school level. Placements are determined as follows:

| Placement Criteria | Course Placement |
|---|---|
| Accuplacer reading score of 54 or below. | ENGL 094 |
| Accuplacer reading score of 55-79 OR completion of ENGL 094 with grade of C+ or better. | ENGL 097 |
| Writeplacer score of 2 or 3 below. | ENGL 098 |
| 1) Writeplacer score of 4 OR 2) *Writeplacer score of 5 or above COMBINED WITH Accuplacer reading score less than 80 (see information  below if condition 2 applies) | ENGL 099 |
| Writeplacer score of 5-6 PLUS college-level reading skills determined by one of the following criteria:<br>• Accuplacer score of 80 or above<br>• Completion of ENGL 097 with a grade of C+ or better | ENGL 110 |
| Placement into two or more English and/or Math courses below the 100-level | INT  102 **and** English and/or math courses below the 100 level. **MUST** *be taken in the first semester of attendance)* |

### Math Department Placement Policy
Before students may register for college-level math courses, they must demonstrate mastery of math at the high school level. Placements are determined as follows:

| Accuplacer Placement Criteria | Course Placement |
|---|---|
| AR ≤ 55 and EA ≤ 61 | MATH 070 |
| AR ≥ 56 and EA ≤ 61 | MATH 080 |
| EA ≥ 62 and ≤ 78 | MATH 103 |
| EA ≥ 62 and ≤ 78 | MATH 111 |
| EA ≥ 62 and ≤ 78 | MATH 131 |

**Accuplacer codes:  AR-**Arithmetic;   **EA-**Elementary Algebra
Accuplacer may place students in higher levels of math. Please see CAPS for that information.
Courses with numbers between "0-99" are considered developmental and cannot be used toward graduation requirements. Courses with numbers between "100-199" are considered beginning level courses.

### Computer Science Placement Policy

| | | |
|---|---|---|
| < 65% | Computer Fundamentals | CIS 097 |
| > 65% | Microsoft® Computer Applications | CIS 110 |
| > 65% | Computer Technologies I | CIS 111 |

Elective Course Information:  In addition to the required courses in a student's program, students are given the choice to select from a variety of elective courses. Each program offers a different set of electives, so please refer to each individual program for specific options.

The following information will assist students with the variety of elective categories and the selection of elective courses. All academic subject codes and course numbers refer only to MCC courses.

English Elective: any course with the academic subject code of ENGL and a course number of at least 100. Social Science Elective: any of these designations: AN, ECON, GEOG, HIST, POL, PSYC, SOC. Foreign Language/Humanities Elective/Fine Arts:  any of these designations: ARTS, ENGL Literature, or the following courses ASL, ENGL113, 210, 213, 214 HUMA, PHIL, FREN, GERM. SPAN, and HIST 120, 130. Math Elective: any course with the academic subject code of MATH and a course number of at least 100. Science Elective: any course with the academic subject code of BIOL, CHEM, ESCI, PHYS and a course number of at least 100. Business Elective: any course with the academic subject code of ACCT, BUS, FINC, MKTG and a course number of at least 100.

Liberal Arts Elective: any course listed under the categories of English elective, Social Science elective, Foreign Language/Humanities/Fine Arts elective, Math elective or Science elective with a course number of at least 100.

**Open Elective:** any course that the college offers with a course number of at least 100. ESL courses are not considered open electives and cannot be counted toward graduation requirements.

**ACCT100 Bookkeeping for Small Business** **2-2-3**
This hands-on class teaches the bookkeeping required for a small business. Basic accounting is taught using QuickBooks™ software. A semester-long practice case gives students the opportunity to input routine transactions and prepare monthly financials for a small business. Topics covered are sales, receivables, un-collectible accounts, payables, inventory, payroll, general ledger, depreciation, cash management, monthly bank reconciliations, and financial-statement reporting. Students learn how to compute payroll, prepare payroll checks, and prepare federal and state payroll reports. Students also learn how to start up a business, file the necessary paperwork at the federal and state levels, and obtain a general knowledge of a Schedule C for individual tax reporting purposes. Different forms of businesses are reviewed, with emphasis on bookkeeping for a sole proprietorship. Proper insurance coverage is also reviewed to include business liability and workers' compensation insurance. **Note:** This class cannot be taken by accounting majors as part of their Accounting degree or Accounting certificate program.

**ACCT105 Managerial Accounting** **3-0-3**
This course explores the financial impact of various business decisions and the financial benefits for business practices. Upon completion, the student will understand how accounting, capital budgeting tools, cost classification, and other productivity information can be used to assess the past performance and improve the future performance of a business by giving managers the essential information they need to make better decisions. Topics covered include financial-statement analysis, cash flow statements, master and operational budgets, cost-classification methods and allocation methods, break-even analysis, incremental analysis, standard costing, variance analysis, and capital budgeting tools.

**ACCT113 Introduction to Accounting & Financial Reporting I** **3-0-3**
Introduces accounting as the language of business and the need for accounting in the business world. Students develop an understanding of the concepts and usage of assets, liabilities, equity, revenue and expense accounts, and are introduced to accounting procedures necessary to prepare financial statement utilizing current concepts and accounting principles. Topics covered include journalizing transactions, trial balance, adjustments, closing entries, accounts receivable and payable, inventory, bank reconciliations, special journals, cash receipts, disbursements, and banking procedures.

**ACCT115 Concepts of Personal Income Taxes** **2-0-2**
Reviews the concepts of Federal Income Tax Laws as related to individuals as well as sole proprietorships. The focus of this class is how tax law impacts or benefits personal financial planning for the individual or sole proprietor. The student will prepare basic tax returns using a tax return software.

**ACCT123 Intro to Accounting & Financial Reporting II** **3-0-3**
A continuation of the concepts covered in Accounting and Financial Reporting I. Emphasis is on the analysis of balance sheet accounts including accounts receivable, notes receivable, property, plant and equipment, short-term and long-term liabilities, bonds, investments, stock transactions, retained earnings, cash flows, ratio computation and analysis, and partnerships. This course also compares and contrasts basic accounting methods of accounting for sole-proprietorships, partnerships and corporations. Prerequisite: ACCT113.

**ACCT213 Cost Accounting I** **3-0-3**
Covers how accounting data is used within decision making. The student will examine and analyze cost flow, cost of goods sold, job order and process costing, cost-volume-profit relationships, equivalent units of production, variable costing, activity based costing, and cost behavior patterns. Prerequisite: ACCT123.

**ACCT215 Cost Accounting II** **3-0-3**
Designed as a continuation of the concepts covered in Cost Accounting I where the student was introduced to how accounting data is used within an organization for planning, control, and decision-making. The student will build on this foundation with a more in-depth analysis and reporting of costs. The student will examine and analyze service department costs, joint cost allocation, management control systems, planning and budgeting, capital budgeting, transfer pricing, standard cost systems, variance analysis, investment center performance, relevant costs for decision making, ratio analysis, and absorption versus variable costing. Prerequisite: ACCT213.

**ACCT216 Software System Applications** **2-2-3**
An introduction to an integrated accounting software package, this course includes evaluation of common software characteristics and features, a review of internal controls for computerized accounting systems. The student will become proficient in processing transactions in a computerized accounting environment using a popular software package in general ledger, financial statement preparation, accounts receivable, accounts payable, payroll, inventory, time and billing, fixed assets and depreciation, cost control, budgeting and reporting. Prerequisite: ACCT123, CIS110 or higher.

**ACCT220 Intermediate Accounting I** **3-0-3**
This first of three classes in intermediate accounting is an extension of topics covered in Accounting & Financial Reporting I and II, with further emphasis on the study and application of generally accepted accounting principles. The student will encounter an in-depth study of accounting concepts and will accurately prepare complex balance sheets, income statements, and retained earnings statements including required financial disclosures. Discussions include accounting ethical practices, fair earnings management, the Sarbanes Oxley act, and international accounting standards. A review of the accounting cycle will cover monthly transaction entries and complex adjusting, correcting, reversing, and closing entries. Also includes an in-depth analysis of cash, receivables, inventory valuation, and time value of money. Integrated within this class is exposure to sample CPA exam questions and the use of EDGAR or similar databases for conducting accounting research. Prerequisite: ACCT123.

**ACCT221 Intermediate Accounting II** **3-0-3**
The second of three classes for Intermediate Accounting, this course continues the intensive study begun in Intermediate Accounting I. Students will study the recording and disclosure requirements for acquisition and disposition of long term assets, depreciation and impairment of assets, intangible assets, current liabilities, contingencies, contract accounting, long and short term debt, estimated liabilities, investments, shareholders' equity transactions, stock issuance and retirement, revenue recognition, dilutive securities and earnings per share. Integrated within this class is exposure to sample CPA exam questions and the use of EDGAR or similar databases for conducting accounting research. Prerequisite: ACCT220.

**ACCT222 Intermediate Accounting III** **3-0-3**
The final of three classes for Intermediate Accounting continues the intensive study begun in Intermediate Accounting I. Topics include the complex reporting and disclosure requirements for the Statement of Cash Flows, income taxes for financial statement presentation, pension plans and post-retirement benefit accounting, leases, accounting changes and error analysis, full disclosure requirements in financial reporting, partnership accounting and SEC reporting requirements. Integrated within this class is exposure to sample CPA exam questions and the use of EDGAR or similar databases for conducting accounting research. Prerequisite: ACCT220.

**ACCT243 Federal Income Taxes – Individuals** **3-0-3**
A detailed presentation of Federal Income Tax Laws focusing on Internal Revenue Service procedures and court rulings related to individuals as well as sole proprietorships. Applicable tax forms are prepared in conjunction with rules and regulations. Prerequisite: ACCT123.

**ACCT244 Federal Income Taxes - Corporations & Partnerships** **3-0-3**
A detailed presentation of the theories and practice of Federal Income Tax Laws for C and S Corporations and Partnerships. Applicable tax forms will be studied in conjunction with rules and regulations. Prerequisite: ACCT123.

**ACSP101 Payroll Fundamentals-Entry Level** **3-0-3**
This course will be a hands-on approach to learning the payroll cycle through the completion of a semester-long practice case. Topics covered include the logical process of work within the payroll department; the fundamentals of laws and regulations that govern the payroll function; internal control procedures; various payroll fringe benefits. Upon successful completion of the course, the student will be ready for an entry-level position as a payroll professional, and will be prepared to test for the American Payroll Association's Fundamental Payroll Certification Examination.

**ACSP103 Accounts Payable-Entry Level** **2-.5-2**
This hands-on class will teach the student the accounts payable department functions, from the receipt of a purchase order through the completed payment of the invoice using a Quick Books™ software package. Topics covered include the logical process of work within the accounts payable department, the interaction and flow of information throughout the organization, internal controls, processing of paperwork for the invoice packet, disbursement of funds, updating the vendor master file, preparation of 1099 reports and vendor statement reconciliation. Upon successful completion of the course, the student will be ready for an entry level position in accounts payables. Upon completion of this class, the student will be prepared to test for the Accounts Payable Fundamental Certification, a National Certification Examination.

**ACSP104 Accounts Payable Professional-Advanced** **2-0-2**
This advanced level class in accounts payable operations and procedures is designed for the accounts payable professional with at least 3 years of full-time work experience in accounts payable who wants to further their education regarding advanced topics of accounts payable so as to enhance their performance in the work place and/or prepare to take the Accredited Payable Specialist Certificate Exam. Topics covered include: Internal control systems, Sarbanes Oxley Act, policy manual preparation, fraud detection and prevention, record retention and destruction practices, preparation for internal and external

audits, accounting terminology and account reconciliation, advanced processing functions for invoices and non-invoice billing, disbursement methods, paper versus electronic payments, international payments, petty cash, error corrections, updating the vendor master file, accounts payable software specifics and security issues, electronic invoicing, data security, imaging and workflow, sales and use taxes, value added taxes, travel and entertainment expense management, 1099 reporting, and importance of cross training and best training processes. Upon successful completion of this class and providing that the student has the applicable required work experience, the student will be prepared to take the Accredited Payable Specialist Certification Exam offered by The Accounts Payable Network and The Institute of Management & Administration.

### ACSP110 Bookkeeping Internal Controls and Advanced Topics    2-0-2

Covers more advanced topics in bookkeeping, including the reconciliation of depreciation for book versus taxes, depreciation methods for GAAP (*General Accepted Accounting Principles)*, depreciation methods for Federal Income Tax, depreciation of vehicles for tax purposes, merchandise inventory using the perpetual and the periodic systems, inventory computation methods, and lower of cost or market.  Topics covered for internal controls include employee theft and how to prevent it, prevention of check and credit card fraud, prevention of vendor cheating, and how to avoid various con schemes and scams. This class is designed to prepare the student for the workforce as a bookkeeper and to prepare for part 2 / test 2, and parts 3 & 4 of the National Certified Bookkeeper exam administered by the American Institute of Professional Bookkeepers. Prerequisite: ACCT113 with a grade of C or better.

### ACSP111 Advanced Bookkeeping  Applications               3-0-3

The Capstone course in the bookkeeping certificate program. Topics extensively covered include daily transaction entries, monthly and year-end adjusting entries, locating errors, error-correction entries, bank reconciliations, preparation of worksheets and creation of computerized financial statements. The student will complete a practice case that applies the knowledge learned to a *"real-life"* case. This class is designed to prepare the student for work as a bookkeeper and for part 1 of the National Certified Bookkeeper examination administered by the American Institute of Professional Bookkeepers.

### ADMN111 Keyboarding I                                    3-0-3

Introduces touch-typing. Students learn basic word processing functions as they format personal letters, business letters, envelopes, memos, reports and tabulations. Formatting rules pertaining to margins, tabs, and spacing will be reinforced.

### ADMN122 Executive Keyboarding                            2-2-3

Continues supervised speed and accuracy development. While learning keyboarding concepts, the student will produce correspondence with more advanced features. Also covers business letters with verifying formats, complex tabulations, business forms, manuscripts, and tables. Prerequisite:  ADMN111 or permission of the instructor.

### AH110 Medical Terminology                                3-0-3

Designed to provide the ability to communicate in a professional, effective manner in a variety of health care settings. Through a realistic approach, students learn the basic rules for building and defining medical terms, the correct pronunciation and spelling of medical terms, and the application of medical terminology as it relates to each body system. Students are introduced to various types of medical records and reports and provided with the skills to read and interpret them. A variety of activities will guide the student in the application of medical terminology as it relates to the clinical world.

### AH115 Phlebotomy                                         3-0-3

Designed to provide the student with theoretical and introductory technical skills of a phlebotomist. Discussions include anatomy and physiology of the circulatory system, medical terminology, structures of the health care system and laboratory safety, types of laboratory analyses, specimen collection including techniques, equipment, sources of error and medico-legal issues surrounding the practice of phlebotomy.  Prerequisite: Reading Comprehension at the 12th grade level based on the Accuplacer Test.

### AH135 Phlebotomy Internship                              0-9-3

After successful completion of AH115 Phlebotomy, the student will spend 120 hours in a clinical environment becoming proficient with the responsibilities and skills of a phlebotomist. Students receive hands-on experience with venipuncture and capillary punctures. In addition, the ability to follow protocol for the collection of blood specimens is stressed, all while under the supervision of qualified personnel in an accredited clinical laboratory. Requires program matriculation and immunization documentation. Prerequisite: Grade of C or better in AH115 and signed permission of Phlebotomy Coordinator. **Note**: Only full-time, daytime internships available. No evening or weekends.

### AH200 Transcultural Health Care                          3-0-3

Health care professionals support the concept of holistic care and recognize the need to understand the client's background in order to provide comprehensive care that respects personal values and individuality. To this end, Transcultural Health Care provides a framework for all health care providers to learn inherent concepts and characteristics of culture and provide the background necessary to interact knowledgeably and competently with a number of ethnic populations. Prerequisites:  AH110, BIOL106 or BIOL110. Corequisite:  MEDA123.

### AN101 Introduction to Anthropology                       3-0-3

Introduces students to cultural anthropology, its key concepts, terminology, theories, and research. Some aspects of physical anthropology and linguistics will also be covered. Topics covered include culture, ethnocentrism, cultural aspects of language and communication,  economic patterns, kinship, sex and marriage, socialization, social control, political organization, class and caste, ethnicity, gender, religion, beliefs, and cultural change. *(Fulfills Social Science requirement.)* Offered every semester.

### ARTS110 Welding for the Artist                           1-4-3

An introduction to welding for the artist. The goal is for the student to develop structurally and aesthetically sound welding techniques in arc and gas welding to enable the art student to create two- and three-dimensional artwork. Emphasis is on safety, hands-on practice, equipment and process selection, joint design and filler metal characteristics. Students learn to safely flame cut mild steel as well as bend metal using torch heat. Braze welding is also discussed and practiced. Demonstrations in other welding processes more suitable to welding aluminum and stainless steel are given. Also covers the art of blacksmithing, an introduction to the history of sculpture and examples of sculptors and their work.  *(Fulfills Fine Arts requirement.)*

### ARTS115 Photography I                                     2-3-3

Designed to give the novice photographer the hands-on skills to successfully create and interpret photographic images, this course is structured to help students master the technical tools of photography along with giving them the ability to perceive and understand photographs visually and artistically. They will construct and use a pinhole camera. Students must also submit a review of a photography exhibit or photographer's book, along with an exhibit of work describing a documentary project of their choice. Students are required to complete 10 assignments and submit a final portfolio at the end of the term. Basic photographic methods are taught using 35mm cameras. Students learn the basics of light and exposure using 35mm cameras and the pinhole camera. The course  covers the basic techniques of film exposure and processing. Students learn to correctly expose their film, to work in the darkroom and how to make a good black and white photograph. The lab component of this class will include in-class lab time and off-campus lab time. *(Fulfills Fine Arts requirement.)*

### ARTS117 Art History I                                     3-0-3

Surveys the history of art and design in Western and non-Western traditions from prehistoric to the Baroque period or 17th century. The course emphasizes the connections among historical, political, social, religious and artistic developments, showing how artists and designers are influenced by their culture and time. *(Fulfills Fine Arts requirement.)*

### ARTS120  Digital Photography                              2-3-3

Designed to provide basic skills and to develop skills in pixel-based photographic design and printing. Through the use of simple digital equipment, students will be able to shoot their image, import to their computer, manipulate using photo editing software, and produce a print without the use of traditional silver based materials. Students will use Adobe® Photoshop® as the primary image-editing tool. Using your camera software, save photos as JPEG files *(on blank CD-Rom Disks, Memory Flash Card or other means of saving and copying edited files)* and bring to the classroom for manipulation in Adobe Photoshop™. Students will come away with a working knowledge of the skills involved in digital printing and other available resources .The lab component of this class will include in-class lab time and off-campus lab time. *(Fulfills Fine Arts requirement.)*

### ARTS123 Drawing I                                         2-3-3

Various drawing media and techniques are explored in this course. Assignments are designed to build drawing observation skills necessary for visual communications. *(Fulfills Fine Arts requirement.)*

### ARTS125 Watercolors I                                     2-3-3

Students will acquire basic watercolor painting skills, and explore painting techniques, different papers and watercolor mediums. Experimental techniques and affects along with tools and various watercolor mediums will be demonstrated and students will use skills they have acquired in assigned class projects. Prerequisite: ARTS123. *(Fulfills Fine Arts requirement.)*

**ARTS127 Art History II**     **3-0-3**
Surveys the history of art and design in Western and non-Western traditions from the 18th through the 20th century, emphasizing the connections among historical, political, social, religious and artistic developments, showing how artists and designers are influenced by the culture and time in which they live. *(Fulfills Fine Arts requirement.)*

**ARTS130 Introduction to Art**     **3-0-3**
Surveys and compares works of visual art and design from Western and non-Western traditions. The course emphasizes the relationship among themes, techniques and periods. Using video/DVDs, students learn how certain artists produce their art from start to finish. Students will explore how various artists use the critical thinking process of questioning, exploration, trial and error and discovery. *(Fulfills Fine Arts requirement.)*

**ARTS210 Painting I**     **2-3-3**
Students will acquire painting skills. There will be experimentation with several painting mediums, including watercolor, gouache, acrylics and oils. Tools and techniques will be demonstrated, examined and used. Some basic drawing abilities are helpful but not required. *(Fulfills Fine Arts requirement.)*

**ARTS212 Painting II**     **2-3-3**
Students will enhance painting skills with the knowledge already established in Drawing I and Painting I. Where Painting I began with experimentation of several painting mediums, Painting II involves more advanced painting techniques. The major concentration will involve portrait and figure studies, still life and "plein air" outdoor paint tints. Prerequisites: ARTS123, ARTS210. *(Fulfills Fine Arts requirement.)*

**ARTS215 Photography II**     **2-3-3**
Photography II further investigates black and white photographic methods, covering advanced exposure, tone reproduction, darkroom techniques, basic lighting techniques, including flash photography, use of special filters, and archival procedures with both film and prints, as well as alternative photographic techniques, such as hand coloring, toning and cyanotypes. Students are required to keep a concise lab book, which records all technical data. The class will work together to produce a student show for the end of the term. The lab component of this class will include in-class lab time and off-campus lab time. Prerequisite: ARTS115 *(Fulfills Fine Arts requirement.)*

**ARTS223 Drawing II**     **2-3-3**
Students will continue developing drawing skills based on the knowledge and training acquired in Drawing I. More complex still-life, portrait and life figure drawings will be created in class. Further investigation of drawing materials and an introduction to more mediums are also covered. Prerequisite: ARTS123 *(Fulfills Fine Arts requirement.)*

**ASL110 American Sign Language I**     **3-0-3**
An introductory course that provides non-native signers the opportunity to study American Sign Language. Emphasis will be on the development of visual receptive and expressive skills necessary for effective communication with deaf and hard-of-hearing individuals. Through a variety of classroom experiences, students will learn to recognize and produce both manual and non-manual behaviors that reflect an understanding of the language's grammatical, semantic, spatial and cultural frameworks. *(Fulfills Foreign Language requirement.)*

**ASL 120 American Sign Language II**     **3-0-3**
Builds on skills developed in ASL110. Participants will be introduced to more advanced vocabulary and grammatical features inherent in the language of ASL. Emphasis is on conversational fluency. Students will also explore the historical and cultural evolution of ASL through a variety of learning mediums. Prerequisite: ASL110 *(Fulfills Foreign Language requirement.)*

**AUTO101 Introduction to Service & Maintenance**     **1-6-3**
Introduces automobile service and repair including shop safety, service department operations, safety inspection, and techniques for proper use of hand, power tools and equipment. Using the various skills learned, students perform basic service and repairs on today's automobiles. Prerequisite: Accuplacer assessment test which indicates placement into ENGL110 and any 100 or 200 level MATH course; developmental coursework may be taken concurrently.

**AUTO102 Suspension & Steering Systems**     **2-3-3**
An in-depth study of steering and suspension systems, alignment geometry and procedures including the service of these systems. Introduces automatic ride control suspension, 4-wheel steering and active suspension. Wheel balance and balancing, wheel and tire diagnosis and repair are also covered. Prerequisite/ Corequisite:AUTO101.

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**AUTO103 Basic Electrical**     **3-3-4**
A comprehensive study of the theory and diagnosis of electrical systems. Topics include: basic electricity theory and systems, magnetism, induction, batteries, semiconductors, automotive wiring circuits, electrical circuit repair and diagnosis techniques, and the fundamentals of electronics. Corequisite: AUTO101.

**AUTO104 Automotive Brakes**     **2-3-3**
An extensive study of the construction, operation and diagnosis of modern brake systems. Topics include: the fundamentals of hydraulics, components and diagnosis; disc and drum brake operation and diagnosis; parking brake systems; power assist brakes, and disc and drum machining. Prerequisite: AUTO101 with a C- or better.

**AUTO105 Automotive Engines**     **2-3-3**
A comprehensive study of the theory, diagnosis and overhaul of gasoline-fueled internal combustion engines. This course provides a means of gaining knowledge and skills to diagnose and service today's complex engines and systems. Covers the principles of four-stroke cycle engine operation, identification of engine systems and components, cylinder head and valve train diagnosis and service; engine noise diagnosis, basics of diesel operation and turbocharger/supercharger principles. Prerequisite: AUTO101 with a grade of C- or better.

**AUTO106 Electronic Systems**     **2-3-3**
A continuation of AUTO103 that expands knowledge of electronic systems and electrical circuits. Provides an in-depth study of electronic control system input sensors, output devices and microprocessor control systems. Sensors and output device operation and oscilloscope analysis are also covered. Prerequisite: AUTO103 with a C- or better.

**AUTO107 Automotive Climate Control**     **2-3-3**
A comprehensive course covering the theory and operation of air conditioning systems, air management and electronic climate control systems. Also included are the service, maintenance and diagnosis of climate control systems. Prerequisite: AUTO103 with a grade of C- or better.

**AUTO108 Automotive Co-Op**     **0-15-1**
The Automotive Co-op provides an opportunity for practical experience at an approved site. It is a required component of the certificate program. Students are required to work a minimum of 240 hours. A log of all work will be completed for review by the faculty member and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the Co-op coordinator and site supervisor, and will be the basis for the final grade. Prerequisite: AUTO101 with a min. grade of C- or better.

**AUTO111 Introduction to Automotive Service**     **1-6-3**
Introduces service and repair including shop safety, service department operations, safety inspection, and techniques for proper use of hand, power tools and equipment. Using the various skills learned, students perform basic service and repairs on today's automobiles.

**AUTO112 Steering, Suspension & Alignment**     **2-3-3**
An in-depth study of steering and suspension systems, alignment geometry and procedures including the service of these systems. An introduction to automatic ride control suspension, 4-wheel steering, and active suspension. Wheel balance and balancing, wheel and tire diagnosis and repair are also covered. Corequisite: AUTO111

**AUTO113 Electrical Systems**     **3-3-4**
A comprehensive study of the theory and diagnosis of electrical systems. Topics include: basic electricity theory and systems, magnetism, induction, batteries, semiconductors, automotive wiring circuits, electrical circuit repair and diagnosis techniques and the fundamentals of electronics. Corequisite: AUTO111

**AUTO121 Brake Systems**     **2-3-3**
An extensive study of the construction, operation and diagnosis of modern brake systems. Topics include: the fundamentals of hydraulics, components and diagnosis: disc and drum brake operation and diagnosis, parking brake systems, power assist brakes, and disc and drum machining. Prerequisite: AUTO111 with a grade of C- or better.

**AUTO122 Engine Theory, Diagnosis & Repair**     **2-3-3**
Through a comprehensive study of the theory, diagnosis and overhaul of gasoline fueled internal combustion engines, students gain the knowledge and skills to diagnosis and service today's complex engines and systems. The principles of four-stroke cycle engine operation, identification of engine systems and components, cylinder head and valve train diagnosis and service, engine noise diagnosis, basics of diesel operation and turbocharger/supercharger principles are covered. Prereq: AUTO111 with a C- or better.

### AUTO123 Electronics I   2-3-3
A continuation of AUTO 113 that expands the student's knowledge of electronic systems and electrical circuits. The course consists of an in-depth study of electronic control system input sensors, output devices and microprocessor control systems. Sensors and output device operation and oscilloscope analysis are also covered. Prerequisite: AUTO113 with a grade of C- or better.

### AUTO124 Automotive Co-op I   0-15-1
The Automotive Co-op provides an opportunity for practical experience at an approved site. Students are required to work a minimum of 320 hours. A log of all work will be completed for review by the faculty member and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the faculty member and site supervisor, and will be the basis for the final grade. Prerequisites: AUTO 121, AUTO122, AUTO123 all with a grade of C- or better.

### AUTO131 Climate Control Systems   2-3-3
A comprehensive course covering the theory and operation of air conditioning systems, air management and electronic climate control systems. Also included in this course are the service, maintenance and diagnosis of climate control systems. Prerequisite: AUTO113 with a grade of C- or better.

### AUTO132 Electronics II   2-3-3
This course is a continuation of the freshman electrical, electronics, and mechanical courses. It will cover vehicle systems that have integrated electronic controls. The students will examine the theory of operation, diagnostic techniques and service procedures for these systems. Prerequisite: AUTO123 with a grade of C- or better.

### AUTO133 Customer Satisfaction   1-0-1
Evaluates the student's internship progress and experiences and discusses issues related to becoming a successful technician or manager. Focus will be on issues of ethics, professionalism, quality and customer satisfaction. Guest speakers, consumers and others may be invited to participate in open discussions of issues related to the automotive service industry. Prerequisite: AUTO111 with a grade of C- or better.

### AUTO134 Automotive Co-op II   0-15-1
The Co-op provides an opportunity for practical experience at an approved site, and is a required component of the certificate program. Students must work a minimum of 240 hours, and log all work for review by the faculty member and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the faculty member and supervisor, and will be the basis for the final grade. Prereq: AUTO131, AUTO132, AUTO133 with a C- or better.

### AUTO211 Manual Transmissions & Transaxles   2-3-3
Covers theory and operation of manual transmissions and transaxles, including drive axles, drive shafts, clutches, as well as diagnostic procedures and techniques. Disassembly, overhaul procedures, repair and reassembly of transmission/transaxles, differentials and clutches will be performed. Prerequisite: AUTO111 with a grade of C- or better.

### AUTO214 Powertrain & Emission Controls   2-3-3
This course provides an in-depth study of powertrain control systems and emission control systems with emphasis on operating strategies. This course focuses on the theory and operation of the systems and how they react to different operating conditions. This course lays the foundation for the driveability and performance diagnostic course that follows. Prerequisite: AUTO132 with a grade of C- or better.

### AUTO215 Advanced Vehicle Systems   3-0-3
Introduces the students to new technology. This course focuses on the latest vehicle systems and technology that may not yet be in production. This course is designed to explore the future of technology in the automobile and to help prepare students for what is ahead. Prerequisite: AUTO132 with a grade of C- or better.

### AUTO220 Automotive Co-op III   0-15-1
The Automotive Co-op provides an opportunity for practical experience at an approved site. It is a required component of the certificate program. Students are required to work a minimum of 320 hours. A log of all work will be completed for review by the faculty member and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the faculty member and site supervisor, and will be the basis for the final grade. Prerequisite: AUTO 211, AUTO214, AUTO215 with a grade of C- or better.

### AUTO221 Automatic Transmission   2-3-3
#### Hydraulic & Mechanical Systems
Covers automatic transmission hydraulic and mechanical system operation, diagnosis and repair. Students participate in the complete disassembly, inspection and overhaul procedures of different types of automatic transmissions. Students will examine the principles of torque converter operation, hydraulics, power-flow, planetary gear sets and diagnosis. Prerequisite: AUTO211 with a grade of C- or better.

### AUTO223 Driveability & Performance   2-3-3
A comprehensive course in vehicle performance diagnosis with a focus on identifying driveability concerns and diagnostic methods used in solving performance problems. Using actual driveability problems, students will have the opportunity to learn diagnostic techniques. The goal is to learn to solve performance problems in a logical and complete manner and to identify the root cause. Prereq: AUTO214 with a C- or better.

### AUTO224 Automatic Transmission Electronics   2-3-3
Provides a thorough study into automatic transmission electronic control system operation, diagnosis and repair. Students participate in the inspection and diagnosis of electronic controls of automatic transmissions. An in-depth analysis of electronic transmission control system strategies and diagnosis will also be part of the course. Prerequisites: AUTO132, AUTO211.

### BIOL041 Foundations for Biology   3-0-3
Covers the main points of biology at the high school level, and meant to replace or supplement a student's background in biology if that student either never passed high school biology, or took the course so long ago as to be unprepared for further study of the life sciences. Provides an overview of cell biology, the biology of organisms, and the biology of populations. Credits do not count toward graduation requirements.

### BIOL090 Chemistry Foundations   1-0-1
#### for Anatomy & Physiology
An introduction to chemistry and biochemistry to prepare students for Anatomy and Physiology specifically, and other health science courses they may subsequently take. Emphasizes general vocabulary and concepts in chemistry that are appropriate to the health sciences; specific topics may be covered in more depth as appropriate for preparation for Anatomy & Physiology I. Students should be ready for a rigorous, fast-paced course. This course does not fulfill the chemistry requirement for Nursing.

### BIOL101 General Concepts in Biology   3-3-4
A one semester college-level biology course that deals with important concepts surrounding biology. It will cover some basic chemistry, the cell structures and their functions, cell division, cellular respiration, photosynthesis, DNA and RNA, and some basic genetics. This study is based on the ongoing evolution of species. Prerequisite: High school biology with a C or better or equivalent or permission of instructor and placement into ENGL110.

### BIOL102 Introduction to Botany   3-3-4
Covers the basic form of plants including roots, stems, leaves, flowers, and the different modes of reproduction and plant responses. Cellular structures and functions will also be explored as will the scope of the many types of plants and their adaptations to various environments. These topics will be linked to the study of evolution and how this process occurs in plants. Prerequisites: High School Biology with a C or better or permission of the instructor and placement into ENGL110.

### BIOL106 Human Body   3-0-3
Introduces the structure and function of the human body, which includes the anatomy and physiology of each of the organ systems of the human body and practical discussions of disease and health. Prerequisite: placement into ENGL110.

### BIOL107 Human Body Lab   0-2-1
A series of laboratory experiences designed to enhance and reinforce the concepts of Human Biology. *(Medical Assistant students must take BIOL106 concurrently.)*

### BIOL108 Biology I   3-3-4
An intense college-level course which covers the principles of biology, including the structure of cells and how they function as well as how they reproduce themselves. Also included is: cellular respiration, photosynthesis, biochemisty of cells, physiological processes, genetics and heredity. Prerequisite: Successful completion of high school biology and chemistry or BIOL041 and CHEM043 or permission of the instructor.

### BIOL109 Biology II   3-3-4
Covers the biology of organisms, including the four areas of kingdoms, behavior, evolution and ecology. An understanding of high school level biology and chemistry is assumed.

**BIOL110 Human Anatomy and Physiology I**     **3-3-4**
A comprehensive course in the anatomy and physiology of the human body that presents current in-depth information in basic molecular and cell biology as well as human cells, tissues, and organ systems. This first of two courses includes molecular biology which covers DNA and RNA structure and the formation of proteins, as well as basic cellular respiration. It also covers the integumentary, skeletal, muscular, nervous, and sensory systems. Laboratory work augments lectures and includes the study of fresh and preserved specimens, microscopy and human physiology. Prerequisites: Successful completion (grade C or better) of high school level biology and chemistry or BIOL041 and CHEM043 with a C or better or permission of the instructor.

**BIOL111  Anatomy & Physiology of Domestic Animals I**     **3-3-4**
Introduces the comparative anatomy of the mammalian body that will include domestic animals and man. Emphasizes normal anatomy and physiology with references made to deviation from the norm which might constitute a disease state. This is the first semester of a two semester course and covers basic organization, cells, and tissues; along with the integument, skeletal, muscular, and nervous systems. Lab work augments lectures and includes the study of histology as well as preserved specimens and models. Prerequisite: Successful completion (grade C or better) of high school level biology and chemistry or permission of the instructor and placement into ENGL110.

**BIOL112 Human Diseases**     **3-0-3**
Provides an understanding of disease processes. Common disorders of major body systems are discussed relative to the mechanisms by which they develop and their effects on homeostasis. Prerequisite of BIOL106 with a C or better or permission of the instructor.

**BIOL113 Human Diseases Lab**     **0-2-1**
A series of laboratory experiences designed to enhance and reinforce the concepts of BIOL112. The course will cover normal and abnormal anatomy and microanatomy, diagnostic tools, and study of disease organisms. Corequisite: BIOL112

**BIOL120 Human Anatomy & Physiology II**     **3-3-4**
A continuation of BIOL110, this course includes current, in-depth information of the structure and function of the endocrine, digestive, respiratory, blood, cardiovascular, lymphatic, urinary, and reproductive systems. Lab work augments lectures and includes exercises in microscopy, the study of fresh and preserved specimens, and physiological measurements of the human body. Prerequisite: BIOL110 with C or better or permission of instructor.

**BIOL121  Anatomy & Physiology of Domestic Animals II**     **3-3-4**
A continuation of BIOL111, this course includes current in-depth information of the structure and function of the endocrine, digestive, respiratory, blood, cardiovascular, lymphatic, immune, urinary, and reproductive systems. Lab work augments lectures and includes the study of histology, preserved specimens, and models. Prerequisite of C or better in BIOL111 or permission of the instructor.

**BIOL150 Nutrition**     **3-0-3**
A study of normal and medical nutritional therapy, including the digestion, absorption, transport, and metabolism of the macro and micro nutrients throughout the life cycle. Covers nutritional assessment and care plan processes for various medical nutritional therapies, including cardiac, diabetes, stress disorders, various feeding routes, and energy and weight management.

**BIOL201 Principles of Genetics**     **3-3-4**
Introduces the principles of genetics, with an emphasis on human examples that illustrate basic genetic concepts. Genetics is studied at the level of DNA, genes, chromosome, cells, tissues and organs, individuals, and populations. Hands-on laboratory exercises reinforce the lectures and include investigations in mitosis and meiosis, Mendelian genetics, chromosome structure, control of gene expression, mutation, and genetic technologies. Prereq: High school biology with a C or better, or a 100 level college biology course with a C or better, and placement into ENGL110, or permission of instructor.

**BIOL210 Microbiology: Principles and Practices**     **3-3-4**
Introduces the principles and practices of medical microbiology. Topics include: the nature and behavior of microorganisms; principles of growth and reproduction of micro-organisms; identification of microorganisms using staining, pure culture, biochemical and antigenic techniques; and the epidemiology, clinical features, laboratory diagnosis and control measures for microbial diseases caused by viruses, bacteria, fungi, protozoa and helminthes. Students are required to have protective eye wear *(available in the bookstore)* and lab coats for the first lab session.  Prerequisite:  BIOL110 with C or better.

**BIOL220 Pathophysiology**     **3-3-4**
Focuses on the clinical pathogenesis of human diseases as a consequence of abnormalities and alterations of normal physiologic function. Lectures cover topics in general pathology as well as in-depth information in system pathology, and focus on the most common diseases, which are either frequently encountered or illustrate an important principle. Laboratory experiences enhance and reinforce the lecture and will include histological studies, examination of models, and lab activities that enforce the understanding of certain disease processes. Prerequisites: Successful completion *(grade C or better)* of BIOL110 and 120 or BIOL111 and 121, and placement into ENGL110, or permission of the instructor.

**BLDG099  Building Construction Exploration**     **1-0-1**
This course allows students to participate in some aspects of the Building Construction program while they are taking preparatory math, English or reading courses.  Students will be integrated into the construction environment, be assigned a construction advisor and be mentored by other construction students.  These credits do not count toward graduation requirements.

**BLDG111 Construction Drafting I**     **1-3-2**
Develops basic drawing skills necessary to complete satisfactory drawings in the light residential construction field. Drawings deal with basic drafting concepts such as orthographic projection, isometrics, and obliques. Drawings of details and sections of a house from the sill to the ridge are also completed. All drawings and details will be related to the Building Construction Technology Program.

**BLDG112 Methods of Construction I Theory**     **4-0-4**
Covers the various components and materials necessary to complete the frame of a light residential dwelling, including deck, walls, partitions, ceilings, rafters, and sheathing.

**BLDG113 Methods of Construction I Lab**     **0-6-2**
The student learns to identify and apply the various components and materials necessary to complete the frame of a light residential dwelling, including deck, walls, partitions, ceilings, rafters, and sheathing.

**BLDG121 Construction Drafting II**     **1-3-2**
This course gives the student an opportunity to specialize in drawings related to complete wall elevation sections, cornice details, rough stairs, and component parts of a complete set of working drawings. The student will also start plans for a complete set of working drawings for an energy-, space- and cost-efficient home common to quality New England construction. Completed preliminaries of a foundation plan, floor plan, door and window schedule, front and side elevation drawings, and various sketches will be required for a house design. All drawings and details will be related to the Building Construction Technology Program. Prerequisite: BLDG111.

**BLDG122 Methods of Construction II Theory**     **4-0-4**
Covers the various components and materials necessary for the completion of the exterior of a wood frame dwelling, including trim roofing, sidewalling, doors, windows, stairs, and ventilating components. The proper installation of exterior finishing materials and design of stairs in accordance with industry standards are studied. Prerequisites: BLDG112 and BLDG113, or permission of the instructor.

**BLDG123 Methods of Construction II Lab**     **0-6-2**
The student learns to identify and apply the various components and materials necessary for the completion of a light residential dwelling including trim roofing, sidewalling, doors, windows, stairs, and ventilating components. The proper installation of the materials in accordance with industry standards are studied and practiced. Prerequisites: BLDG112 and BLDG113, or permission of the instructor.

**BLDG212 Methods of Construction III Theory**     **3-0-3**
Provides practical experience in identifying the various materials and components used to finish the interior walls and ceilings of a wood frame structure. The proper installation of door frames, hanging doors and installation of locksets, installation of door and window trim, and the application of baseboard and ceiling moldings are studied in accordance with acceptable industry standards. Prerequisites: BLDG122 and BLDG123, or permission of the instructor.

**BLDG213 Methods of Construction III Lab**     **0-6-2**
Introduces the proper installation of materials to complete the interior of a wood frame dwelling. Included are ceiling and wall finishes, door frames, hanging doors, locksets, door and window trim, ceiling and baseboard molding, installed in accordance with industry standards. Prerequisites: BLDG122 and BLDG123, or permission of the instructor.

**BLDG214 Energy-Efficient Building Construction**     **3-0-3**
Introduces the principles, practices, and materials in energy-efficient building construction. Covers: heat transport, insulation, air movement and indoor air quality, vapor diffusion and air barriers, moisture and condensation, sound transmission and absorption, solar energy, lighting, space and domestic hot water heating. A heat audit is performed, and the state energy code is examined.

**BLDG222 Site Work and Foundations** 3-0-3
The student studies soil analysis, site and utility investigation, foundations common to New England, and building codes. Students develop hands-on skills with a leveling gun and transit. Discussion of brick, block and stone are part of this course. Introduces individual septic system design. Prerequisite: BLDG212 or permission of the instructor.

**BLDG223 Methods of Construction V Theory** 3-0-3
Covers the identification and installation of flooring materials, stair parts, and cabinetry as well as the proper installation of stair treads, risers, skirt boards, newel posts, handrails and balusters. Introduces the design, layout, construction and installation of kitchen cabinets. Prerequisites: BLDG212 and BLDG213, or permission of the instructor.

**BLDG224 Methods of Construction V Lab** 0-6-2
A continuation of Methods III Lab with interior finish: jamb extensions, baseboard, window and door casings, kitchen cabinet layout and installation, construction and installation of bathroom vanity, installation of countertops, finish stair mock-ups, and other laboratory projects. Prerequisites: BLDG212 and BLDG213, or permission of the instructor.

**BLDG225 Blueprint Reading/Estimating** 3-3-4
Students learn to comprehend and use blueprints typically used in light residential construction. Two and three-dimensional drawings are analyzed, and common methods of estimating labor and materials practiced. An understanding of residential construction is suggested.

**BLDG230 Construction CAD I** 2-2-3
Introduces the basic concepts and practices of producing drawings by Computer Aided Drafting using Windows® based personal computers and AUTOCAD software. Anticipated benefits of CAD capability include increased drawing productivity, improved drawing accuracy, simplification of drawing changes and modifications, and enhanced design capabilities. All drawings and details will be related to the Building Construction Technology Program. Prerequisites: BLDG111and BLDG121.

**BLDG 235 Construction CAD II** 2-2-3
A continuation of the introduction to basic concepts and practices of producing drawings by computer aided drafting using IBM™-compatible personal computers and AUTOCAD software. Anticipated benefits of CAD include increased drawing productivity, improved drawing accuracy, simplification of drawing changes and modifications, and enhanced design capabilities. The student will also work on plans for a set of working drawings to an energy-, space- and cost-efficient home common to quality New England construction. Completed preliminaries of a foundation plan, floor plan, door and window schedule, front and side elevation drawings, cross sections, and various sketches will be required for a house design. All drawings and details will be related to the Building Construction Technology Program. Prerequisite: BLDG230.

**BLDG240 Introduction to Precision Estimating** 1-2-2
The student gains both theoretical and practical knowledge in using Precision Estimating for the Windows operating system to estimate large and small residential and commercial construction jobs, including carpentry, sitework, structural steel, and mechanical systems, as practiced in accordance with acceptable industry standards.

**BUS110 Introduction to Business** 3-0-3
Introduces a basic understanding of the structures and operations of business and an awareness of social and ethical responsibility as it relates to the environment, consumers, employees, and investors. An appreciation of the global economy will also be explored.

**BUS114 Management** 3-0-3
Introduces the principles and techniques underlying the successful organization and management of business activities. The course combines the traditional analysis of management principles with the behavioral approach using case studies. Areas of study include the management functions of planning, organization, leadership, staffing control, and the decision-making process.

**BUS120 Introduction to Communications Media** 3-0-3
Provides an introduction to communications media by studying the nature and history of mass communications, as well as examining the various media available to marketers within the communication process. Some of the specific media topics discussed include newspapers, magazines, radio, television, and the Internet. An emphasis is placed on professions within the communications media industry, regulation of the mass media, and the impact of the media on society and the global marketplace.

**BUS124 Small Business Management** 3-0-3
Provides comprehensive knowledge in the development and management of small businesses. Sales, production, personnel management and finance are examined from the point of view of the small business entrepreneur or manager. Using case studies, students are introduced to effective techniques for starting businesses, getting loans, hiring and supervising employees, marketing products andservices and dealing with legal issues and regulations. Using concepts and techniques learned from the course, students will also prepare a business plan for a real or fictitious organization of their choice.

**BUS155 Retail Management** 3-0-3
Examines contemporary management issues in the retail environment, with a focus on theoretical principles, problem-solving techniques, and decision-making processes. Students will discuss a range of retail management topics, including inventory planning and control, location assessment and store design, merchandising and retail promotion, product and brand management, human resources administration, legal and ethical concerns, information technology resources, financial and accounting needs, and sales and trend forecasting. Prerequisite or corequisite: MKTG125.

**BUS200 Teambuilding** 3-0-3
Introduces and expands upon the basic principles and concepts of team building and self-directed work teams as they pertain to the workplace environment. The key concepts of how teamwork can influence and benefit the workplace are explored through lectures, interactive discussions, workshop-type group exercises, videos, and guest speakers.

**BUS210 Organizational Communications** 3-0-3
Effective communication is the lifeblood of the organization and the foundation of a successful business career. The potential business professional must master the methods and techniques necessary to utilize facts, make inferences, understand communication strategies, create logical presentations, and develop critical skills in listening, speaking, and writing. The potential business professional must also understand nonverbal, visual, and mass communication. This course helps students polish their business-communication skills by teaching them how to create an error-free electronic portfolio, which will provide students with a job-search tool. The course emphasizes proper business formatting, along with other communication activities and the communication process as it relates to business. Prerequisite: ENGL110.

**BUS212 Business Law I** 3-0-3
Covers some of the common topics in criminal, civil and business law. Topics include the criminal, civil and business law justice systems including: constitutional law for business and on-line commerce, torts and privacy, business and cyber crimes, ethics and social responsibility, contracts and warranties.

**BUS213 Business Law II** 3-0-3
Continues to encompass some of the common topics in criminal, civil and business law. Topics include: e-commerce contracts, negotiable instruments and digital banking, credit, secured transactions and bankruptcy, sole proprietorships, partnerships and limited liability companies, corporations, investor protection and on-line securities transactions, agency and employment, equal opportunity in employment, antitrust laws and intellectual property and internet law.

**BUS216 Organizational Behavior** 3-0-3
This course develops and expands on the basic understanding of organizational behavior. The human relations approach is stressed, including: management philosophy, the organizational climate, supervision, communication, group participation, and factors in the work environment. The foundations of group behavior are explored and applied to real-world situations, case studies, and a capstone project.

**BUS220 Operations Management** 3-0-3
Focuses on the relationship of the production and operations functions of delivering products or services to the achievement of an organization's strategic plan and linking the organization to its customers. Students integrate forecasting, materials management, planning, scheduling, process, operations control skills and techniques with approaches and tools such as Total Quality, Statistical Process Control, Continuous Improvement, Demand Flow, and Just-In-Time production systems.

**BUS221 Business Finance** 3-0-3
Surveys the corporate finance discipline, to examine the financial management of corporations, to develop skills necessary for financial decision-making, financial forecasting, ratio evaluation and to acquaint students with money, capital markets and institutions. Prerequisite: ACCT123.

**BUS224 Human Resource Management** 3-0-3
Provides a fundamental presentation of the dynamics of human resource management. Emphasis is placed on job design and development, employment training, benefits administration, compensation, and employee relations and the laws relating to human resource management. Course concepts will be solidified through the use of case studies and real-world applications.

**BUS231 Self Assessment** 1-0-1
A seminar meeting one period per week will discuss issues related to successful employment. Discussion topics will include job search, resume, cover letter, interviewing. This seminar will be taken in the final semester.

**BUS291 Internship** 0-9-3
Designed to provide comprehensive experience in application of knowledge learned in previous coursework. Students will research and select an internship site and work as a supervised intern. Prerequisite or Corequisite: MKTG282 or ACCT233.

**CAD110  CAD I Fundamentals** 2-2-3
Introduces computer aided design for 2D drawings.Students will use AutoCAD®, one of the most popular computer aided design programs. Integrated CAD competencies include: model & layout space environments, prototype drawing use, coordinate input systems, 2D engineering geometry construction in model space, geometry editing, and paper space drawing layout. Objects drawn are Mechanical and Architectural.

**CAD113 Applied CAD for Industry** 1-3-2
An introduction to the basic concepts and practices of producing drawings by computer aided drafting using AutoCAD® software. Cover setting up for electronic drawing, drawing accurately, controlling the graphic display, basic drawing techniques, graphic entities and an introduction to editing.

**CAD120 CAD II Intermediate** 2-2-3
A continuation of CAD110 to reinforce skills and learn more in-depth command operations for drawing and editing 3D wireframe models. Students will study the engineering graphics language necessary to communicate technical ideas and solve engineering problems with AutoCAD® . Objects drawn are Mechanical and Architectural. Prereq: CAD110

**CAD210 CAD III Advanced** 2-2-3
Students will apply the standards, conventional drafting practices, and problem solution methods learned in CAD110 and CAD120 using AutoCAD® . Students will construct sets of working drawings (details & assemblies) in 3D engineering solid model formats and finalize paper space drawing formats. This course will continue with concepts and commands to enhance increased productivity. Complete mechanical and architectural projects will be created. Prerequisite: CAD120.

**CDI111 Electronic Publishing I** 2-3-3
Students will produce pre-designed and original publications using Introductory QuarkXPress® and PhotoShop® on Windows®-based PCs, with a focus on the principles, skills and equipment used in electronic publishing. Knowledge of basic layout and paste-up methods is necessary along with basic computer application skills.

**CDI112 Print Design Basics** 2-3-3
Introduces the basics of printed reproduction and demonstrates the historic, modern and future implications of printed communications. Students will learn the language and tools of the industry by solving weekly projects that at the beginning of the semester will teach them the use of hand tools. From there they will use a Windows™ PC platform to create camera-ready layouts that match the techniques, principles, and standards required for quality print production by the graphic artist. Co/Prerequisite: CDI111.

**CDI114 Two Dimensional Design for Graphic Arts** 2-3-3
Covers the basic principles and elements of design. Design problems are solved using techniques that acquaint the student with mechanical tools and media used in the commercial design field.

**CDI121 Electronic Publishing II** 2-3-3
This course give students training in hardware and software components of advanced electronic publishing technology, and the skills needed to produce attractive and effective printed materials. Students will learn to produce page layouts using advanced QuarkXPress® and PhotoShop®.

**CDI122 Color Theory for Graphic Arts** 2-3-3
Explores color theory for graphic arts and design concepts. A variety of projects will be solved, demonstrating how color and design can be used as effective tools for strengthening graphic communication in graphic design.

**CDI124 Typography** 2-3-3
An introduction to typefaces from an aesthetic and communicative perspective. Explores the history and background of typography to provide an understanding of the language and form of typefaces and letterforms. The students will have weekly assignments that will teach them about modern typography and ways to recognize and solve design problems using type. Prerequisites: CDI111, CDI114.

**CDI211 Illustration I** 2-3-3
An introduction to illustration with emphasis on basic ideas, techniques, media, and skill development. Prerequisite: ARTS123. Corequisite: CDI213.

**CDI213 Commercial Design I** 2-3-3
An introductory level process of researching, designing, executing, promoting and presenting for the advertising field is assessed in this course. Marketing trends, products and guidelines of the advertising and graphic arts fields are dissected and evaluated. Individual and group projects are assigned to mobilize the cognitive, creative and collaborative skills of the student. Students will put together electronic layouts that demonstrate a beginner skill in commercial design production. Prerequisites: CDI111, CDI112, CDI114, CDI121, CDI122, ARTS123, CDI124. Corequisite: CDI211.

**CDI215 Digital Publishing Methods** 2-3-3
Students will learn digital printing methods and theories. File preparation and management for print production and Raster Image Processing (RIP) will be explored and practiced. Resolution, graphic file formats, workflow methods, and color calibration of a monitor and scanner will be covered. Students will have weekly projects for hands-on training in making files production-ready. Prerequisites: CDI111, CDI112, CDI121.

**CDI221 Illustration II** 2-3-3
A continuation of CDI211, with attention given to the role of the illustration as communicator. Design problems will be assigned including book and advertising illustration. Students will receive advanced training in illustration techniques and mediums while creating their unique style. Prerequisites: ARTS123, CDI211.

**CDI222 Computer Illustration** 2-3-3
Students will produce pre-designed and original computer illustrations on Windows® based PCs. Students move from introductory drawing techniques to advanced using Adobe Illustrator®. They will learn proper color management and file preparations to ensure that the illustration printed from the screen version is the desired result and usable in electronic design. Prerequisite: CDI114.

**CDI225 Commercial Design II** 2-3-3
An advanced creative process involved in researching, designing, executing, promoting and presenting for the advertising field is assessed in this course. Marketing trends, products and guidelines of the advertising and graphic arts fields are dissected and evaluated. Individual and group projects are assigned to mobilize the cognitive, creative and collaborative skills of the student. Students will put together electronic layouts that demonstrate advanced skill in graphic design production. Completion of a self-promotional package is required. Prerequisites: all freshman courses and CDI211, CDI213, CDI215.

**CDI226 Portfolio Preparation** 2-3-3
Students will produce a professionally mounted portfolio of at least 10 pieces, a press release, a mini portfolio and an electronically produced portfolio. Students must participate in two portfolio reviews; one attended, one unattended, and also participate in a juried exhibition. Students will identify and pursue their career and/or education goals. Co/Prerequisites: all CDI courses.

**CDI227 Internship Seminar** 1-0-1
The Internship Seminar is an opportunity for the student to prepare to work at a graphic design, commercial art, printing, publishing or advertising company. This course is designed to allow the student to further the study of graphic design through research, interviews, and hands-on projects. Students will prepare for interviews and practice interviewing techniques. Prerequisites: all freshman courses.

**CDI228 Internship** 0-8-2
The CDI Internship is an opportunity for the student to experience on-the-job training at a business or professional job site. The student must complete the first three semesters of the Graphic Design Program and be prepared to work at a graphic design, printing, publishing or advertising company. This course is designed to allow the student to further the study of art through in-field internships. Students must attend a business luncheon seminar. Prerequisites: all freshman courses and CDI211, CDI213, CDI215, CDI227.

**CDI230 Time Based Design with Flash®** 2-3-3
This project-based course introduces students to the creation of animated sequences and GIF animations using 2D and 3D tools for use on the web. Students will use Photoshop® and Illustrator® to create original artwork to animate in time based applications. Topics include an exploration of the drawing tools for creating graphics and symbols, optimization, and animating graphics. The course also covers the use of text, buttons, actions, .swf files, sounds, and storyboarding to create production work.

**CDI235 Web Design**      **2-3-3**
A project-based course that addresses the design principles of web site creation. Students learn to use appropriate layouts, typography, colors, file formats, and compression methods when designing for the web. Using Photoshop®, Illustrator®, Flash®, and Dreamweaver®, students design images for background, text, graphics, and navigation for web sites. The course also covers designing for target audiences, creating an online portfolio, and preparing for the future of multi-media and web design. Prerequisites: CDI114, CIS124, CDI122, CDI224, CDI230.

**CE110 National Electric Code Update**      **Non-credit**
Covers in detail the 2008 changes to the National Electrical Code. It is presented in four sessions of 3 ¾ hours each. The course is designed to meet the requirements of the State Electricians Board for re-licensing of electricians.

**CHEM043 Foundations for Chemistry**      **3-0-3**
This high school-level course in chemistry examines the structure of matter and the nature of chemical reactions. The course helps to prepare students for college-level sciences. These credits do not count toward graduation requirements.

**CHEM115 General Chemistry I**      **3-3-4**
Provides a sound foundation in the basic principles of chemistry. Covers structure of matter, stoichiometry, chemical reactions, quantum theory and atomic structure, chemical periodicity, chemical bonding, gases and their properties. Laboratories reinforce the principles and concepts presented in lectures and develop critical thinking and scientific writing. Prerequisites: High school chemistry and biology with a grade of C or better, high school Algebra I or MATH131.

**CIS097 Computer Fundamentals**      **0-2-1**
Designed for students with little or no computer skill or those interested in refreshing their computer knowledge. Students will identify the major hardware and software components of a computer, gain proficiency in the Windows™ operating system and learn to manage files and folders. Students will also gain knowledge of current trends and topics in computer technology and learn the terms and skills needed in today's computer literate society. This course may not be applied to meet certificate or degree requirements.

**CIS109 Operating Systems and Desktop Problems Resolution**      **2-2-3**
Emphasizes the MS Operating Systems, the most common OS found in the workplace. Topics include boot partitions, hardware requirements, software installation issues, features of the Windows™ OS, terminology, skills necessary for desktop support, user accounts and privileges, driver signing, the Device Manager, file encryption and recovery, file and folder types, extensions and attributes, configuring addresses, installation of network printers. Computer Science majors are not eligible to take this course for credit. Prerequisites: CIS097 or passing of evaluation test or permission of the instructor.

**CIS110 Microsoft® Computer Applications I**      **2-2-3**
Introduces the world of MS Applications Office Suite®. Topics include the use of Microsoft® Internet Explorer® as a research tool, and MS Applications Office Suite® *(the most current version the college is licensed for)*. This grouping of programs includes MS Word®, MS Excel®, and MS PowerPoint®. This is not a course for a student with no computer skills and should not be considered as such; it is an intense and rapid instruction in the use of the most common MS Applications programs. Prerequisites: CIS097, permission of the instructor or a demonstrated competency in basic computer skills. *(This course cannot be used toward graduation requirements for Computer Science majors.)*

**CIS111 Foundations of Computer Technologies**      **2-2-3**
Provides a firm foundation in and understanding of fundamental computer concepts including: hardware, algorithmic design, software applications, memory concepts, storage devices, file management, operating systems, DOS Scripting, networking essentials, ethics, terminology, and the effects of current and emerging technology on our society. Prerequisite: None. Co-requisite: CIS118 or CIS148 or CIS158.

**CIS113 Database Design & Management Using SQL**      **3-3-4**
A foundation course in the construction of a Database. Topics include the types of databases, their advantages and frailities; a major focus will be the construction of a working database using Native SQL *(Structured Query Language)* as a tool. The student can expect to learn how to plan and build a relational database using a current industry standard relational database such as Oracle®. Prereq: CIS111 or permission of instructor.

**CIS116 Computer Networking I**      **2-2-3**
Introduces the fundamental concepts and principles that underlie computer networking using the Open Systems Interconnection *(OSI)* model and the TCP/IP protocol suite. Provides an overview of networking terminology, examines different networking topologies and architectures, discusses the physical components of computer networks, and reviews principles of network connectivity.

**CIS118 Visual Basic. NET Programming**      **2-2-3**
Provides an understanding of structured, procedural, and event-driven programming. Students will develop techniques for problem solving through the application of programming methods and will gain experience in the nuts and bolts of program design as they complete lab work and assignments. Students will learn Visual Basic® language and programming environment. Corequisite: CIS111 or permission of instructor.

**CIS120 Microsoft® Computer Applications II**      **2-2-3**
Introduces additional programs associated with the Microsoft® Office Suite that have not been presented through the other classes. Covers Microsoft's Projects, Access, Publisher, and Outlook. Students will learn how to track and manage tasks with MS Projects, create new business-oriented publications in Publisher, set up and manage a small database in Access, and manipulate the default settings associated with Outlook to maximize its utility. Prerequisites: CIS110 with a C or better or the permission of the instructor. *(This course cannot be used toward graduation requirements for Computer Science majors).*

**CIS123 Microsoft® Access**      **2-2-3**
Introduces the world's most popular database, MS Access. Topics covered include the MS Access Development Environment, defining objects and relationships, data types, databases, how to work with templates and tables, record and table manipulation, creation of forms and reports, control features, queries, and the table analyzer. Upon successful completion of this class the student will be able to set up and run an Access Database. Open to all majors, this course provides the skills necessary to build and run a database without requiring an in-depth understanding of database theory and construction. Although database fundamentals will be taught, this class is primarily a hands-on Access class. Prerequisite: CIS110 or CIS111 with a C or better or permission of the instructor.

**CIS124 Web Programming I**      **2-2-3**
Provides the basic XHTML skills necessary to construct a web site. Students will acquire a working knowledge of all aspects of XHTML construction. Cascading Style Sheets *(CSS)* construction and design are stressed as a fundamental part of this course as are the programming, and the design aspect of web development. Students will demonstrate the effective use of text editors to complete all tasks. Students will be required to publish an online portfolio to display their web site.

**CIS129 Network Security**      **2-2-3**
Provides a solid foundation in different security concepts, functions and applications. The course will map the Comptia Security+ objectives including security concepts, communication and infrastructure security, basics of cryptography, and operations/organizational security. Upon successful completion of this course, the students will be prepared to take the Comptia Security+ exam. Prereq: CIS116 with a C or better, or permission of the instructor.

**CIS146 Linux I**      **2-2-3**
Provides the basic skills needed to administer a UNIX/Linux server environment, and for the Linux + certification test. A recent version of the popular open-source operating system Linux will be used as a platform for course delivery. Topics to be covered include installation, the file system, file management, text editors *(including vi)*, running and creating shell scripts, X-windows®, basic networking and basic system administration. All exercises will be completed in the shell *(command line)* environment.

**CIS148 JAVA Programming**      **2-2-3**
Provides an understanding of structured, procedural, and event-driven programming. Students will develop techniques for problem solving through the application of programming methods and will gain experience in the nuts-and-bolts of program design as they complete lab work and assignments. Students will learn to use the JAVA language and programming environment. Corequisite: CIS111 or permission of instructor.

**CIS158 C# Programming**      **2-2-3**
Provides an understanding of structured, procedural, and event-driven programming. Students will develop techniques for problem solving through the application of programming methods and will gain experience in the nuts-and-bolts of program design as they complete lab work and assignments. Students will learn to use the C# language and programming environment. Corequisite: CIS111 or permission of instructor.

### CIS207 Windows® Server  2-2-3
Prepares the student to install, configure, manage, and troubleshoot network servers using the latest version of Microsoft® Windows® Server operating system. Topics include upgrading, installing, troubleshooting, administration of resource responsibilities, installing drivers, configuring user and group accounts, and managing security features. Prerequisite: CIS116 with a C or better or permission of the instructor.

### CIS210 Data Structures and Elementary Algorithms  3-3-4
An advanced, language-independent programming course. Students will develop and work with common programming Data Structures. Topics include Arrays, Stacks, Queue, Linked Lists, Binary Trees, Hash Tables, Heap Concepts, and Graphs. The programming language used will be the students' choice of Java, VB.Net, or C#. Students will work in a team environment. Prereq: CIS118 or CIS148 or CIS158, or permission of the instructor.

### CIS220 Object Oriented Programming  2-2-3
An advanced, language-independent programming course. Students will master the Object Oriented skills necessary for success in the modern IT workplace. Emphasizes Unified Modeling Language, Encapsulation, Data Abstraction, Modularity, Polymorphism, Inheritance, good programming techniques and debugging skills. The programming languages used will be the students' choice of Java, VB.Net, Or C#. Prerequisite: CIS210 or permission of the instructo**r.**

### CIS221 Advanced Word®  2-2-3
Covers the intermediate and advanced features, commands, and functions of the most current version of Microsoft Word to help users enhance productivity and develop more vibrant documents. The course will prepare students to produce more complicated word documents and templates. Prerequisite: CIS110 with a C or better. *(Cannot be used toward graduation requirements for Computer Science majors.)*

### CIS224 Web Programming II  2-2-3
This course will enable students to create dynamically built web sites using JavaScript and other client-side scripting languages. Students will gain advanced XHTML and CSS skills, and will gain familiarity with programming concepts and terminology common to many web scripting languages. Prerequisites: CIS124

### CIS230 Embedded Database Programming  2-2-3
An advanced, language-independent programming course. Students will master the skills necessary to construct Embedded SQL Programming in the modern IT workplace. Such topics as Database Connectivity Scripts, Embedding SQL in a programming language, Report Generation, HTML Interfaces, ASP or JSP concepts, and good programming techniques and debugging skills will be emphasized. The programming languages used will be the student's choice of Java, VB.Net, or C#. Prerequisite: CIS210 and CIS113 or permission of the instructor.

### CIS231 Advanced Worksheets  3-3-4
Provides an expanded understanding of the intermediate to advanced features of Microsoft® Excel. Students apply problem-solving and critical-thinking skills while mastering advanced spreadsheet application techniques using the latest version of Excel. Topics include development of more complex formulas by combining and nesting formulas, database formulas and functions, complex charting, forecasting and trend analysis, statistical analysis, and business *"What- If"* data analysis techniques. Prerequisites: CIS110 with a C or better and placement into MATH131. *(Cannot be used toward graduation requirements for Computer Science majors).*

### CIS233 Oracle® Database Administration I  2-2-3
A foundations course in Oracle®, a major player in the database world. Topics covered are found under the umbrella known as Oracle® Administration 1. The course designed to prep the student to take this exam for a current version of Oracle®. This course is for the serious database person; it will teach concepts that play a key role in the creation and management of a successful database product. While Oracle® is the vehicle used to pass the information on, most of the skills learned are transferable to other relational databases with minimal difficulty. Students who successfully complete this class will have learned the skills necessary to sit for the Oracle® Database 10g: Database Administration I exam. Prerequisite: CIS113 or permission of instructor.

### CIS234 PHP&MySQL Web Development  2-2-3
Building upon the skills taught in CIS124 and CIS224, introduces the world of Embedded PHP programming and MySQL database management. These open source entities are the tools of choice for small retail web entrepreneurs. Students focus on the structure of PHP, learn to embed the code in a standard HTML format, create a MySQL database, and perform the administrative tasks associated with such a database. Also covers working in all the data types, coding functions, Object-Oriented concepts and error handling in a PHP application. Students are required to set up a small online store to establish their skill in working with PHP and MySQL and to create an online presence for this store. Prereq: CIS124 and CIS224 with C or better or permission of the instructor.

### CIS243 Oracle® Database Administration II  2-2-3
An advanced course in Oracle® database administration, intended for serious database students. Topics covered are under the umbrella known as Oracle® Administration 2, and this will prep students to take the exam for a current version of Oracle®. Covers concepts that are little known and yet are key to the creation and management of a successful database product. While Oracle® is the vehicle used to pass the information on, most of the skills are transferable to other relational databases with minimal difficulty. This course will also allow students to learn skills necessary to sit for the Oracle® Database 10g: Database Administration II examination. Prerequisite: CIS233 or permission of instructor.

### CIS274 XML Programming I  2-2-3
Focuses on XML and its applications in the business-to-business, web, multimedia and database industries, with an emphasis on creating and using customized tag sets. Style sheet applications such as CSS and XSL will be explored, as will the use of DTDs and Schemas. Prerequisite: CIS124.

### CIS291 Capstone Senior Seminar  2-2-3
Required for all AS Degree candidates. Students will develop a semester-long project in an area of their interest, complete the project and assess their progress. Examples might include development of a computer program in the language of the student's concentration; construction of a complex database; creation of a Web 2.0 enabled web site; construction, configuration and administration of a complex network; or a portfolio of graphics and animations representing complex work. Prerequisite: completion of course work for the first three semesters of the student's program of study.

### ECE100 Early Childhood Growth and Development  3-0-3
Provides an in-depth study of normal growth and development from conception through early childhood with an emphasis on the needs and characteristics of each developmental level. Introduces prominent theories of child psychology such as Piaget, Erikson, Maslow and behaviorism. Observation of children will be required as part of the course requirements. Students must complete 20 hours of observation in a child care setting.

### ECE104 Foundations of Early Childhood Education  3-0-3
Provides an overview of the history of childhood and childcare as well as a survey of the existing program models. Various environments, materials and resources that meet developmental and educational needs of young children will be presented. Students will observe and evaluate programs based on principles of developmentally-appropriate practice as outlined by the National Association for the Education of Young Children.

### ECE105 Creative Activities & Curriculum for Early Childhood  3-0-3
Focuses on nurturing creativity in young children through developmentally-appropriate activities in the areas of art, music, dramatic play and movement. The various methods and materials used to stimulate a young child's creative impulses are explored. Prerequisite: ECE100, ECE104, or permission of the instructor.

### ECE110 Children's Literature and Language Arts  3-0-3
Provides an overview of developmentally and interest-appropriate literature for young children. Students explore the various genres, recognize the value of literature to children's development, become familiar with exemplary authors and illustrators of children's literature, and learn ways to extend and enhance literature for young children. The components of a language-rich environment, language arts curriculum and the whole language approach to reading and writing are explored. Prerequisites: ECE100, ECE104 or permission of instructor.

### ECE111 Infant/Toddler Practicum: Nurturing Environments  2-3-3
Focuses on the manner in which a "prepared environment" leads to play while stimulating the development and educational growth of children from birth to 36 months. Students observe the effects of space, equipment, materials, and relationships upon play, learning, and discovery and plan developmentally- appropriate learning activities. Incorporating and documenting routine care as an integral part of the curriculum will be emphasized. Students will attend a weekly three-hour infant/toddler practicum internship placement at an approved site. Students must complete a health form and criminal records check as required by the NH Childcare Licensing Bureau before beginning this practicum.

### ECE112 Preschool Practicum: Learning Environments  2-3-3
Emphasizes the environment as the Early Childhood curriculum. The manner in which a "prepared environment" leads to play while stimulating the development and educational growth of children is the focus of the course. Students observe the effects of space, equipment, materials and relationships upon play, learning and discovery. Students will plan developmentally-appropriate activities. Students will attend a weekly three-hour preschool practicum internship placement at an approved site.

### ECE116 Child Health, Safety, and Nutrition  3-0-3
Provides a variety of health, nutrition and safety concepts that will enable the individual to implement preventive health and safety practices based on NH Childcare Regulations. .

Students will develop menus for meals and snacks which are nutritious, appealing, and age-appropriate for young children. Recognition and treatment of child abuse victims will be addressed. It should be noted that CPR and First Aid are **NOT** part of this course.

### ECE200  Math and Science for Young Children     3-0-3
Provides the theoretical and developmental knowledge necessary to effectively teach the basic concepts of math and science to young children. Students will develop their skills in preparing developmentally appropriate activities that promote inquisitiveness, problem-solving and exploration. The interrelationship between math and science and other areas of the curriculum is explored. Students will need access to young children to complete course requirements. Prerequisite: ECE100, ECE104, or permission of the instructor.

### ECE201 Children's Individualized and Special Needs     3-0-3
Focuses on the unique characteristics and needs of young children with communication disorders, sensory impairments, physical and health-related disabilities, child abuse, and giftedness, as well as those living with stress. Room arrangement plans, accommodations and modifications based on learning characteristics will be explored. Screening, assessment, early intervention, individualized education plans, inclusive education, community resources and family issues will be presented and discussed. Prerequisites: ECE100, ECE 104, or permission of instructor.

### ECE202 Student Teaching Practicum     1-9-4
The Student Teaching Practicum requires that students spend 9 hours/week in a college approved early childhood facility, which allows students to gradually assume teacher responsibilities under guided supervision. Students will bridge the gap between theory and practice by applying theoretical knowledge and developmentally appropriate methodology in their work with young children. Students will assume increasing responsibility for teaching and classroom management throughout the semester. Weekly seminars are scheduled to discuss issues of appropriate practice, discipline, lesson plans, observations, and other concerns. Students will need to have practicum experience with two different age groups *(e.g. infant/toddler, preschool, and primary aged children)* during their senior year. Prerequisites: ECE100, ECE104, and ECE112

### ECE204 Developmentally Appropriate Curriculum     3-0-3
###      for Infants and Toddlers
Covers the normal growth and development of the child from birth through toddlerhood. with an emphasis on the interrelationship of emotional, social, cognitive, physical and language development patterns of infants and toddlers. The student will learn to plan a developmentally appropriate curriculum based upon standards of NAEYC and NH Bureau of Child Care Licensing. The sequential and effective use of play materials are presented as essential to an infant and toddler curriculum. Community Service is part of the course where students will be required to volunteer and observe eight hours in an infant and/or toddler program.  Prerequisite:  ECE100, ECE 104, or permission of instructor.

### ECE205 Developmentally Appropriate Programs     3-0-3
###      for School-Age Children
Focuses on current theories and practices relevant to the care of school-age children. Topics include an overview of the developmental characteristics of children ages 6-12, the roles and responsibilities of educators in planning and providing developmentally appropriate learning experiences, and the characteristic components of quality programs. The importance of building positive relationships among home, school, and community is emphasized. Community Service is part of the course. Students are required to complete 8 hours of observation and volunteer in a program for school-aged children. Prerequisites: ECE100, ECE104 or permission of instructor.

### ECE210 Child, Family & Community Relations     3-0-3
Covers the young child in relation to the family, school/center and community. Students explore the societal changes affecting the contemporary American family and subsequent impact upon children. The role of the community and its impact on the family functioning and child development is discussed.  Interpersonal and family dynamics and its impact on family functioning and relationships will be analyzed.  A focus of the course is the importance of the parent-teacher relationship and communication between teachers and parents.  A community service project will be required. Prerequisites: ECE100 & ECE104

### ECE212 Professional Development Practicum     1-9-4
Designed to help bridge the gap between theory and practice by giving students specific experiences in working with groups of young children in licensed settings under the supervision of certified professionals. Students participate in the daily activities of young children and assume increasing responsibility throughout the semester by planning developmentally-appropriate activities for their assigned group. Weekly seminars are scheduled to discuss issues of appropriate practice, discipline, lesson plans, observations and other concerns. Students will need to have practicum experience with two different age groups *(e.g. infant/toddler, preschool and primary aged children)* to obtain their associate degree. Students create a professional portfolio as part of the final course requirement.  Prerequisite: ECE202.

### ECE214 Developmentally Appropriate Guidance & Discipline     3-0-3
###      for Young Children
Emphasizes the role of positive child guidance in preparing young children to become competent, confident and cooperative individuals. Developmentally appropriate methods of guiding children will be shared along with effective strategies for preventing disruptive behaviors in the classroom.  A recurring theme is the impact of positive discipline on self-esteem. Also covers the influence of developmental, environmental and health factors and theories behind the approaches and techniques of discipline and guidance issues. Prerequisites:  ECE100 & ECE104

### ECE250 Childcare Administration and Management     3-0-3
Provides information on administering an early childhood education program. Students explore diverse programs available to the community and examine state and federal licensing regulations, as well as national accreditation standards.  Students critically analyze the degree to which financial issues of marketing, accounting, and funding affect the management of the center or family childcare home. In addition, students identify components of a healthy organization that manages people and resources in a positive, supportive manner.  This course is required by NH State licensing rules for center directors. It counts toward the Family Child Care Certificate but does not count towards other ECE certificates or the Associate Degree. Prerequisite: Permission of the instructor.

### ECON134 Macroeconomics     3-0-3
Macroeconomics analyzes the determinants of aggregate economic activity and the effects of government policy intended to achieve full employment, price stability and economic growth. Course examines the standard formulas to measure the nation's production and income and spending; analysis unemployment and inflation, aggregate demand and supply, fiscal policies, investment and financial markets, money and banking, and the Federal Reserve and monetary policies. *(Fulfills Social Science requirement.)*

### ECON135 Microeconomics     3-0-3
Microeconomics equips the student with an understanding of fundamental economic principles and tools. It presents economic analysis with respect to demand and supply, consumer utility theory, elasticity, costs of production, perfect and imperfect competition and resource markets. Prerequisite: ECON134. *(Fulfills Social Science Requirement.)*

### ECON136 International Economics     3-0-3
Examines the international economy and globalization, international trade relations and international monetary relations. Topics of discussion include: sources of comparative advantage, tariffs and nontariff trade barriers, trade regulations and industrial policies, trade policies for developing nations and regional trading agreements.  In addition, foreign exchange, macroeconomic policy in an open market and international banking are discussed. Prerequisite: ECON134.  *(Fulfills Social Science Requirement.)*

### EDU101 Introduction to Exceptionalities     3-0-3
Examines the role and values necessary to support students who experience disabilities and the supportive role of teacher and paraeducator in inclusion in the home, community and school.  The curriculum will emphasize the philosophy and practice of theory with a focus on educational collaboration, accommodations, and problem solving strategies.

### EDU104 Foundations of Education     3-0-3
Examines the philosophical, historical, legal and social/cultural aspects of education in the U.S. Explores current issues and trends in education, how schools and classrooms func-tion organizationally and academically, and teaching as a profession. Discussions focus on the goals of education, the role of governmental agencies, educational law and policy, and the roles and responsibilities of teachers. The Interstate New Teacher Assessment and Support Consortium *(INTASC)* Model of Standards for Beginning Teacher Licensing is introduced. Students must complete 20 hours of observation in a school setting.

### EDU201 Teaching and Learning     3-0-3
Presents an overview of the multi-dimensional teaching and learning processes in elementary, middle, and secondary schools. Focus is on the context in which teaching and learning occurs, classroom organization and management, lesson planning and decision making, effective teaching strategies, and assessment methods. In-class and outside of class activities will result in the creation of a teaching methods portfolio and reflective practice journal. Students will develop and teach two lessons appropriate to their teaching goals, and will complete a service learning project incorporating at least 10 hours of service in a school setting. Prerequisite: EDU104 with a minimum grade of C.

### EDU202 Current Practice: Teaching, Learning, Assessment     3-0-3
An in-depth study of the application of educational practices and pedagogical theory necessary to succeed as classroom teachers. The concepts presented enhance and build upon material from prior courses. Students incorporate current research and instructional strategies into their teaching repertoire as evidenced by individual and group activities. Prepares students for success in advanced methods and materials courses. Students must complete a minimum of 10 observation hours in a school setting.  Prereq: EDU104.

## EDU205 Technology in Education      2-2-3

Provides an overview of theory and strategies for effective integration of technology resources, technology-based methods of instruction, and assistive technology for students with disabilities, based on the National Educational Technology Standards for teachers *(NETS-T)*. An emphasis is placed on technology as a tool that facilitates learning and enhances the teaching process. Students explore technology as it directly relates to student achievement, professional growth, and classroom management. The course focuses on both knowledge and performance and includes hands-on technology activities.

## EDU206 Literacy in Education      3-0-3

An in-depth study of literacy in education. The areas of reading, writing, listening, and speaking are viewed as interrelating processes. A broad theoretical foundation promotes a focus on literacy in today's classroom. Students also preview current research and methods of support available to teachers. Material in this course is discussed consistent with themes of reflective practice, and acknowledging and responding to the unique learning characteristics of all students. Prerequisite: EDU104.

## EDU210 Essentials of Career/Technical/Curriculum/Instruction    3-0-3

Covers the history, philosophy, principles, organization, and operation of career and technical education in the U.S. Students will develop a functional understanding of the role and responsibilities of a professional career/technical educator, and gain the foundation and skills to design, implement, and manage a curriculum in career/technical education. Identification of resources and occupational analysis, derivation of content, formulation of objectives, defining measurable outcomes, and the selection and development of activities and evaluation methods will be explored. Prerequisites: Permission of instructor.

## EDU215 Behavioral Challenges in the Classroom      3-0-3

Provides an in-depth understanding of classroom and individual behavioral intervention techniques. Topics include strategies to support the development of a positive classroom environment, teaching social competencies, and other preventive strategies. Specific behavioral challenges and issues are investigated. The course provides a broad theoretical foundation of behavioral intervention strategies to support children with emotional, behavioral, and social challenges. Integrating home-school collaboration and team collaboration is emphasized. Prerequisites: Grade C or better in EDU101 and EDU104 or ECE104 and ECE114.

## EDU220 Families & Professionals in Special Education      3-0-3

Provides strategies for productive interactions among special educators, teachers, paraprofessionals, service providers, parents, and other professionals. Students explore and develop collaborative and communication skills for participating in IEP/IFSP teams, co-teaching, and working with families as partners in the process. Students also investigate the ethical issues in working with educational teams and families. Prerequisites: Grade C or better in EDU101 and EDU104 or ECE104 and ECE114.

## EDU225 Curriculum Planning and Implementation for      3-0-3
### Children with Unique Learning Characteristics

Provides an overview of effective instructional strategies, curricula, materials, student assessments, and assistive techniques for children with special educational needs. Classroom accommodations and instructional modifications to meet the goals of the IEP/IFSP, which can be implemented in a variety of instructional settings, are introduced. Collaborative planning, co-teaching strategies, and effective methods for working with members of the IEP/IFSP team and families are reviewed. Prerequisite: Grade of C or better in EDU101 and EDU104 or ECE104 and ECE114.

## ENGL094 Intermediate College Reading Skills      3-0-3

For students with a score of 54 or below on the Accuplacer Reading assessment. Students will develop proficiency in the fundamental communication skill of reading *(at the 8th –12th grade level)*. The course emphasizes comprehending main ideas and details, making inferences, developing vocabulary, understanding the logical relationship among the parts of paragraphs, and applying study skills. This course may not be applied to meet certificate or degree requirements. A grade of C or better is required to advance to ENGL097. Offered every semester. ENGL 094 for English as a Second Language Students: ENGL094/ESL is targeted toward students whose native language is not English. Additional supports incorporated to support student success.

## ENGL097 Advanced College Reading Skills      3-0-3

For students with a score of 55-79 on the Accuplacer Reading assessment. Students will develop proficiency in the fundamental communication skill of reading *(at the 10th – 14th grade level)*. The course emphasizes comprehending main ideas and details, making inferences, developing vocabulary, understanding the logical relationship among the parts of paragraphs, and communicating ideas in writing. This course may not be applied to meet certificate or degree requirements. Prerequisites: Placement testing or grade of C or better in ENGL094. Offered every semester. ENGL097 for English as a Second Language Students: ENGL097/ESL is targeted toward students whose native language is not English. Additional supports incorporated to support student success.

## ENGL098 College Writing Skills I      4-0-4

This course strengthens students' language skills through reading and through instruction in grammar and writing mechanics. Students participate in structured writing workshops and computerized instruction. This course may not be applied to meet certificate or degree requirements. Prerequisites: Placement testing or grade of C or better in ESL098. Offered every semester. ENGL098 for English as a Second Language Students: ENGL098A is targeted toward students whose native language is not English. Additional supports are incorporated to support student success.

## ENGL099 College Writing Skills II      4-0-4

This course places the development of composition skills in the context of the reading and writing process. Students will read a variety of texts for idea development and imitation. Students will participate in structured writing workshops. This course may not be applied to meet certificate or degree requirements. Prerequisites: placement testing or grade of C or better in ENGL098 or ESL120. Offered every semester. ENGL099 for English as a Second Language Students: ENGL099/ESL is targeted toward students whose native language is not English. Additional supports are incorporated to support student success.

## ENGL110 College Composition      4-0-4

Using the rhetorical modes of discourse, students learn to write clearly and effectively for defined audiences. Emphasis is on the writing process, from pre-writing and drafting to revising and editing. This course places reading at the core of the writing curriculum, exposing students to a variety of texts not only as writing models but also for analysis, interpretation, idea development, and research. Students must receive a passing grade on the research paper to pass the course. Prerequisite: Placement testing or grade of C or better in ENGL099 and a grade of C or better in ENGL097 if required. Offered every semester.
ENGL110 / Honors: ENGL110 with a greater complexity of thinking and higher level of sophistication in writing expected.
ENGL110 for English as a Second Language Students: ENGL110/ESL is targeted toward students whose native language is not English. Additional supports are incorporated to support student success.

## ENGL113 Oral Communications      3-0-3

Designed to give students confidence and poise in public speaking through practice in speech preparation and presentation. *(Fulfills English or Humanities requirement.)* Offered every semester.

## ENGL200 Themes in Literature      3-0-3

Covers selected literary themes such as gothic, science fiction, or women's literature. Students apply critical contexts and practice various theoretical approaches to the readings. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every fall.

## ENGL201 Survey of Poetry      3-0-3

Along with studying the formal elements of poetry *(rhythm, rhyme, figurative language)*, students learn to identify genre, incorporate critical contexts, and practice various theoretical approaches to the readings. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every other fall.

## ENGL202 Introduction to Drama      3-0-3

Covers drama as a major literary form, through reading, discussing, and writing about a representative selection of English and American plays as well as plays in translation. A variety of genres and time periods will be studied. Written texts will be supplemented by filmed adaptations and/or live performances. Prerequisite: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

## ENGL203 Introduction to Journalism      3-0-3

Introduces the basic principles of journalism including researching, writing, editing, and reporting news for publication in print and electronic media. Students will gain practice in producing assignments under deadline that meet the *"ABC"* standard *(accuracy, brevity, clarity)* and conform to general guidelines of the Associated Press. Prerequisite: Grade of C or better in ENGL110 or equivalent, or permission of the instructor.

## ENGL 205 The Novel      3-0-3

A study of the novel, a genre as vast as it is prolific. The course is not, however, a survey attempting to exhaust the topic. Rather, students read, interpret, and analyze a variety of novels *(selected by the instructor and approved by the department)*, applying critical contexts and practicing various theoretical approaches to the readings. Prerequisite: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every other fall.

**ENGL206 Professional Communication**     3-0-3

Building on skills developed in College Composition , this course introduces students to the basic principles of professional written and oral communication. Using an audience-centered approach, students practice presenting information such as instructions, proposals, reports, electronic communication, and product/service information in clear, concise, and understandable terms. Document design and formatting are also covered. Frequent oral presentations are required. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor.
*(Fulfills English elective requirement.)*

**ENGL213 Creative Writing**     3-0-3

Covers the techniques of creative writing using a combination of lecture, writing exercises, and workshops. Using the writing process, students will produce finished works of fiction and poetry exploring and incorporating elements such as point of view, dialog, characterization, setting, imagery, and poetic form and structure. Course readings will be used for discussion, inspiration, and idea development. Peer review and instructor feed-back constitute a significant component of the course. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

**ENGL214 Creative Nonfiction**     3-0-3

Building on skills developed in College Composition  and incorporating artistic techniques such as scenes, dialog, and detailed descriptions, this course introduces the basic principles of writing creative nonfiction. Drawing on course readings for essay models and idea development, students produce creative nonfiction works such as the personal essay, the memoir, nature and science writing, and literary journalism. Peer review and instructor feedback constitute a significant component of the course. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every semester.

**ENGL218 Short Story**     3-0-3

Presents the short story as a major literary genre, with reading, interpreting, and analyzing a representative selection of texts. Students apply critical contexts and practice various theoretical approaches to the readings. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every semester.

**ENGL220 American Literature**     3-0-3

Covers American fiction, poetry, and drama, through reading, interpreting, and analyzing a representative selection of texts. Students apply critical contexts and practice various theoretical approaches to the readings. Prerequisite: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. Offered every other spring.

**ENGL225 Shakespeare**     3-0-3

Covers the works of Shakespeare, with emphasis on his plays. In particular, students read, interpret, and analyze no fewer than seven of Shakespeare's plays, including the four major genres: comedy, romance, history, and tragedy. Moreover, students apply critical contexts and practice various theoretical approaches to the readings. Prerequisites: Grade of C or better in ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)* Offered every spring.

**ESCI110 Earth Science**     3-3-4

Explores the basics of Earth Science including geology, meteorology, and astronomy. The geology section includes the many Earth processes that change the face of the planet such as plate tectonics and erosion. In meteorology, the students will study how weather is created and its effects both globally and locally. The study of astronomy will include our solar system, stars, and galaxies. Also covered will be possible origins of the universe as and our place in it.  Prerequisite: placement into ENGL110 or permission of the instructor.

**ESCI111 Meteorology**     3-3-4

Provides an introduction to the science of meteorology.  Students discover the relationships between everyday weather and the Earth's atmosphere. Topics include atmospheric pressure, air masses, fronts, atmospheric circulation, severe storms, forecasting and the ever changing climate. Real-time data delivered via the Internet is used as a foundation of study and to create weather maps and local forecasts.

**ESCI115 Contemporary Issues in Ecology**     3-0-3

Covers basic ecological concepts and explores contemporary environmental and resource management issues, including global warming and loss of species diversity. Prerequisite: Placement in ENGL110.  High school biology recommended.

**ESCI125  Introduction to Environmental Science**     3-3-4

A  lab course that introduces ecology, environmental studies, and sustainability while stressing a scientific approach toward understanding  real world issues in relation to natural systems. Local, regional, and global case studies challenge students to think critically about human impacts with complex issues, gaining insight toward the world's need for sustainability.  Field trips to local sites are part of the course. Prerequisites:  High School Biology with a C or better, Placement in ENGL110.

**ESL050 ESL Listening, Speaking, and Pronunciation**     Non-credit

In this high-beginner/low-intermediate course, students receive instruction and extensive practice in speaking, listening, and pronunciation. Grammar is taught in the content of speaking and of reading materials. The overall objective is for students to improve communication for work, school, and daily situations. Prerequisite: a qualifying score on the ESL Placement Test, or ESL070 ESL Beginning I with a passing grade.

**ESL065 TOEFL Preparation**     Non-credit

Prepares students to acquire the language skills and test-taking strategies necessary to succeed on the Test of English as a Foreign Language *(TOEFL)*. This course gives students the skills, strategies, practice, and confidence needed to increase their scores on all sections of the TOEFL:  listening, structure, reading, and writing.

**ESL070 ESL Beginning I**     Non-credit

This course focuses on improving speaking skills that are necessary in an academic setting. Speaking activities are organized around reading and writing exercises. Grammar is integrated through the content of the material covered. Students use expressions *(e.g., idioms, dialogues)* to increase their participation in conversations and thus build their confidence and fluency in English. Prerequisite: a qualifying score on the ESL Placement Test.

**ESL080 ESL Beginning II**     Non-credit

Students build on their basic knowledge of English grammar, listening and speaking skills, expand their vocabulary and develop reading, writing and learning strategies. Students demonstrate an understanding of the reading materials by answering comprehension questions and completing assignments. Prerequisite: a qualifying score on the ESL Placement Test, or ESL070 ESL Beginning I with a passing grade.

**ESL090 ESL Intermediate I**     Non-credit

Develops intermediate level communication skills of English with intensive practice in reading skills development with explicit use of reading and learner strategies. In addition, students continue to expand their spoken language to include assigned topics for class discussions and oral reports. Grammar is taught in the context of all language skills. Prerequisite: a qualifying score on the ESL Placement Test, or ESL080 ESL Beginning II with a passing grade.

**ESL091 ESL Intermediate II**     Non-credit

Students build on intermediate level communication skills of English. Content focuses on all areas of language skills with particular attention to writing, as well as a continued emphasis on reading skills. While grammar is taught in the context of all language skills, there are many opportunities to apply grammar skills to written communication. Class discussions, written and oral reports, as well as reading and learner strategies are key components of the curriculum. Prerequisite: a qualifying score on the ESL Placement Test or ESL090 ESL Intermediate I with a passing grade.

**ESL097 Pronunciation for Non-Native Speakers**     3-0-3

Focuses on improving oral communication skills *(speaking and listening)* with emphasis on pronunciation. Classroom exercises and activities will move from controlled practice such as modeling and imitating to using more communicative techniques such as role-play, drama, and oral presentation. Analyzing audio and videotapes of fluent speaker conversation provides students opportunities to improve their speaking and listening skills. These credits do not count toward graduation requirement.  Prerequisite: Permission of Department Chairperson or designee. Offered every spring.

**ESL098 Intermediate**     3-0-3

Emphasis is on comprehending and producing English in written and in spoken form, focusing on strategy-based activities of information gathering, summarizing, reading for information, and problem-solving. Students develop vocabulary and academic reading skills and practice writing in various forms, using readings as models for developing effective writing skills. Grammar is taught in the context of all language skills. Prerequisite: a qualifying score on the ESL Pro – ACCUPLACER. These credits do not count toward graduation requirements.

**ESL120 Advanced**     3-0-3

Provides instruction and practice in all language domains: listening, speaking, reading, writing, and cultural appreciation, as well as opportunities to develop communicative skills through presentations. Students will use readings as models for developing effective academic writing skills. Prerequisite: a qualifying score on the ESL Pro - ACCUPLACER, or ESL 098 with a passing grade of C or better. *(Fulfills Foreign Language requirement for students who earn a final grade of C or better, and for students for whom English is a Foreign Language).*

**ETEC110 Electrical Fundamentals I** 3-3-4
Introduces basic electrical concepts, practices, and procedures. Topics include electrical safety, an introduction to the National Electrical Code, basic DC electrical theory, magnetic theory, electrical formulas and calculations, test equipment, testing procedures, and electrical diagrams. The material presented satisfies NH Electrical Apprentice training requirements. Laboratory work provides reinforcement and application of theoretical concepts. Prerequisite: MATH131 or permission of instructor.

**ETEC120 Electrical Fundamentals II** 3-3-4
A continuation of Electrical Fundamentals I. Topics include AC theory, electrical distribution, wiring methods and requirements, branch circuits and feeders, grounding and bonding, and over-current protection. The material presented satisfies NH Electrical Apprentice training requirements. Laboratory work provides reinforcement and application of theoretical concepts. Prerequisite: ETEC110 and MATH131 or permission of instructor. Co-requisite: MATH141.

**ETEC150 Power Transformers & Rotating Mach** 3-3-4
Covers the theory of operation, application, and installation practices pertaining to equipment that provides for electrical power generation, transmission and use, as well as energy and power conversion, AC and DC power systems, power quality considerations, AC and DC generators, transformers, and AC and DC motors. The National Electrical Code is referenced as it applies to the subject matter. The material presented satisfies NH Electrical Apprentice training requirements. Laboratory work provides reinforcement and application of theoretical concepts. Prerequisites: ETEC120 and MATH141 or permission of instructor.

**ETEC160 Residential, Commercial, and Ind. Wiring** 3-3-4
Presents comprehensive coverage of the requirements and methods for wiring residential, commercial, and industrial installations. Topics include print reading and interpreting, load calculations, equipment types and applications, special occupancies, special equipment, and special conditions as they relate to the three installation types. The National Electrical Code is an integral part of this course. The material presented satisfies NH Electrical Apprentice training requirements. Laboratory work provides reinforcement and application of theoretical concepts. Prerequisite: ETEC120 and MATH141 or permission of instructor.

**ETEC210 Electrical & Electronic Motor Controls** 3-3-4
Provides in-depth coverage of the theory and operation of AC and DC motor and generator controls and control systems. Topics include generator starting, stopping, and synchronization controls, as well as motor starting, reversing, and braking controls, and motor drive systems. Solid-state theory is introduced. Theory and applications for electronic devices and control systems are presented in the classroom and lab. The material presented satisfies NH Electrical Apprentice training requirements. Lab work provides reinforcement and application of theoretical concepts. Prerequisites: ETEC120 and MATH141 or permission of instructor.

**ETEC220 Communications/Low Voltage Building Systems** 3-3-4
Covers the theory of operation, applications, and installation practices for low voltage and communications systems typically installed in buildings, including audio, video, security, telephone, fire alarm, computer networking, and wireless systems. The National Electrical Code will be referenced throughout this course as it applies to the subject matter. The material presented satisfies NH Electrical Apprentice training requirements. Laboratory work provides reinforcement and application of theoretical concepts. Prerequisite: ETEC120 and MATH141 or permission of instructor.

**ETEC250  Advanced Control Systems I** 3-3-4
Summarizes individual areas of the electrical field that have been previously presented, adds new material, and integrates this subject matter into control systems. Covers the theory of operation, installation, testing and troubleshooting of building automation and energy management systems. This is one of the fastest growing and developing areas in the electrical field and a fine example of combining older technology with the evolving technology of today. Laboratory work provides reinforcement and application of theoretical concepts.  Prerequisite: ETEC210 and ETEC220 or permission of instructor.

**ETEC260 Advanced Control Systems II** 3-3-4
Covers process control systems and industrial robotics. Topics include analog and digital devices and controllers, sensors and actuators, programmable logic controllers, industrial systems, pneumatic and hydraulic concepts, and robotics. Laboratory work will provide reinforcement and application of theoretical concepts. Prerequisite: ETEC250 or ETEC210 and permission of instructor.

**EXER110 Group Exercise Leadership** 1-3-2
Exposes students to the fundamentals of different modes of group exercise and enhances exercise leadership skills. Through lab activities and community service, students gain the ability to teach, modify exercise, communicate effectively, and motivate group participants.

**EXER111 Introduction to Exercise Science Industry** 1-3-2
Introduces the various sub-disciplines within the exercise science field. Students will observe and question professionals employed in several settings, including preventive adult fitness, corporate fitness, cardiac rehabilitation, physical therapy, orthopedic practice, sports medicine, and health education/wellness programs.

**EXER113 Physiology of Exercise** 3-2-4
Covers basic nutritional biochemistry, energy metabolism, oxygen consumption, and alterations within the body resulting from acute and chronic physical stress. Study and analysis of aerobic and anaerobic metabolism, primary energy systems, and fuels used during exercise serve as the foundation for additional study in exercise science. A weekly laboratory session is congruent with the theoretical component. Prerequisite: BIOL110.

**EXER116 Health Fitness Assessment & Programming** 2-4-4
Focuses on health screening and risk stratification, pre-test evaluation, and basic principles and guidelines of physical fitness assessment, with an emphasis on cardio-respiratory capacity and body composition. Calculation and interpretation of data from the fitness assessments is an integral part of the course. Also includes development of exercise programs based upon assessment results, client goals and health limitations. American College of Sports Medicine KSA's *(knowledge, skills, abilities)* and guidelines are incorporated into the course framework. Prerequisite:  EXER113.

**EXER200 Advanced Physiology of Exercise** 3-2-4
Focuses on and provides an in-depth understanding of the integrated responses and adaptations to exercise of the cardiovascular, pulmonary and endocrine systems. Enhancement of work performance and adaptations to environmental stress are also studied. Research-oriented lab sessions are congruent with the theoretical component. Prerequisites:  BIOL110, BIOL120, EXER113, ENGL 110.

**EXER212 Physical Activity and Aging** 3-0-3
Designed to prepare students to understand the aging process and how physical activity may influence it. Integrates materials on matters of aging and how to incorporate a fitness program to meet the demands. Prerequisite: BIOL110, BIOL120, EXER113. Corequisite: EXER114.

**EXER213 Resistance Training Essentials** 2-3-3
Focuses on muscular fitness, resistance training exercises and program design. The emphasis of theory will be placed on how the human body responds and adapts to resistance training exercise. Resistive training principles and theory of program design will also be an integral course component. The focus of lab is to provide students with scientific information necessary for better selection of resistance exercise. Students will learn safe and effective exercise technique utilizing many different modes of resistance such as free weights, machines, tubing and bands, stability and medicine balls, balance and agility equipment.  Prerequisite: BIOL110 or permission of instructor.

**EXER221 Exercise Science Internship** 0-9-3
In this course, the student will acquire practical experience in a subdiscipline of exercise science through field-based internships under the auspices of one or more outside agencies. Prerequisites: Permission of instructor.

**EXER230 Kinesiology** 3-2-4
Focuses on the integration of theoretical and applied aspects of human motion. Applied anatomy and analysis of exercise from a biomechanical and kinesiological perspective are the major themes. A weekly laboratory session is congruent with the theoretical component. Prerequisites: BIOL110, BIOL120, EXER213.

**EXER240 Injury Prevention & Post-Rehabilitative Exercise** 3-2-4
Provides a basic background in sports medicine as it relates to the Health Fitness Instructor *(HFI)*. Primary emphasis is on the prevention of injury, mechanics of injury, and post-rehabilitative exercise for common injuries. Also provides an understanding of emergency procedures, and the proper care and management of injuries once they occur. Prerequisites: BIOL110, BIOL120, EXER213, EXER230.

**FINC120 Personal Financial Management** 3-0-3
Provides the student with an effective learning experience in personal finance, with an emphasis on helping students make sound financial decisions in the areas of budgeting, insurance, taxes, credit, investment, real estate, and retirement planning.

**FINC213 Applied Problems in Managing Finance** 3-0-3
**& Financial Policy**
Designed to be case driven. The cases will involve decision making for real-world situations. Topics include financial analysis and planning, working capital management, capital budgeting, intermediate and long term financing, allocation of funds and financial structure. Prerequisite: BUS221.

**FINC215 Introduction to Investment Analysis** 3-0-3
Introduces the student to various investment options such as stocks, bonds, mutual funds and commodities, with a focus on the decision-making process for investment and portfolio management.

**FINC216 Budgeting and Forecasting** 3-0-3
Designed to evaluate the process of corporate budgeting and forecasting, this course uses real world applications of comprehensive profit planning and control. Methods for forecasting will be evaluated.

**FINC217 International Corporate Finance** 3-0-3
Teaches students to be effective financial managers for corporations with international operations. Topics include international financial management, international monetary system, foreign exchange rates, capital management, international capital markets, international financial institutions, tax regulations and accounting practices. Prerequisite: BUS221.

**FINC225 Survey of Retirement, Trusts, Wills & Estate Planning** 2-0-2
Builds upon the personal finance information learned in the personal financial management class and goes more in depth into personal financial planning. The focus will be on establishing effective retirement goals, evaluating retirement portfolio options, selecting appropriate investments for long-term objectives, selecting appropriate investing options for college funds, evaluating the necessary components of wills, trust funds, and tax considerations in estate planning. Prerequisite: FINC120.

**FREN110 French I** 3-2-4
A fully integrated introductory French course designed for beginning French students, with little or no prior knowledge of French, whose learning objectives and needs are in any of the following: for French language students, for business purposes and for travelers. The emphasis is to develop proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences. Language laboratory activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing, and cultural appreciation. *(Fulfills Foreign Language requirement.)*

**FREN120 French II** 3-2-4
A continuation of the introductory French course for students with the equivalent of one year of high school French or one semester of college French, whose learning objectives and needs are in any of the following: for French language students, for business purposes as well as for travelers. The emphasis is to consolidate and reinforce the language skills acquired in French I or equivalent and to continue building communicative skills and cultural competency. Prerequisite: FREN110 or equivalent.
*(Fulfills Foreign Language requirement.)*

**GA101 Assessment of Prior Learning** 1-0-1
This course will assist the student in preparing a resume, a statement of career objectives, a curriculum checklist, and life experience proposals. This course is required for anyone who has been accepted into the General Studies program.

**GEOG110 World Geography** 3-0-3
Introduces the geographic and cultural elements of the world's major regions, including demographics, origins, language, religion, geopolitics and agricultural features. The importance of place (geography) and how it shapes the character of the neighborhood, city, country and world will be emphasized as we look at key issues from a geographic perspective. *(Fulfills Social Science requirement.)* Offered every fall & spring.

**GERM110 German I** 3-2-4
A fully integrated introductory German course, designed for beginning German students with little or no prior knowledge of German, whose learning objectives and needs are any of the following: for German language students, for business purposes and for travelers. The emphasis is to develop proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences helping the student develop an instinctive sense of correct usage. Language laboratory activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing and cultural appreciation.
*(Fulfills Foreign Language requirement.)*

**GERM120 German II** 3-2-4
A continuation of the introductory German course for students with the equivalent of one year of high school German or one semester of college German,.whose learning objectives and needs are any of the following: for German language students, for business purposes and for travelers. The emphasis is to consolidate and reinforce the language skills acquired in German I or equivalent and to continue building communicative skills

and cultural competency. A strong grammar foundation and other essential language skills are taught through actual phrases and sentences helping the student develop an instinctive sense of the correct usage. Language laboratory activities reinforce course class content. The objectives will be achieved through speaking, listening, reading, writing and culture. Prerequisite: GERM110 with a passing grade of C or better.
*(Fulfills Foreign Language requirement.)*

**HIM110 Healthcare Delivery Systems** 3-0-3
Introduces the student to the organization, financing, and delivery of health care services in the U.S. with a focus on information management practices of agencies that provide health services in ambulatory care, home health care, hospice, long-term care, mental health, and other alternate care systems. Prerequisite: Placement into ENGL 110.

**HIM115 Legal Aspects of Health Information** 3-0-3
Covers all legal aspects of the Health Information Management field, including the legal principles that govern patient information. Also, court functions, confidentiality release of information standards, risk/quality management, and access to health information by various parties along with specialized medical records.
Prerequisite: Placement into ENGL110.

**HIM120 Computers in Healthcare** 1-3-2
Provides concepts and practical approaches for the implementation and management of technology used to improve the delivery of health care. Topics include tools and techniques for collecting, storing, and retrieving data: essential concepts of biomedical computing, an overview of the types of imaging systems and databases, and security and risk management associated with electronic medical records. Prerequisite: CIS110

**HIM125 Health Data Content and Structure** 3-0-3
Introduces the systems and processes for collecting, maintaining, and disseminating primary and secondary health related information. Instruction in delivery and organizational structure will include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens. Prerequisite: ENGL110.

**HIM200 Health Information Management Practicum I** 1-8-3
This 32-hour practicum provides hands-on experience at an assigned hospital health information department. Following site guidelines, students will apply theory and procedures acquired in prerequisite courses to their participation in medical record filing, retention, and retrieval, record assembly, the admission process, discharge analysis, and the release of records. Direct supervision is provided by the clinical professional. Prereq: completion of all HIM first year courses. Offered Summer after freshman year only.

**HIM210 Health Information Organization & Supervision** 3-0-3
Introduces the principles of organization and supervision in a health information department. Focuses on specific human resource management functions, including communication, motivation, teambuilding, budgeting, staff scheduling, productivity reporting, policy and procedure development, ergonomics, equipment selection, and marketing health information department services.

**HIM215 Healthcare Registries and Statistics** 3-0-3
Covers medical and hospital census and discharge statistics, the organizations requiring data and their use of it. Introduces computer abstracting of patient records and data collection both manually and from computer spreadsheets. Students learn how measurements and data can be used to balance quality services and financial viability and how measures can help evaluate and improve organization, clinical, and financial processes. Prerequisites: +MATH131, ENGL110, completion of all HIM first-year courses.

**HIM220 Quality Improvement in Healthcare** 3-0-3
A study of the purpose and principles of improving organizational performance through quality assessment and utilization management. Topics include use of quality improvement tools; data collection, display, analysis, and report methods; resource and risk management techniques, clinical critical paths in case management; and application of accreditation and licensing standards.
Prerequisite: HIM120, HIM125, HIM215, MCOD100, MCOD110- all with a C or better.

**HIM225 Health Information Management Practicum II** 1-9-4
Students will gain 120-hours of practical experience at assigned hospitals, nursing homes, non-acute health care settings. Students reinforce learning experiences through class-room presentations, projects and laboratory exercises, make the transition from theory to practice under the supervision of experienced practitioners, observe employee relationships, interact with professionals in the health care field and apply the principles of Health Information Technology. Prerequisite: HIM220, HIM200, HIM220, MCOD215 all with a C or better.

**HIST120 Western Civilization through 1500**                    **3-0-3**
Surveys the development of civilization in the western world from the beginning of Mesopotamian culture through the Protestant Reformation of the 16th century. Covers social, political, economic and spiritual forces and patterns which shaped the eras of western history. Emphasizes history as the record of human struggle and achievement, change and continuity. *(Fulfills Social Science OR Humanities requirement.)* Offered every semester.

**HIST130 Western Civilization-1500 to the Present**             **3-0-3**
Surveys the development of civilization in the western world from the 16th century to the present. Covers social, political, economic and spiritual forces and patterns that shaped the eras of western history.  Emphasizes history as the record of human struggle and achievement, change and continuity. *(Fulfills Social Science OR Humanities requirement.)* Offered every semester.

**HIST202 United States History to 1870**                        **3-0-3**
Examines the political, social, and cultural development of the United States from settlement to 1870, emphasizing political institutions, sectional rivalry and slavery, the development of nationalism, and the cultural development of the American people. The course concludes with the period of Reconstruction. *(Fulfills Social Science requirement.)* Offered every semester.

**HIST203 Topics in History**                                    **3-0-3**
Examines the political, social, and cultural development of the United States from settlement to 1870, emphasizing political institutions, sectional rivalry and slavery, the development of nationalism, and the cultural development of the American people. The course concludes with the period of Reconstruction. *(Fulfills Social Science requirement.)* Offered every semester.

**HIST204 United States History - 1870 to the Present**          **3-0-3**
Covers the political, social, and cultural development of the United States from the period following Reconstruction to the present, emphasizing the urban industrial age, America as a world power, and the challenges to and advances of human rights and cultural pluralism. *(Fulfills Social Science requirement.)* Offered every semester.

**HIST205 History of Russia**                                    **3-0-3**
A survey of the history of Russia and the Soviet Union, with emphasis on the political, economic, and social developments of the 19th century, the revolution of 1917, the evolution of the Communist state and its collapse. *(Fulfills Social Science requirement.)* Offered every spring.

**HIST210 History of China**                                     **3-0-3**
A history of China from the Opium Wars to the present; explores the political, economic, social, and intellectual upheavals that constitute recurrent elements in Chinese history. *(Fulfills Social Science requirement.)* Offered every other fall.

**HIST211 Modern Middle East History**                           **3-0-3**
A survey of the main political, economic, religious, and political currents in the Middle East, with emphasis on issues and events since World War II, including the geographic and historical roots of many current issues. Topics include colonialism, the rise of nationalism, the creation of modern nation states, and the role of the state in an Islamic society. Also covers the relationship of the Middle East to the rest of the world, the US in particular. Prerequisite: Placement into ENGL110 or equivalent, or permission of the instructor. *(Fulfills Social Science requirement.)* Offered every fall.

**HUMA105 Introduction to Music**                                **3-0-3**
An introduction to Western music. The student will listen to, read about, and discuss the great music of the Middle Ages, Renaissance, Baroque, Classical, Romantic, and Modern Periods.  *(Fulfills Humanities requirement.)*

**HUMA106 History of American Popular Music**                    **3-0-3**
Provides a historical overview of American popular music, from the mid-19th to the turn of the 21st century, including folk, jazz, ragtime, blues, swing, show music, motion picture music, country, rock & roll, soul, heavy metal, pop, grunge, rap and Latin /African music. Students will be required to listen to music associated with these styles. *(Fulfills Humanities requirement.)*

**HUMA126 Introduction to Film**                                 **3-0-3**
A historical overview of film from its inception to the present day. Covers textual elements *(such as narrative, characterization, plot, and symbolism)*, as well as film's technical elements *(mise-en-scène, cinematography, lighting, editing, and sound)*.Emphasis is on film as both cultural artifact and institution. Also includes major films, developments, genres, directors and movements, as well as the technical vocabulary needed to interpret, analyze, and appreciate film. *(Fulfills Humanities requirement.)* Offered every other spring.

**HUMA150 Critical Thinking**                                    **3-0-3**
A reading, writing, speaking, and listening course that presents the skills and methods of critical thinking as a way to explore and evaluate ideas. Formative skills such as distinguishing fact and opinion, making inferences, detecting biases, reasoning inductively and deductively, and spotting logical fallacies are introduced sequentially, then applied to analyzing and evaluating selected readings. Emphasis is on having students develop greater confidence in their ability to make rational choices about political, moral, and social issues. *(Fulfills Humanities requirement)*

**HUMA200 Film and Society**                                     **3-0-3**
Covers American film as an expression of American society, emphasizing film as a reflection of social trends and changes in America. Covers five *(minimum)* genres of film: Film Noir, the Western, War films, Science Fiction and Horror films. The influence of film on social and cultural values will be discussed.  Prerequisites:  ENGL110. *(Fulfills Humanities requirement.)* Offered every other spring.

**HUMA205 Liberty and Justice: A Humanistic Approach**           **3-0-3**
Liberty and justice are two concepts dear to the hearts of Westerners *(certainly to Americans),* but too often assumed as unquestioned givens. This course explores the torturous progress of these treasured ideas through the centuries by studying representative works of literature, history, philosophy, politics, art and music. Prerequisite: ENGL110.   *(Fulfills Humanities requirement.)* Offered every other spring.

**HUMA210 The Darker Side of Man**                               **3-0-3**
Students will critically read and discuss from primary sources works, which reveal the dark side of human nature according to Western tradition. Readings from literature, poetry, drama, philosophy, history and politics form the core of the study. Related works in art, music, film as appropriate. One formal research paper and short papers are due on a weekly basis. *(Fulfills Humanities requirement.)* Offered every fall.

**HUMA220 Love in the Western Tradition**                        **3-0-3**
Love as a concept and as an activity consumes much time and space in the history of the human race. The literary and performing arts consider love as an abiding theme. The relationship of love to marriage is carefully examined. *(Fulfills Humanities requirement.)* Offered every spring.

**HVAC099 HVAC Exploration**                                     **1-0-1**
This course allows students to participate in HVAC laboratories while they are taking preparatory math, English or reading courses.  Students will be integrated into the HVAC environment, be assigned an HVAC advisor and will be mentored by other HVAC students. These credits do not count toward graduation requirements.

**HVAC111 Fundamentals of Refrigeration I Theory**              **3-0-3**
Introduces the principles of heat and its transfer, with emphasis on the compression cycle and its four major components. Prerequisite/Corequisite: HVAC113.

**HVAC112 Fundamentals of Refrigeration I Lab**                 **0-3-1**
Covers soldering, silver brazing, flaring, swagging, and use of specialized tools. Students receive hands-on experience with equipment using manifold gauges, reading pressure/temperature charts, and learning service procedures. Prerequisite/Corequisite: HVAC113.

**HVAC113 Related Electricity I**                               **3-3-4**
Theory and lab work on the principles of DC and AC electricity that are fundamental to the HVAC area. These include: Ohm's law, series circuits, parallel circuits, meters, wire gauges, magnetism, AC generation, AC calculations, and basic electric motor principles.

**HVAC114 Fundamentals of Heating I Theory**                    **3-0-3**
A thorough study of the residential high pressure, gun-type oil burner. Covers  basic combustion theory, how the components of high pressure gun type burners operate, choosing replacement parts, mechanical troubleshooting, oil tank installation, advanced combustion theory, and steady-state efficiency testing. Prerequisite/Corequisite: HVAC113.

**HVAC115 Fundamentals of Heating I Lab**                       **0-3-1**
An in-depth,hands-on course covering the components, component testing, replacement, maintenance and burner troubleshooting, and steady-state efficiency testing of residential high pressure, gun-type burners  Prerequisite/Corequisite: HVAC113.

**HVAC121 Fundamentals of Refrigeration II Theory**             **3-0-3**
A continuation of Fundamentals of Refrigeration I, this course covers electrical circuit controls and motors necessary for the operation of various residential and small commercial units; components necessary for optimum operation and efficiency; and basic mechanical and electrical troubleshooting. Prerequisite: HVAC111

**HVAC122 Fundamentals of Refrigeration II Lab** 0-3-1
A continuation of HVAC112, this course covers electrical meter testing of controls, motors and circuits, reading wiring diagrams, troubleshooting, and repair of various system malfunctions. Prerequisite: HVAC112

**HVAC123 Related Electricity II** 3-3-4
A continuation of HVAC113 covering electrical circuit controls commonly found in air conditioning and heating systems. Prerequisite: HVAC113.

**HVAC124 Fundamentals of Heating II Theory** 3-0-3
An in-depth study of residential heating system controls, with topics including the proper selection, use and theory of operation, maintenance, troubleshooting, and replacement of heating controls. Their use in steam, warm air, and hot water systems to achieve comfort and efficiency is also covered. Reading wiring diagrams is emphasized. Prerequisite: HVAC114.

**HVAC125 Fundamentals of Heating Lab II** 0-3-1
A continuation of Heating Lab I, with topics including control identification, applications, control system design, troubleshooting, and replacement. The student designs and installs steam, warm air, and hot water control systems following relevant codes. Prerequisite: HVAC115.

**HVAC211 Commercial Refrigeration Theory** 3-0-3
Covers system design, selection of proper units, piping size and layout, wiring controls and troubleshooting. Prerequisites: HVAC121, HVAC122.

**HVAC212 Commercial Refrigeration Lab** 0-6-2
Covers: installation stock list of components and electrical supplies; installation of commercial units found in small stores, restaurants, and supermarkets; start-up and charging procedures including use of a charging cylinder for critically charged units. Prerequisites: HVAC121 and HVAC122.

**HVAC213 Hydronic and Steam Systems Theory** 3-0-3
Topics include heat loss calculation; forced hot water system and steam system components; piping layout; selection of system components; and problem-solving, which involves troubleshooting and replacement. Various methods of heating domestic hot water are also studied. Prerequisite: HVAC124.

**HVAC214 Hydronic and Steam Systems Lab** 0-6-2
An in-depth study of residential forced hot water and steam heating systems. The student designs and installs a complete hot water system including the piping arrangement, control system, and method of heating domestic hot water. Forced hot water skills are emphasized. The student also begins a steam system installation. Prerequisite: HVAC125.

**HVAC221 Residential and Commercial
Air Conditioning and Heat Pumps Theory** 3-0-3
Covers the proper use and understanding of the psychometric chart and its use for comfort control, and the operation of complicated central unitary and split systems. Emphasis placed on the special requirements of heat pumps. Prerequisite: HVAC121 and HVAC122.

**HVAC222 Residential and Commercial
Air Conditioning and Heat Pumps Lab** 0-6-2
Covers installation and start-up of central air conditioning systems and heat pumps; troubleshooting and mechanical/electrical repair of various makes and models; pricing components and billing procedures. Prerequisites: HVAC121 and HVAC122.

**HVAC223 Warm Air Systems Theory** 3-0-3
Introduces residential steam and warm air system components, along with methods of piping and duct layout. Maintenance, troubleshooting, replacement, alteration, and total system designs are emphasized to help the student learn the various concepts involved. Prerequisite: HVAC124.

**HVAC224 Warm Air Systems Lab** 0-6-2
A continuation of HVAC214 and covers installation of steam and warm air systems, layout and make up of ductwork, multi-fuel units, and gas heating. Prerequisite: HVAC125.

**HVAC226 Air and Water Testing & Balancing** 3-0-3
Covers the essential techniques for the testing and balancing of air and water for HVAC systems, the fundamentals of testing and balancing, including the mathematics, fan and pump characteristics, and the basic electrical systems. Also covers: details of fan and pump curves, motor drives, and related electrical systems; testing and balancing instruments and use, including measurements and analysis; required TAB procedures, including preliminary air and hydronic procedures, as well as the TAB required report

forms, system evaluation, and troubleshooting. Prerequisites: HVAC first year courses or three years experience in the field. MATH111 and MATH131 recommended.

**HVAC243 DDC & Building Controls Automation I** 5-0-5
Introduces electronic environmental and industrial control concepts and equipment to electricians, HVAC technicians, and maintenance personnel. Covers basic subject matter such as introduction to electronics; solid-state theory and devices; digital numbering systems; digital logic; and basic theory of analog and digital control devices and systems. The course then advances to Computer System architecture; programmable logic controllers; direct digital control for total energy management systems; electronic controls for HVAC equipment; and industrial control devices and systems. Intended for students with prior training in electrical theory and practice with electrical equipment. A review of basic electrical theory precedes the other subject matter, but this review is intended as a brief refresher only and not as preparation for the course material to follow.

**HVAC244 DDC & Building Controls Automation II** 3-3-4
An advanced control systems course for students who have taken and passed HVAC 243, this course covers commercial/industrial control systems. Pneumatic, electrical, and electronic control systems are covered as well as associated subject matter such as variable frequency motor drives, variable air volume systems, and heat recovery. The course then focuses on new technology building control systems. System controller types, analog and digital sensors and actuators in system configurations, data communications and systems interfacing, DDC systems strategies and troubleshooting methods and equipment will be covered in detail. There will be a significant amount of hands-on lab work. Every attempt is made to keep the material in this course as current as possible. This is an advanced course and provides the student with the knowledge, ability, and experience to work confidently with existing control technology and adapt to new technology as it develops. Prerequisite: HVAC243 with a minimum grade of C or better.

**ID101 Interior Design Technology Studio I** 2-3-3
Introduces students to the fundamental principles of design for the built environment through lecture and studio project sessions. Explores the process of designing for commercial, public and residential interiors. Students will learn basic skill sets and methods for arriving at functional and creative design solutions. Using critical thinking in the design process is a major focus. Corequisite: ID102.

**ID102 Technical Drawing for Interiors I** 2-3-3
A basic 2D drawing course offered to provide the manual and electronic technical skills to present accurate documentation of ideas and concepts within the field of interior design. Areas of study will include hand drafting techniques and a general introduction to digital media methods using AutoCad® software. Emphasis is on instruction in the accuracy of scale and precise documentation skills.

**ID103 Visual Presentation for Interior Design** 1-3-3
Focuses on the development of artistic drawing skills by exploring the methods and techniques used to communicate design concepts for the built environment. Techniques in freehand sketching, rendered floor plans and elevations as well as perspective drawings will be studied using various mediums. Additional topics include the composition and organizational methods for assembling presentation boards which are required in studio and related interior design courses.

**ID121 Interior Design Technology Studio II** 2-3-3
The student continues to further develop technical and creative skill sets required for the built environment. Through lecture and studio project sessions, design concepts and solutions are explored and refined. Critical thinking techniques will further advance students' understanding of how to address technological and social changes placed upon the designing of interior spaces. Applications of the principles and elements of interiors will be presented with an emphasis on commercial interior design. Prerequisites: ID101

**ID122 Technical Drawing for Interiors II** 2-3-3
Provides intermediate AutoCad® skills for interior construction documentation activity within the built environment. Covers the preparation of construction drawings such as floor plans, electrical plans, reflected ceiling plans, finish schedules, hardware schedules and furniture installation plans using AutoCad®. Prerequisite: ID102.

**ID123 The Built Environment: Codes & Standards** 2-3-3
Covers basic building codes, life safety and barrier-free standards for the built environment. Students will study the reasoning and application for code-mandated methods of construction, material requirements, ADA guidelines and other regulations pertaining to both commercial and residential interiors. Prerequisite: None

**ID124 Architectural & Interior Design Movements: 1900 – Present**　　3-0-3
Provides a historical perspective of how advances in technology and society influence the built environment. Contributions of notable interior designers and architects of the 20th century and their influences in advancing and modernizing interior space and furniture will be studied. Topics include interior movements from the Beaux Arts, Bauhaus, Art Deco, the Modern Movement and into the present.

**ID200 Materials and Components**　　3-0-3
Surveys the architectural and decorative materials used by interior designers. Presents the properties, attributes and installation characteristics of the major interior design components: paints and finishes, carpeting, floors, walls, ceilings, hardware, cabinet construction, kitchens and bathrooms.

**ID201 Interior Design Technology Studio III**　　2-3-3
Emphasizes specific intermediate-level skill sets and methods needed for effective space planning and interior solutions in both lecture and studio sessions. Presents techniques for refining research specific to designated program criteria. Technical detail requirements and their importance in designing functional interior environments will be stressed. Prerequisites: ID101 and ID121.

**ID205 Interior Contract Documentation**　　2-3-3
Covers the knowledge and skill required for the preparation of basic construction documents for the built environment. Topics include specific documents for the fit up of commercial and residential interior spaces such as plans, schedules, details, sections, life safety and furniture installation plans. Stresses the need for skill and accuracy in turning ideas and concepts into working drawings for project implementation. Prerequisites: ID101, ID121.

**ID212  Lighting Design**　　3-0-3
A comprehensive lighting course designed to provide knowledge and skill for implementing functional and creative lighting solutions for commercial and residential interior applications. Explores the principles of quality lighting through design theory and technical requirements based on specific project criteria. Topics include elements of lighting systems, human factors, color, case studies and presentation of lighting solutions. Students should possess proficiency in the design process, drafting and AutoCad®. Prerequisites: ID101, ID121.

**ID221 Interior Design Technology Studio IV**　　2-3-3
Advanced studio course provides the opportunity to demonstrate knowledge and skill in completing an individual interior project incorporating all design and documentation phases of the built environment. The student selects one from a variety of predetermined projects. Programming, conceptual design, plans, and construction documentation along with final visual and oral presentation, will be presented to the ID faculty for critique. Individual guidance by the instructor will support the student's project during each phase of the process. Mini lectures of current technological news and innovations affecting the built environment along with specific workplace and lifestyle trends will also provide a dynamic learning environment. Prerequisites: All ID courses prior to 4th semester.

**ID224 Professional Practice For Interior Design Technology**　　3-0-3
Designed to provide a working knowledge of effective business practices and management skills for interior designers. Students will become familiar with the importance of contract documents, fee structuring, project management, successful marketing techniques and ethics in providing skilled services. Prerequisites: All ID courses prior to fourth semester.

**ID225 Interior Design Technology Internship**　　1-8-3
A cooperative work experience program consisting of on-site experience in business establishments including placement within interior design firms, architectural firms, facility management operations or other firms related to the interior design industry. The college coordinator and the organization's work supervisor evaluate students' work experience and achievements. Students meet in seminar session to discuss and analyze their experiences. Additional topics will include resume and cover letter preparation, role-playing of interview techniques, employer expectations and evaluation of career opportunities. Prerequisite: All ID courses prior to 4th semester.

**ID226 Portfolio Preparation for Interior Design Technology**　　1-3-2
Students will produce an academic or school portfolio as well as a professionally assembled multi-ringed portfolio which represents the best examples of their creative and technical skill sets. Instruction will include electronically reproducing the portfolio in CD format. Using appropriate marketing materials, including a business card and letterhead, will be explored on a class and individual basis. Preparation for interviews and practice interviews will also be included. Prerequisites: All ID courses prior to 4th semester.

**INT101 College Success Seminar**　　1-0-1
Designed to help students explore their personal and academic strengths and challenges as they develop strategies to support their success and to understand college expectations and resources. Supports student's development of a Student Success Portfolio to include strategies specific to learning styles, time management, reading, writing, group projects, study skills, test taking skills and working with academic advisors.

**INT102 Learning Community Seminar**　　2-0-2
Specifically designed to support participation in learning communities through two inter-related components. One component is a direct and integrative approach to study skill development and application as noted in the INT101 course description. The other component establishes a seminar approach to synthesizing and unifying the concepts or themes of the individual courses in the learning community cluster. *(This course will fulfill the INT101 College Success Seminar requirement.)*

**MATH070 Fundamentals of College Math**　　3-0-3
Designed to review or to enhance the mastery of basic mathematical concepts and skills needed to successfully complete future courses in math. The inclusion of numerous real-data and real world applications relating to everyday life or to other academic disciplines will enable the student to begin the development of a firm foundation of math facts and problem-solving skills. Calculators will not be used in this course until the very end of the term. Offered every semester. Credits do not count toward degree requirements.

**MATH080 Pre-Algebra**　　3-0-3
For the student who possesses an adequate background in basic math concepts and skills, but who has never taken an algebra course or who needs a refresher course. Topics covered are operations with signed numbers; algebraic expressions; linear equations/inequalities; exponents; square roots; understanding and manipulating formulas; translating and solving word problems; interpreting/analyzing data and basic graphing techniques; and applications of all skills. Offered every semester. Credits do not count toward degree requirements. Prerequisite: Satisfactory placement test scores as defined by math faculty; or successful completion *(grade of C or better)* of MATH070.

**MATH103 Topics in Applied College Mathematics**　　3-0-3
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 as the student becomes actively involved solving applied problems. Topics 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. Prerequisite:  Satisfactory placement test scores as defined by math faculty; or successful completion *(grade of C or better)* of MATH080.

**MATH111 Numerical Geometry**　　3-0-3
An applied course in Euclidean geometry stressing calculator manipulation and problem solving. Topics include linear, area, and solid measures involving US and SI units, solutions of linear equations, proportional relationships, congruent and similar figures, properties of polygons, circles and ellipses. Prerequisites: satisfactory placement test scores as defined by math faculty, or successful completion *(grade of C or better)* of one year of college prep algebra, or successful completion *(grade of C or better)* of MATH080.

**MATH131 College Algebra I**　　3-0-3
This is the first college-level algebra course offered at MCC, and helps students further develop a knowledge foundation of basic algebra concepts that are required to solve problems in all programs of study available at MCC. Algebra topics offered are signed numbers; polynomial operations; solutions of linear equations and inequalities involving numerical and literal terms; factoring polynomials; word problems; formula manipulation; graphing linear equations; systems of linear equations and solutions of equations by factoring or the quadratic formula; and an introduction to functions and their related notions. Prerequisites: satisfactory placement test scores as defined by math faculty; successful completion *(grade of C or better)* MATH080; or permission of the instructor.

**MATH132 Business Mathematics**　　3-0-3
Helps students learn the mathematics needed to perform personal and business operations effectively and efficiently. Students will use mathematics in applications involving interest, personal finance, loans, taxes, depreciation, insurance, investments, retailing and accounting practices, and financial statements. Prerequisite: successful completion of MATH080 with a C or better; or permission of the instructor; or appropriate results of placement test. Offered spring semester only.

## MATH135 Numerical Algebra and Trigonometry     3-0-3
Provides students with the basic algebra and trigonometry manipulatives to compute solutions in their curriculums. Algebra topics offered are signed numbers, polynomial operations, solutions of linear equations involving numerical and literal terms, word problems, and formula manipulation. Trigonometric topics are trigonometric ratios as applied to right triangles and computation of measures in oblique triangles, using the Law of Sines and the Law of Cosines. Prerequisite: successful completion *(grade of C or better)* of MATH111 or permission of the instructor.

## MATH141 Advanced Algebra and Trigonometry     3-0-3
Covers the essentials of numerical algebra, geometry and trigonometry using different problem-solving strategies. A short review of elementary algebra topics is followed by an introduction of geometric principles and trigonometric functions. The solution of applied problems will require the integration of these topics. The trigonometric topics include trigonometric ratios in solving right triangles and vectors applications, Laws of Sines and Cosines in solving oblique triangles and selected analytic geometry applications *(or trigonometric applications in analytic geometry)*. Prerequisites: satisfactory placement test scores as defined by math faculty or successful completion *(grade of C or better)* of MATH131; or permission of the instructor.

## MATH151 Intermediate Algebra     3-0-3
Prepares students for higher level mathematics by covering topics including exponents; polynomials; factoring; rational expressions; and solving linear, higher degree and rational equations *(including the quadratic formula)*. Introduces quadratic functions, composite and inverse functions, and solving of exponential and logarithmic equations. Solving systems of linear equations of three and more variables by matrices and systems of inequalities are covered. Prereq: satisfactory placement test scores as defined by math faculty, or successful completion *(grade of C or better)* of MATH131, or permission of the instructor.

## MATH170 Discrete Mathematics     4-0-4
Provides a mathematical foundation for the understanding of set theory, abstraction, and formal proofs. Topics include sets, subsets and operations, logic, counting, Boolean algebras, induction, groups, discrete functions, recursion, graphs, trees, and algorithms. Prereq: MATH141 with a C or better, placement test or permission of instructor.

## MATH171 Pre-Calculus     4-0-4
Topics covered in this course are: trigonometric functions, complex numbers, and conic sections; analytic trigonometry; systems of nonlinear equations; non-linear inequalities; matrices and determinants; sequences and series; limits and continuity; and probability and statistics. Other topics to be investigated include algebra, geometry, and trigonometry. Graphic calculators will be used to facilitate problem solving and graphing. Prerequisites: MATH141 with a C or better or placement test or permission of instructor.

## MATH200 Finite Mathematics     4-0-4
Reviews linear equations, inequalities and systems of equations emphasizing graphing methods. Topics include matrices, linear programming, sets, introduction to probability, the mathematics of finance, and the simplex method. Prerequisites: successful completion *(grade of C or better)* of MATH151; satisfactory placement scores as defined by mathematics faculty; or permission of the instructor.

## MATH202 Probability and Statistics     4-0-4
Topics include basic measures of central tendency and variability; frequency distributions; probability; the binomial distribution; the normal distribution; sampling of distributions; estimation of parameters; confidence levels and hypothesis testing; non-parametric tests; simple regression and correlation analysis. Prerequisite: satisfactory placement scores as defined by mathematics faculty; or successful completion *(grade C or better)* of MATH131; or permission of the instructor.

## MATH204 Calculus I     4-0-4
Explores functions, limits, continuity, derivatives; rules for differentiating algebraic, trigonometric, exponential and logarithmic functions; chain rule; implicit differentiation; related rate problems; max-min problems; curve sketching; integrals, areas and volumes. Prerequisite: MATH171 *(grade C or better)* or permission from the instructor.

## MATH214 Calculus II     4-0-4
Topics include area, volume, arc length, surface area, pressure force; integration of trigo-nometric, exponential and logarithmic functions; differentiation and integration of inverse trigonometric and hyperbolic functions; methods of integration; improper integration; infinite series, Taylor and MacLaurin series; and polar coordinates.
Prerequisite: MATH204 *(grade C or better)* or permission of instructor.

## MCOD100 ICD CM Coding     3-0-3
Focuses on the evaluation and management aspect of coding for medical settings. Students apply their knowledge of medical terminology and the human body to interpret and abstract pertinent data to accurately code insurance claims to optimize

reimbursement. ICD CM manuals will be explained and utilized extensively.
Prerequisites: AH110, BIOL106. A GPA of 2.0 is required to continue on to MCOD215.

## MCOD110 CPT Coding     3-0-3
Focuses on surgical procedures with individual emphasis on each of the body systems, radiology, pathology and behavioral medicine. Special attention is paid to the use of modifiers for definitive CPT coding. Students will continue to interpret and abstract data from simulated and actual case studies. Prerequisites: AH110 and BIOL106. A GPA of 2.0 is required to continue on to MCOD215.

## MCOD215 Classification Systems and Reimbursement     3-0-3
This final course in coding focuses on the coding of inpatient hospital procedures. Students continue to work with ICD-9 and CPT codes, and will become familiar with the HCPCS codes needed for hospital reimbursement. Students learn to accurately sequence diagnoses and procedures to determine co-morbid and complicating diagnoses found in the various fields of medicine. Students also learn to abstract and code using actual patient charts. Particular attention is paid to Medicare compliance. The use of encoders *(software packages)* to facilitate coding is explained. Prerequisites: MCOD110, BIOL112. GPA of 2.0 required to pass course.

## MEDA122 Medical Office Procedures     3-0-3
Offers students the opportunity to explore, study, and practice numerous administrative responsibilities associated with work in a medical office. This course focuses on career opportunities, professionalism, appointment scheduling, letter composition relevant to the medical office, telephone techniques, office management, banking duties, and patient account maintenance. Keyboarding ability is needed to complete course requirements. Prerequisite: ADMN111 and AH110. Note: A grade of C or better is required in order to take Medical Assistant Practicum.

## MEDA123 Introduction to Pharmacology     3-0-3
Provides the Medical Assistant student with the fundamental knowledge for a basic understanding of the principles and practice of pharmacology. Emphasis is on the safe preparation and administration of medications to patients of various age groups. Simulated problems and case scenarios will be based upon clinical situations that the Medical Assistant may encounter in a general medical office or clinic setting. Students must have an understanding of basic mathematical processes to perform practice problems with accuracy. Prerequisites: AH110/ BIOL106. NOTE: A grade of C is required in order to take Medical Assistant Practicum.

## MEDA124 Insurance for the Medical Office     4-0-4
Introduces the student to the basics of the medical billing process, including insurance terminology, medical coding systems, government and private payer health claims, general insurance procedures, and patient billing/collections. Prerequisite: AH110. NOTE: A grade of C is required to pass this course.

## MEDA125 Clinical Laboratory Procedures I     2-6-4
Provides the Medical Assistant with the knowledge and skills that may be needed in a general practice medical office or clinic. Laboratory skills presented include, but are not limited to: medical asepsis and infection control; patient preparation, assessment, and medical history taking; vital signs and anthropometric measurements; preparation and assisting in physical examinations; instrumentation, sanitation, disinfection and sterilization of instruments and equipment; assisting with minor surgical procedures; administration of EKGs; preparation, storage, and administration of medication; collection and analysis of microbiological specimens including hematology and urinalysis; diagnostic imaging; and medical office emergencies including CPR and airway obstruction. Prerequisites: grade of C or better in AH110 and BIOL106/107.

## MEDA126 Medical Law and Ethics     3-0-3
Covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional. **Note:** A grade of C is required in order to take Medical Assistant Practicum.

## MEDA218 Clinical Lab Procedures II     2-3-3
Students refine their skill and gain competence in essential clinical laboratory skills that might be needed in a medical practice. Theory content covers anatomy and physiology, and emphasizes specific organs and body systems and their associated illnesses and disease entities. In addition, the physiological aspects of working with special populations will be considered. Skill performance lab includes, but is not limited to the medical assistant's role in patient education, quality improvement and risk management, emergency medical procedures, common diagnostic procedures, instrumentation, minor

office surgery, general patient assessment, phlebotomy, collection and preparation of micro-biological specimens, and the skills necessary in working with special populations. Skills learned in Clinical Lab Procedures I will be reinforced in order for the student to gain a higher level of proficiency and confidence in their abilities as medical assistants. Prerequisite: MEDA125 with a grade of C or better.

### MEDA223 Medical Assistant Practicum     0-15-5
This capstone course allows students to receive supervised hands-on experience at off-site locations related to the medical assistant field. All practicums are unpaid and students must have submitted all documentation as stated in the *Medical Assistant Handbook* to the Medical Assistant Program Director. There are no evening or weekend practicums, so consult with your Academic Advisor. Co-requisite: MEDA 225. Prerequisite: All MEDA courses must be completed with a grade of C or better.

### MEDA225 Practicum Seminar     1-0-1
Students in the Medical Assistant Practicum course meet for a one-period seminar to review their practicum progress and to discuss issues related to successful employment. Resumés, cover letters, interviewing techniques, and job-keeping skills are some of the topics included in this course. Corequisite: MEDA223.

### MKTG125 Principles of Marketing: A Global Perspective     3-0-3
Provide a basic understanding of the entire marketing process from a managerial point of view. Students examine the marketing system and strategies for the marketing of consumer and business products. Other topics include: the global marketing environment, customer relationship management, target markets, market segmentation, customer behavior, market research, retail and wholesale environments and specialty marketing. Emphasis is on the marketing mix – product, price, place, and promotion.

### MKTG135 Global Consumer Behavior     3-0-3
An in-depth analysis of the internal and external forces in the consumer decision-making process as it relates to marketing. Consumer trends and changes in demographic and psychographic characteristics are discussed. Emphasis is on the global aspect of consumer buying behavior in terms of buying, having, and being.

### MKTG205 International Marketing     3-0-3
Analyzes the decision-making process in marketing products internationally, with a focus on the design of international marketing strategies *(identification of potential markets, and products, price, promotion, and distribution decisions)* within the constraints of a particular cultural, economic, and political setting. Case studies are used to apply course concepts to international marketing scenarios. Prerequisite: MKTG125.

### MKTG210 Advertising     3-0-3
Covers the history of advertising, roles of advertising, the advertising brief, target marketing, the advertising agency, media planning and placement, as well as media services. Also basic media strategy using television, radio, newspapers, magazines, outdoor advertising, personal selling, internet marketing, direct response, and other forms of advertising will be investigated. Students apply advertising, promotional, and integration tools to an advertising project/campaign. Prerequisite: MKTG125.

### MKTG224 Sales and Sales Management     3-0-3
An analysis of the role of selling in the marketing process, with a focus on effective communication and customer psychology. Topics regarding sales techniques, customer service, recruiting, training, and supervision of employees are examined, along with sales force organization, performance, and assessment.

### MKTG282 Marketing Research     3-0-3
This course will be taught from the viewpoint of the person who conducts primary and secondary market research with a concentration on techniques and processes required to conduct quality research studies. Topics include questionnaire development, sampling techniques, data collection methods, and survey errors. Application of concepts through primary data coupled with secondary data through a market research project. This course should be taken in the student's final semester. Prerequisite MKTG125.

### NURS111 Nursing I     6-12-10
Introduces the roles of the Associate Degree Nurse as a provider and manager of care and member of the discipline of nursing. Students develop beginning intellectual, interpersonal and psychomotor competencies for patient assessment. Communication theory, life span development, ethical-legal standards, and nursing process are basic concepts to the practice of nursing. Introduces the concept that the person is a system in dynamic interaction with internal and external environments. The 11 Functional Health Patterns organize the study of concepts common to a basic knowledge of the patient's state of wellness and possible or actual health problems. The Learning Laboratory provides opportunities to practice nursing skills in simulated activities. Clinical learning provides experiences to practice nursing by caring for well patients or patients with common basic health problems in structured health settings. Coreq: BIOL110, PSYC110.

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### NURS112 Nursing II     4-15-9
The student develops competence to provide and manage care for patients and their families across the life span in structured health care settings. The student provides support and teaching to the patient and family and direct care for the patient. Includes the Functional Health Patterns of Sexual Reproduction, Role Relationship, Nutrition Metabolic, Health Perception Health Management, Cognitive Perceptual and Value Belief. Intellectual, interpersonal and psychomotor competencies are further developed. Needs of patients across the life span are emphasized with special focus on adults, children in childbearing and childrearing families and psychiatric/mental health care settings. Student plans the care of the patient/family utilizing the Nursing Process. Direct care will be provided to patients with common health problems. Laboratory learning provides opportunities to practice more complex nursing skills and basic group skills in simulated activities. Clinical learning experiences are provided in adult health care settings, and psychiatric/mental health or perinatal/pediatric settings. Prereq: NURS111 and BIOL110 with a grade of C or better and completion of PSYC110. Coreq: BIOL120, PSYC210.

### NURS211 Nursing III     4-15-9
The student continues to develop competence to provide and manage care for patients and their families across the life span in structured health care settings. The student provides support and teaching to the patient and family and direct care for the patient. Includes the Functional Health Patterns of Activity Exercise, Elimination, Nutrition Metabolic, Self-Perception and Coping Stress Tolerance. Intellectual, interpersonal and psychomotor competencies are further developed. Needs of patients across the life span are emphasized with special focus on adults, children in childbearing and child rearing families, and psychiatric/mental health care settings. The student will plan the care of the patient/family utilizing the Nursing Process. Direct care will be provided to patients with common health problems. Laboratory learning provides opportunities to practice increasingly complex nursing skills in simulated activities. Clinical learning experiences are provided in adult health care settings, and psychiatric/mental health, or perinatal/ pediatric settings. Prerequisites: NURS112 and BIOL120 with a grade of C or better and competition of PSYC210. Corequisites: BIOL210, ENGL110.

### NURS212 Nursing IV     3-18-9
The student develops increased competence and independence to provide and manage care for patients and families with common multi-system health problems across the life span. Includes ethical decision-making, role performance and the care of patients with multi-system health problems of metabolism/immunity/hematopoiesis; cognition/ sensation/perception; and cardio-respiratory. Also includes leadership skills, health care policy and legislative advocacy. An evidence-based care project presentation is required. Laboratory learning focuses on student case presentations involving current, multi-system health problems and ethical decision-making. Clinical learning experiences are provided in advanced medical-surgical and community health settings. Prereq: NURS211 and BIOL210 with a grade of C or better and completion of ENGL110.

### PHIL110 Introduction to Philosophy     3-0-3
Introduces the important ideas in Western philosophy, with emphasis on the Greek origins of philosophy, the transformation of philosophy by Enlightenment thought in the 17th and 18th centuries, and the post-modern reaction to Enlightenment thought. The course relates philosophical ideas to contemporary issues. *(Fulfills Humanities requirement.)* Offered every spring.

### PHIL215 World Religions     3-0-3
Introduces the major religions of the world, including their origins, core beliefs, traditions, and practices. The purpose of the course is to understand and appreciate the various religious theories and practices by focusing on key texts, figures and ideas. The approach will strive to be descriptive, not prescriptive. Students will gain initial exposure to the structure and world-view of the religions covered: Christianity, Islam, Judaism, Hinduism and Buddhism. Additional religions may be included based on instructor and student interest *(African, Native American and new wave, Taoism, Confucianism, Baha'i, Zoroastrianism, Sikhism, etc.). (Fulfills Humanities requirement.)* Offered every fall.

### PHIL240 Ethics     3-0-3
Introduces students to general ethical theories, philosophies, and decision-making models. with the goal of relating theory to practice. This general knowledge will be applied to specific problems and cases. Applications may include general ethical issues and more career-specific issues determined by student interest. *(Fulfills Humanities requirement.)* Offered every fall.

### PHYS100 Introductory Physics     2-3-3
A conceptual introduction to the basic principles related to the composition of matter, mechanical properties of solids and fluids, forces and static equilibrium, potential and kinetic energy, power, and force transformers. Emphasizes the development of problem solving techniques and the appropriate application of those concepts to solve problems. Dimensional/unit analysis is stressed. Prereq: a C or better in MATH135 or equivalent.

## PHYS110 Physical Science I     3-2-4
A "hands-on" exploration of the basic principles of the physical world, this course is designed to foster a better understanding of the environment that surrounds us and to serve as a foundation for further study in science. Concepts explored include mechanics, heat, temperature, electricity and magnetism, sound, and light. Prerequisite: MATH 080.

## PHYS120 Physical Science II     3-2-4
Continues the "hands-on" exploration of the basic concepts initiated during PHYS110. Concepts explored include the atom, atomic models, and selected topics in chemistry, earth science, and astronomy. Success in the first semester is a prerequisite to the second semester. Success in both will enable the student to pursue advanced science courses of physics, chemistry, earth science, and astronomy. Prerequisite: PHYS110.

## PHYS135 College Physics I     3-3-4
Introduces the basic principles of Newtonian mechanics with emphasis on the application of these principles when solving problems. Topics include kinematics of motion, vectors, Newton's laws, friction, work-energy, impulse-momentum for both translational and rotational motion, and the mechanical properties of matter. Dimensional *(unit)* analysis and critical thinking are stressed. Prerequisite: C or better in MATH141 or equivalent.

## PHYS136 College Physics II     3-3-4
Continues the study of elementary physics that began in College Physics I. Emphasis is on the principles introduced when solving problems. Topics include the fundamentals and the applications of Coulomb's Law, electrical fields and potentials, capacitance, electric current and resistance, DC circuits magnetism, electromagnetic induction, AC circuits, oscillating systems and waves, and geometric optics. Prerequisite/Corequisite: C- or better in MATH171 or equivalent.

## POL110 American Government     3-0-3
Introduces the basic structures of the U.S. political process, and explains political activity at national, state and local levels. Topics include an analysis of the Constitution; the powers of the Executive, Legislative, and Judicial branches; the power of bureaucracy and the media and the pervasiveness of federalism, as well as campaigns, elections, political parties and interest groups. *(Fulfills Social Science requirement.)* Offered every semester.

## POL210 Introduction to Political Science     3-0-3
Introduces the field of political science. Political ideologies, nationalism, cultures, and institutions are discussed, as well as public opinion, political parties, interest groups, and voting behavior. The concepts of power and legitimacy, elitism and pluralism will guide discussion. American and comparative examples are used. *(Fulfills Social Science requirement.)* Offered every fall.

## PSYC110 Introduction to Psychology     3-0-3
Introduces various areas of psychology, including scientific investigation and prominent theories. Topics include motivation, emotions, personality, physiological foundations of behavior, psychological disorders and therapy, perception, learning, and human development. *(Fulfills Social Science requirement.)* Offered every semester.

## PSYC112 Learning and Behavior     3-0-3
Discusses the history and principles of behaviorism and presents a learning theory and teaching techniques based on positive behavioral principles. Presentation and discussion focus on the ethical and client right issues of positive behavior change, and recent trends and techniques for applying learning principles in a variety of settings. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)* Offered every spring.

## PSYC118 Theories of Personality     3-0-3
Introduces the various theoretical models explaining human behavior. Currently accepted and historically significant theories are presented and students participate in critical analysis of each theory. Application of currently accepted theories in such areas as assessment of personality and connections to adjustment issues are discussed as well. Prerequisite: PSYC110 *(Fulfills Social Science requirement.)* Offered every fall.

## PSYC120 Leadership Development     3-0-3
A study of leadership and the skills manifest in effective leaders. Topics include articulating a vision, goal setting, decision making, managing time, team building, empowering others, initiating change, managing conflict, applying ethics, and serving as a leader. Provides the opportunity for students to develop a personal leadership philosophy, as well as essential leadership skills, through study, observation, and application. Prerequisite: ENGL110. *(Fulfills Social Science requirement.)* Offered every other spring.

## PSYC210 Human Growth and Development     3-0-3
A study of human growth and development with a specific emphasis on the physical, cognitive, social and emotional dimensions from the prenatal period to later adulthood.

An examination of major theorists is presented. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)* Offered every semester.

## PSYC215 Abnormal Psychology     3-0-3
Develops an understanding of human behavior and the similarities and differences between normal and abnormal reactions to environmental stimuli. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)* Offered every semester.

## PSYC217 Chemical Dependency     3-0-3
Introduces the concepts of chemical dependency as related to the individual and the family. This course discusses the disease concept of chemical dependency, the concept of denial, models for change, and available treatment options for people with chemical dependency and related issues. Prerequisite: ENGL110 or equivalent with a grade of C or better, or permission of the instructor. Offered every fall.

## PSYC220 Adult Development     3-3-4
Presents a detailed discussion of adult development, including cognitive, social, and personality development, and other issues, with a focus on the application of theories of typical development to the challenge of aging. Students will be required to participate in 45 hours of community service focusing on the provision of support to individuals experiencing challenges related to their development through adulthood. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)* Offered every fall.

## PSYC230 Educational Psychology     3-0-3
Reviews the application of psychological principles to the educational environment. Covers theories of cognitive processes and development, learning, and social and moral development as they apply to learning and teaching. Issues involving assessment, classroom management, individual differences, and socioeconomic and developmental influences on learning are also presented. Emphasizes the application of theoretical perspective to classroom teaching. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)* Offered every spring.

## PSYC235 Health Psychology     3-0-3
Covers issues of health and wellness based on the triangle of health psychology -- mind, body, and spirit -- to help students understand the role that stress, mindset, positive and negative relationships, and life choices play in one's overall health. Also addresses stress reduction concepts, positive coping styles, the formation of healthy relationships, and the building of healthy lifestyles, as well as the effect that all of these have on one's overall quality of life. This course brings to the students' awareness the factors and behavioral methods that facilitate a resilient quality of life that is very different in nature and practice from the coping style of psychosocial survival. Prereq: PSYC110 with a grade of C or better. *(Fulfills Social Science requirement.)* Offered every spring.

## SOC109 Contemporary Social Problems     3-0-3
Students study contemporary American social problems from sociological perspectives and discuss the nature, causes, and potential solutions to these problems by applying sociological analysis. Topics may vary and include poverty, culture, immigration, education, crime and deviance, health, and the economy. A service learning option may be available in some sections. *(Fulfills Social Science requirement.)* Offered every semester.

## SOC110 Sociology     3-0-3
Introduces the concepts and principles of sociology, including the basic social units of our society and how they interact. An exploration of the causes of social change as they are related to population will also be considered. *(Fulfills Social Science requirement.)* Offered every semester

## SOC120 Society and Technological Change     3-0-3
A study of the relationship between technology and humankind and the attempt to link, decipher and evaluate technological systems to all human life and to prove that all of them are interrelated. *(Fulfills Social Science requirement.)* Offered every other fall.

## SOC125 American Justice System     3-0-3
Covers the components of the justice system in American society. Although civil law is discussed, the emphasis is on the criminal justice system, and the influence and pressures of changing social, political, technological and economic factors on the agencies of justice. Much of the focus will compare ideals with realities of the system. Law enforcement, the courts and correctional aspects will be examined. Prerequisite: ENGL110. *(Fulfills Social Science requirement.)* Offered every other spring.

## SOC135 Women's Studies     3-0-3
Introduces the fundamental concepts of women's studies, including the roles and contributions of women and the conditions that affect women's lives. Students discuss and debate theories of women's inequality, paying attention to gender, class, race/ethnicity, sexual orientation, age, and ability. *(Fulfills Social Science requirement.)* Offered every other fall.

**SOC210 Changing American Family**      **3-0-3**
Examines the dynamics of relationships in transition and the changing family unit, and explores social, medical, spiritual, financial, and legal perspectives of relationships. The question is: Is marriage a legal technicality, a symbolic commitment, and/or a measurement of maturity? Prerequisite: SOC109 or SOC110. *(Fulfills Social Science requirement.)* Offered every fall.

**SOC250 Multiculturalism**      **3-0-3**
Introduces students to racial, ethnic, and other differences in people that may influence their norms, values, perceptions, and behaviors. Historical connections, as well as current issues related to race, ethnicities, and other minority groups are explored. Discussion increases awareness and understanding of other races, ethnicities, and different minority groups fostering tolerance and cooperation between the participants and the diverse populations of their home/school/work communities. Prerequisite:  SOC109 or SOC110 with a grade of C or better. *(Fulfills Social Science requirement.)* Offered every spring.

**SPAN110 Spanish I**      **3-2-4**
A fully integrated introductory course for beginning Spanish students with little or no prior knowledge of Spanish. It is directed for students whose learning objectives and needs are in any of the following: for Spanish language students, for business purposes or for travelers. The emphasis is to develop proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences, helping the student develop an instinctive sense of correct usage. Language laboratory activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing, and cultural appreciation.  *(Fulfills Foreign Language requirement.)*

**SPAN120 Spanish II**      **3-2-4**
A continuation of the introductory course for students who have had the equivalent of one year of high school Spanish or one semester of college Spanish. The course is designed for Spanish students whose learning objectives and needs are in any of the following: for Spanish language students, for business purposes, for travelers. The emphasis is to consolidate and reinforce the language skills acquired in Spanish I or equivalent, and to continue building communicative skills and cultural competency. The course offers a comprehensive review of basic first-term grammar structures, while developing proficiency and advancement in communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other essential language skills are taught through actual phrases and sentences, helping the student develop an instinctive sense of correct usage. Language laboratory activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing, and culture. Prerequisite:  SPAN110 or equivalent. *(Fulfills Foreign Language requirement.)*

**WELD099  Welding Exploration**      **1-0-1**
This course allows students to participate in some aspects of the Welding program while they are taking preparatory math, English or reading courses.  Students will be integrated into the welding  environment, be assigned a Welding advisor and will be mentored by other Welding students.  These credits do not count toward graduation requirements.

**WELD111 Gas and Arc Welding Lab**      **0-12-4**
At the successful completion of this course, each student will be able to: (1) safely utilize oxy-fuel cutting equipment to cut shapes and prepare material for welding; (2) safety utilize oxy-fuel welding equipment to weld various mild steel joints in the four welding positions; (3) safely utilize arc welding equipment to weld various mild steel joints in the four welding positions; (4) safely use oxy-fuel equipment for braze welding, brazing, soldering, and fusion welding of the most widely used types of metals.

**WELD112 Gas and Arc Welding Theory**      **3-0-3**
Covers: how metals are produced; the advantages of different steel making processes; chemical, physical and mechanical properties of common metals; the operating principles of gas and arc welding and cutting equipment; how electrodes are made, and their uses, differences and numbering system, and basic joints and processes.  Gas and arc welding processes are identified and methods to control them are also explained.

**WELD113 Technical Blueprint Reading**      **0-3-1**
Introduces the basic concepts and practices of technical drawing and blueprint reading. Covers the proper use of drawing equipment, line work and lettering, construction and interpretation of multi-view orthographic drawings, sectional views and auxiliary views. Other topics of discussion include dimensioning and tolerances, sketching and structural steel shapes. Emphasis will be placed on using the drawing skills learned to maintain a high quality of workmanship in the field.

**WELD121 MIG and TIG Welding Laboratory**      **0-12-4**
Instructs students in the safe, hands-on use of the GTAW, GMAW, FCAW, SAW, and PAW processes as they are used in industry. The GTAW process will be used to weld mild steel, stainless steel, aluminum, copper alloys and titanium. The GMAW process will be used to weld mild steel, stainless steel and aluminum. Resistance welding, plastic welding and thermal spray equipment will also be used. Prereq: WELD111, WELD112.

**WELD122 MIG and TIG Welding Theory**      **3-0-3**
Covers the theory behind the gas-shielded arc welding processes, GMAW and GTAW. Principles of operation, filler materials and gas selection are discussed in great detail, as well as modern welding processes, including: Submerged Arc Welding, Plasma Arc Welding, Solid State Welding, Resistance Welding, Electroslag Welding, Stud Welding, the high energy beam processes, Thermal Spraying and more. Prereq: WELD112.

**WELD125 Manufacturing and Repair Techniques**      **0-3-1**
Introduces the safety and fundamental use of machine tools in both manufacturing and repair environments. Processes covered include turning, milling, drilling, broaching, grinding and precision measurement.  In laboratory sessions, students will apply the techniques studied by using machine tools to manufacture welding fixtures and dimensionally restore parts which were repaired by welding.

**WELD180 Basic Arc and Gas Welding**      **1-3-2**
Provides the students with a technical understanding of shielded metal arc welding, arc welding power supplies, electrode classifications, oxy-fuel welding and cutting, torch brazing, joint types, preparation and fit-up, and welding safety. Also provides training to make quality fillet and square groove welds in the flat position on various thickness of mild steel, using the (SMAW), (OFW), and (TB) processes.

**WELD181 Intermediate Arc and Gas Welding**      **1-3-2**
Builds on the knowledge and skill acquired in Basic Arc and Gas *(WELD180)*. It provides the training to make multiple-pass fillet and square groove welds in all positions on mild steel plate using the *(SMAW)* process. Also provides training to develop the skills to make fillet and square groove welds in the flat, horizontal and vertical positions on mild steel, using the *(OFW)* process. Prerequisite: WELD180.

**WELD182 Welder Qualification and Testing**      **1-3-2**
Provides students with an understanding of welder qualification in accordance with the American Welding Society .D1.1 Structural Welding Code. Also provides training to develop the skills to make code-quality, multiple-pass groove welds with backing on 3/8" mild steel plate in all positions using E7018 electrodes. Prepares students for welder qualification testing used throughout the welding industry.
Prerequisites: WELD180, WELD181.

**WELD183 Advanced *(SMAW)* Plate and Pipe Welding**      **1-3-2**
Designed for the experienced welder. Provides the training to make multiple-pass, open-root v-groove welds on 3/8" mild steel plate and 4" - 6" mild steel pipe in all positions, using E6010 and E7018 electrodes. Also provides training for mechanized oxy-fuel cutting as well as carbon arc cutting and gouging. Prerequisites: WELD180, WELD181 and WELD 182.

**WELD184 Gas Tungsten Arc Welding *(TIG)***      **1-3-2**
Provides students with a technical understanding of gas tungsten arc welding, equipment adjustments, tungsten electrodes, filler metals, shielding gases, plasma arc cutting, and welding safety. Also provides training to develop skills to make quality welds on 14-  and 11-gauge mild steel, stainless steel, and aluminum, in the flat, horizontal and vertical positions. Prepares students for production/maintenance welding. Prereq: WELD180.

**WELD185 Gas Metal Arc Welding (MIG)**      **1-3-2**
Provides students with a technical understanding of gas metal arc welding, flux-cored arc welding, equipment adjustments, metal transfer modes, filler metals, shielding gases, and welding safety. Also provides training to develop the skill necessary to make quality (GMAW) and (FCAW) welds in various positions on mild steel, stainless steel and aluminum, using short circuit, globular and spray transfer modes, and illustrates problems in industrial situations and provides corrective information. Prerequisite: WELD180.

**WELD186 Blueprint Reading for Welders**      **3-0-3**
Introduces print reading, covering the different types of lines, dimensions, and notes used to make sketches and prints, the various types of views and their relationship to each other, the welding symbols, and inspection and testing symbols for all welding processes. Students will develop a practical understanding of the blueprint reading knowledge required by the welding industry for employment.

**WELD211 Structural Code Welding Lab**        **0-12-4**

Covers the hands-on practice of Shielded Metal Arc Welding as applied to the American Welding Society Structural Steel Code D1.1. Students perform welder qualification tests in all positions and subject the test coupons to the required forms of mechanical testing. The role of the Welding Inspector is also covered, as well as the documentation required for both welder and weld-procedure qualification. Students gain experience in the inspection role to become familiar with weld defects and discontinuities.
Prerequisites: WELD111, WELD112, WELD121, WELD122, WELD125.

**WELD212 Code Welding Theory**        **3-0-3**

Covers: proper industrial quality control procedures with respect to welder qualification, welding procedure qualifications, materials control and quality assurance organization; the three major welding codes and specifications: A.W.S.D1.1, A.S.M.E. boiler and pressure vessel code, and A.P.I. 1104, which covers cross-country pipelines; principles and practices of common forms of non-destructive testing, with emphasis on weld defects and discontinuities. Also, methods of safely performing leak testing, and weldability of steels and non-ferrous metals, as well as the weldability of dissimilar metals.
Prerequisites: WELD111, WELD112, WELD121, WELD122, WELD125.

**WELD213 Metallurgy**        **2-2-3**

Introduces materials technology, including instruction study assignments and laboratory exercises. The student will gain a knowledge of: *(1)* materials structures; *(2)* heat treatment processes; *(3)* composition of ferrous and non ferrous alloys; *(4)* microscopic examination of metals and the effects of heat treatments and welding.

**WELD220 Fabrication Techniques and Estimating**        **2-2-3**

Covers problems encountered when welding different types of steel and non-ferrous metals in a production shop: the use of arc motion and work motion equipment and robotics in the modern welding factory; the importance of welding procedures and the use of fixtures; and the estimating of typical welding costs *(materials, cutting, welding, consumables and overhead)* to price out a job.

**WELD221 Pipe Code Welding**        **0-12-4**

Students use arc welding equipment to make multiple pass and 100% penetration welds in the 1G, 2G, 3G, and 4G positions on mild steel plate with electrodes from the fast freeze, fill freeze and fast fill groups; safely utilize arc welding equipment to produce welds on 4-inch and 6-inch standard steel pipe in the 1G, 2G, 5G, 6G positions, plus various pipe assemblies.

**WELD223 Statics and Strengths of Materials**        **2-2-3**

Introduces applied statics and strength of materials in relation to weldments, weld testing, material testing, pressure vessels, beam selection and related rigging. Laboratory projects involve the use of non-destructive and destructive testing equipment to determine the forces acting upon rigid bodies under a load, as well as the mechanical properties of materials. Prerequisites: MATH111, MATH135, WELD213. Corequisite: PHYS100.

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Katherine Stewart, Registrar's Assistant
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