2009-2010 Academic Catalog

Address:
1066 Front Street,
Manchester, NH 03102-8518
(603) 668-6706 or 1-800-924-3445 (NH only)
Fax Line: (603) 668-5354
Registrar's Fax Line: (603) 668-2997

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.

Objectives

Manchester Community College is dedicated to the belief that each individual should be provided a continuing opportunity for the development of skills and knowledge, and an increasing awareness of his or her role and responsibility in society. The college is devoted to serving the occupational/educational needs of the State of New Hampshire and assumes a responsibility to help meet the requirements for a skilled workforce through a cooperative effort with local industry, business, service and health organizations.

The college prepares learners for essential professional and workforce occupations with broad, high quality, practical education. Programs employ equipment and materials consistent with the modern workplace, and the faculty blend academic credentials with pertinent work experience. The major programs of study include liberal arts and the intellectual skills necessary for the competent, lifelong learner.

The college believes it is important that individuals establish a set of personal values which are able to be reflected in their own eyes and in the eyes of the community. These values increase through an educational program geared to the continual development of human potential. Acquisition of basic knowledge and saleable skills is only the beginning of the process of education and development that continues throughout life.

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A Message from our President

Welcome to Manchester Community College!

We're pleased you've chosen MCC for your college experience. I personally want to assure you that we can help you achieve your academic goal – whether you plan to transfer to a four-year college, upgrade your skills, or, as so many students are doing in this difficult economic time, begin a new career.

Over the past 60 years our college has evolved from a vocational-technical college into a comprehensive community college. Staying true to our original mission, we continue to provide the state of New Hampshire with the skilled technicians necessary to keep our economy moving. MCC is also where hundreds of students every year acquire career skills to successfully enter a profession.

Of course, because we are a comprehensive community college, many of our students are enrolled in bachelor's degree transfer programs. Through transfer agreements, you can continue your education at any of the institutions of the University System of New Hampshire, Southern New Hampshire University, St. Anselm College, Rivier College, NEC, Wentworth Institute of Technology, Franklin Pierce, and many others. Transfer students are continuing their education at the bachelor's degree level in close to 70 fields, from Accounting to Zoology.

Everyone deserves an opportunity to earn a college degree. Our mission is to help you achieve your goal. Whether you plan to transfer, upgrade your skills, or begin a new career, our faculty and staff are committed to helping you succeed. I wish you the best of luck and congratulate you on making a good choice for your college experience.

Warmly,

Ron Rioux
Interim 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 Marion Knedler, 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.

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.

One of the seven colleges falling under the auspices of the System is Manchester Community College. Serving the needs of the Merrimack Valley, the college is governed collectively by the state's Governor, Executive Council, System Board of Trustees, and individually by Advisory Committees, a President and a Chief Academic Officer.

The college enrolls about 3,000 students per semester and offers more than 40 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 new 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.

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

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:

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

First-Time Matriculating Students *(first-time students seeking admission into a certificate or degree program)*

- Submit a completed Application for Admission for the program you intend to pursue (note: Nursing applicants must submit an application for Nursing, even if they have been previously admitted to Liberal Arts or another program).
- Pay a $10 non-refundable application fee.
- 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 documentaton 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. In addition to a completed application and the non-refundable application fee, documents to be submitted may include 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

- Submit a completed Application for Admission and pay a $10 non-refundable application fee.
- 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 can 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 a Certificate of Finances on official letterhead from a bank or financial institution in which the student or the student's sponsor demonstrates 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. The letter must be in English, must indicate the date the account was opened, the currency type, and the amount currently available and have the signature of a bank official.
    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 US 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 CAPS, the Center for Academic Planning and Support).

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 Center for Academic Planning and Support (CAPS). For information on the TOEFL exam contact:

TOEFL Educational Testing Service
Rosedale Road,
Princeton, NJ 08541 USA
(609) 921-9000 www.toefl.org

Readmit Students

Matriculated status is maintained by successfully completing one course per academic year. Students unable to maintain this requirement and wishing 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 $10 non-refundable application fee.
- Submit additional documentaton as required by the Office of Admissions.
- 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

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 for coursework as a non-matriculating student must:

- Meet with a counselor at the Center for Academic Planning and Support.
- Complete the placement test in reading, writing and mathematics.
- 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 test 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 within two weeks of acceptance. This deposit is applied toward 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.

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. 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 $305 to $5,350 depending on the family financial position.

Supplemental Educational Opportunity Grant (SEOG)

SEOG Grant awards are made available to students who demonstrate exceptional financial need. A SEOG Grant also does not have to be paid back. To receive a SEOG Grant, 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 9 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 9 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 will be paid at least the current minimum wage. Students who qualify for Federal Work Study will be required to perform the work assigned 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 6 credits per semester.

Stafford Loans *(Formerly GSL)*

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 6 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 Parent Loans for Undergraduate Students (PLUS)

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 nine percent *(9%)*. Interested parents will be required to apply for this loan. This loan is credit based.

Alternative (Private) Loans

Many 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 within 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 in attendance at this college and applies to your academic program is taken into account 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 one 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 their 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.

Developmetal / 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.

Federal School Code

The Title IV Code for Manchester Community College is **002582**.

Tuition Rates

In-State Students *(New Hampshire Residents)*
$183/credit

New England Regional Students - *(CT, MA, ME, RI, VT)*
$274/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 $418/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	10.00
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	.25 per day/item
Nursing Clinical Surcharge	350.00 per semester
Nursing NLN Entrance Exam	40.00
Nursing Standardized Testing Fee	100.00
NSNA Membership/year	20.00
Parking Fine	5.00-25.00
Payment Plan Service Fee	25.00
Proctor Exam *(non MCC students per exam)*	50.00
Returned Check Fee	32.00 or 5% check's face value + any bank fees
Transcript Fee	3.00
Transcript Faxed Fee	8.00

Books and Supplies *(Estimated)*

Texts and Writing Materials	700.00
Automotive Tools and Materials	3,000.00
Nursing Uniforms and Supplies	150.00

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 $25.00 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 $.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 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 course work 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/institute or an individual course by the end of the eighth (8th) 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 *(i.e., a mid-semester start)* will have 8 calendar days from the start of the class to withdraw for a full refund. Exception: students who meet for two weeks or fewer must drop by the end of the first day of the class in order to get a 100% refund. 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.

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.

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. 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 complete the add/drop form.

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 grant, and Federal Perkins Loan funds to the United States 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 and 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 also 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 the student with an educational experience ensuring flexibility of occupational choice. It also serves students who plan on directly entering the workforce or enhancing their career mobility by providing a planned sequence of arts and sciences courses that not only give the students the core competency skills required by today's businesses, but 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
Humanities/Fine Arts/Foreign Language	9 credits
Mathematics	6-8 credits
Lab Science	8 credits
Social Sciences	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 within the 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 credits. 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 in response to the 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:

• English Composition and Literature and/ or Communication	6 credits
•. Science	3-4 credits
• Math	3-4 credits
• Social Science	3 credits
• Foreign Language/Humanities/Fine Arts	3 credits
• 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 as follows:

- 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 fifteen *(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 credits of 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.

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. 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.

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

The college is constantly reviewing and upgrading the content of programs offered 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 the 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. **Third and subsequent attempts to repeat a course will require the approval of an appropriate advisor and course instructor.**

Credit Hour Guidelines

- A credit hour shall be the equivalent of one (I) 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 below.

Letter	Numerical Equivalent	Letter		Numerical Equivalent
A	4.0	AF	Administrative Failure	0.0
A-	3.7	AU	Audit	0.0
B+	3.3	CS	Continuing Study	0.0
B	3.0	I	Incomplete	0.0
B-	2.7	NP	No Pass	0.0
C+	2.3	P	Pass	0.0
C	2.0	W	Withdraw	0.0
C-	1.7	WF	Withdraw Failing	0.0
D+	1.3	WP	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.

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 8 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.

In order 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 will be set at twenty *(20)* students. Enrollments in excess of twenty students may be done by mutual agreement with the instructor.

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 *(8th)* 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 tenth *(10)* week of a semester will receive a "W" grade on his/her transcript.
- up to ten *(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 WF is calculated in the GPA as an "F."
- When there are fewer than ten *(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 less than 16 weeks will follow a prorated timeline.

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

Re-admission 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 is strongly encouraged to complete the established process, which includes completion of 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. The purpose of the exit interview is to communicate the college's academic and financial policies pertinent to the date of withdrawal, and to offer support and academic advisement as needed and desired. Failure to withdraw officially will result in a notation on the student's permanent record: Withdrawn-Not-in-Good-Standing.

VI. Academic Placement Policy

Academic Placement Policy

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

Prior to registration in college-level coursework, every student admitted into a degree or certificate program will be required to demonstrate competencies in reading, writing, mathematics and computer skills. 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. Please see the discussion below for details on seeking full or partial waivers for the placement policy. 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.

MCC's placement policy may be waived, in full or part, for those individuals who have met one or more of the following conditions:

- Earned a minimum score of 500 on the SAT verbal and 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 post secondary 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.

The online placement tests **{ACCUPLACER*}** are administered by CAPS and can be done on a drop-in basis during CAPS open hours. Students may be asked to take portions of the Accuplacer Placement Test if coursework currency might affect the student's ability to be successful in subsequent courses.

Students seeking to waive a math or English placement may either:

- Retest one or more portions of the Accuplacer *(minimum waiting period of 30 days required)* OR
- Initiate the course waiver request process by obtaining the request form from CAPS and submitting it to the appropriate department. Requests for a course waiver must be received no later than one week prior to the start of the semester; requests will be considered by department faculty after the submission cutoff date. Students will be informed of the department's decision by email / phone.
- While a decision is pending, students are encouraged to register for the prerequisite course to secure a space; students whose waiver request is approved will be assisted in finding an open section of the course.

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.

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**
Writeplacer score of 4; Writeplacer score of 5 or above PLUS Accuplacer reading score below 80.	**ENGL 099**
Writeplacer score of 5-8 PLUS college-level reading skills determined by one of the following criteria: o Accuplacer score of 80 or above o Completion of ENGL 097 with a grade of C or better.	**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.

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.
- A score of 65% or above placement will be CIS 110 Microsoft Computer Applications or CIS 111 Computer Technologies.

VII. Advanced Standing

A matriculated student who is able to 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 as follows:

- Transfer of credit from another institution;
- College Level Examination Program (CLEP);
- Credit by Examination (Internal), or
- Credit for prior learning experience.

1. Transfer of Credit from Another Institution
Students may transfer credits earned at other accredited institutions for coursework required by their MCC major program. It is the student's responsibility to furnish the college with (1) official transcripts of academic courses from **each** college they have attended and (2) catalogs from each institution attended with course descriptions for which transfer credit is sought. 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 in order to complete a degree and must complete all required courses for their academic program.

Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions. See individual academic program descriptions for specific program transfer policies.

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” and “5”.

2. College Level Examination Program (CLEP)
Students with previous academic experience in specific subject areas may choose to earn credits by taking a nationally standardized exam known as 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 the CLEP exams accepted for credit by MCC, along with corresponding course names and credits, is available in CAPS *(Center for Academic Planning and Support)*.

Successful completion of a CLEP exam is treated as a transfer credit. Students must request that a copy of their scores be sent to MCC for review. This request is made to 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.

Although CLEP credits count towards graduation, CLEP scores are not calculated into a student's GPA or in any way interpreted as a grade. Additionally, CLEP credits 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. Students should speak with their academic advisor if they have questions regarding this process.

CLEP exams are administered on the computer *(CLEP CBT)* through the Center for Academic Planning and Support. For more information, contact CAPS.

3. 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 in the College. 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.

4. 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 degree, professional certificate, or certificate program. To prepare for this option, students will develop a portfolio to be assessed by the academic officer and faculty members. A student must be matriculated at MCC to be eligible 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 faculty member who normally teaches the course for which you wish to receive credit. 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 faculty member, the department chairperson, 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).*

College Success Seminar

This one-credit course is designed to provide students with specific skills that will maximize academic performance. 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 following 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 cumulative grade point average *(CGPA).*
3. The student successfully passes the challenge exam for College Success Seminar.

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 are required to complete all degree requirements with a cumulative GPA of 2.0 before being awarded a degree.

For complete information about graduation requirements, please visit the college website at:
manchestercommunitycollege.edu/Academics/academic_policy.aspx

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 not 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 institution and is usually for one semester. Suspension from the program means that a student may continue to take courses outside of the program as a non-matriculated student. Suspension from the college prohibits a student from taking classes during the period of suspension.

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

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.
NOTE: *Credits accumulated are total credits earned by the student.*

Grade Appeal Procedure

Any appeal of a grade must be initiated by the student with the instructor before an ensuing semester has elapsed.Students should be advised that 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 faculty member and schedule a meeting to discuss the grade appeal and attempt to resolve the conflict. The faculty member and student shall meet within the next five *(5)* work days.

2. Meet with the Department Chairperson.
If the issue was not resolved in Step 1 above, the student has three *(3)* work days from the date of the faculty member's decision to file a written appeal with the faculty member's Department Chairperson. Within three *(3)* work days, the Department Chairperson will mediate the dispute either through discussion with the instructor or with the student in the company of the faculty member.

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

Family Education Rights and Privacy Act

In compliance with the Family Rights and Privacy Act of 1974 *(The Buckley Amendment)*, 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 educational record is considered confidential. No one will have access to such records without written consent of the learner.

XI. Academic Amnesty

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

- All grades taken during the student's previous time at MCC will no longer be used to calculate the student's new cumulative GPA. However, grades C- and above taken during the student's previous time at MCC will be used to meet course requirements *(where appropriate)*, subject to the approval of the Vice President of Academic Affairs or his/her designee.

- . Even though previous grades will not be used to calculate the new cumulative GPA, all previous grades will remain on the student's transcript.

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

a. The student has not taken any courses at original college of enrollment for a period of at least three (3) years from the last semester of attendance.
b. The student applies for Academic Amnesty before the start of his/her second semester after readmission.
c. The student has never before received Academic Amnesty.
d. The student achieved a cumulative GPA 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 who wish 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 cumulative GPA of 2.0 to be eligible for an 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.

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 published learning objectives/ outcomes for a course independently under the guidance of a qualified faculty member. A matriculated student must have a minimum cumulative GPA of 2.0 to be eligible for a Directed Study.

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 in the curriculum. 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 net-working facilities located at or operated by MCC. For the complete policy, visit manchestercommunitycollege.edu/Academics/academics_policy.aspx or ccsnh.edu/acceptableuse

XVI. 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 to courses only offered by Manchester Community College.

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 will be 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' curriculum and assessment and regular course curriculum and assessment.

Learning Communities

A learning community is a combination of courses in different disciplines organized around a common theme or a specific cohort group. In a variety of college settings and in a number of forms, Learning Community approaches 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 as part of the academic experience 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
- sense of civic responsibility and ability to be an effective member of the communities where they will reside after graduation.

The service-learning program focuses on promoting service learning as an effective teaching strategy within the existing curricula of the college. Course learning outcomes are the basis for integrating projects that serve the college or the community at large. In order to preserve the academic integrity of a 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 will provide built-in experiential projects; others will require the student to identify his/her own project. Service learning activities have been demonstrated as positive learning experiences for both students and faculty.

Academic Support Services

Center For Academic Planning And Support (CAPS)

Academic planning and support services are available to both student and community members through the Center for Academic Planning and Support (CAPS). Services include: peer and professional tutoring, computerized instruction, workshops, disability and ESL/ESOL support services, international student advising, career exploration, transfer counseling, academic counseling 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.

Students are encouraged to visit CAPS during their first week of classes to familiarize themselves with CAPS services and staff. There is no charge to students enrolled in credit-bearing courses. Community members may access CAPS on a fee-per-service basis.

Hours of Operation

Monday - Thursday: 8 a.m. to 8 p.m.
Friday: 8 a.m. to 4 p.m.
Saturday: 10 a.m. to 2 p.m. *(fall and spring semesters only)*

For more information or to receive a brochure, call (603) 668-6706 ext. 314. Visit the CAPS website at www.manchestercommunitycollege.edu, and click on Academic Services.

Academic Advising and Counseling

The goal of advising is to assist students to create academic plans that will lead to the successful realization of their educational goals. Through conversation, assessment, goal setting, and strategic planning, students are empowered to create academic schedules that reflect their interests, skills, and obligations to family, work, and/or community.

The process of advising at MCC is characterized by communication and connection between the student and his/her advisor. It is through a mutual exchange of questions and information that ideas and solutions are generated. The advisor-advisee relationship is potentially one of the most significant partnerships a student will experience at MCC. Students are encouraged at all times to seek out their advisor to ask questions, share concerns, get help, plan for the future, or simply to "check-in."

New students are advised by CAPS and returning students who have attended one or more semesters are advised by their program faculty advisor. CAPS will assist new students in connecting with their faculty advisors during their first semester, either at orientation or later in the semester. In some cases, CAPS will continue to work cooperatively with the student and his/her program faculty to address key issues; e.g., visa and legal status, academic skill building, career choices, transfer options, disability support, study and organizational skills, financial aid, cultural counseling, and life management. When necessary, students are referred to outside agencies for further assistance.

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

CAPS provides students with career counseling, career advisement, help with choosing a major, and employment-seeking strategies. CAPS 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 of Academic Planning 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 of CAPS and the Vice President of Academic Affairs, the student may submit the written appeal to the President of Manchester Community College. The original documentation and recommendation of the Disabilities Counselor will be reviewed by the President *(designee)* of MCC 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 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, 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: tutor-facilitated study groups; one-to-one tutoring; small group tutoring; online help; and video and software programs. Schedules for tutoring are posted each semester in CAPS and on the CAPS website by the tutor coordinator. 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 CAPS at (603) 668-6706 ext 314.

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 a $3.00 per copy fee. An additional $5.00 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.

TRIO/Student Support Services
TRIO/Student Support Services is a federally funded grant program located at Manchester Community College. The program's mission is to support students who are low-income, first generation college students (neither parent graduated with a bachelors degree before the student reached their 18th birthday) and students with disabilities. Students must be accepted into an academic program, enrolled in at least six credits, and have applied for financial aid in order to receive services.

TRIO/SSS services include:
- Academic support
- Workshops
- Career counseling
- Cultural trips
- Transfer college exploration
- Personal counseling

TRiO
STUDENT SUPPORT SERVICES

Students can obtain applications for the TRIO/SSS program through the Office of Admissions or by contacting the TRIO/SSS program directly at (603) 668-6706 x366 in Manchester. Applications are accepted for fall and spring semesters.

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
The college contracts with a private vendor to run the cafeteria. The cafeteria is located on the main floor. Students can buy hot or cold foods, drinks, and pastries. The cafeteria hours are posted each semester. Meals are available at reasonable prices, and vending machines are available when the grill is closed.

Housing and Living Expenses
The college does not maintain residence halls or assume responsibility for housing. Students are advised to check on campus to see if any information about local housing options have been made 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 to be familiar 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 at our college are encouraged to take advantage of the leadership opportunities, social activities, and community service involvement offered by the college. 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 manchestercommunitycollege.edu/current

Transfer Opportunities & Articulation Agreements

As a comprehensive community college, MCC has developed partnerships with public and private four-year institutions both in and out of New Hampshire. These partnerships include individual course acceptance, formal articulation agreements, as well as dual admissions opportunities. MCC is accredited by the New England Association of Schools & Colleges, Inc.'s Commission on Institutions of Higher Education.

Transfer Opportunities

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.

Formal Articulation Agreements

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

MCC and Southern New Hampshire University offer students a dual enrollment option. Contact the MCC Office of Admissions for more information.

Following is a list of formal articulation agreements by MCC academic program. For more information regarding these agreements, contact Meg Hamm, Career/Transfer Counselor in CAP, at (603) 668-6706 ext. 294.

BUILDING CONSTRUCTION

UMASS Amherst

BUSINESS STUDIES

Franklin Pierce University
Plymouth State University
Southern New Hampshire University
UNH Durham
UNH Manchester

EARLY CHILDHOOD EDUCATION

Plymouth State University
Southern New Hampshire University

EDUCATION

Keene State College
Plymouth State University
Southern New Hampshire University

HEATING, VENTILATION & AIR CONDITIONING

Ferris State University

INTERIOR DESIGN

Wentworth Institute of Technology

LIBERAL ARTS

Daniel Webster College
Franklin Pierce University
Franklin University
Keene State College *(see NH Transfer Connections Program)*
Plymouth State University *(see NH Transfer Connections Program)*
Southern New Hampshire 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 School of Practical Nursing *(LPN to RN)*
University of New Hampshire - dual enrollment option

TECHNICAL PROGRAMS

Granite State College
Southern New Hampshire University

WELDING

Ferris State University

NH Transfer Connections Program

University System of New Hampshire *(USNH)*

The NH Transfer Connections Program enables students to attend one of the state's community colleges and, if they meet certain standards, be automatically accepted into Keene State College, Plymouth State University, 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 (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 or UNH-M or Plymouth State University can also opt-in to this program.

Please see the MCC Office of Admissions or Meg Hamm, Career/Transfer Counselor in CAPS at (603) 668-6706 ext. 294 for more information.

Transfer Advising

Our Center for Academic Planning & Support 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
Bonneville & Son
Clark Chrysler
Bob Mariano Dodge Jeep
Grappone Ford
Londonderry Tires Too
McFarland Ford
Merrimack Street Volvo
Rockingham Toyota
VIP
White River Toyota
Bill's Auto - Nashua
Caller's Auto
Port City Nissan
AutoServ Plymouth
Irwin Ford
Manchester VW
Merchant's Auto
Mom's Garage
Subaru of Manchester
Wall's Ford
Woodworth Motors

EARLY CHILDHOOD EDUCATION

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

EXERCISE SCIENCE

Center for Physical Therapy/Exercise
Rehab 3
YMCA/Manchester
Hillcrest
Training Effects, Hampshire Hills
Elliot Hospital
WellnessYMCA
St. Joseph Hospital
The Complete Athlete - Sports Performance Clinics

GRAPHIC DESIGN

Allegra Print & Imaging
BIGraphics
Burke Advertising
Maax, Inc.
Printers Square
RAM Printing
Special Olympics NH
Cellular Specialties
Applaud Magazine
Breathe NH
Cummings Printing
Manchester Housing & Redevelopment Authority
Silvertech, Inc
Jayme's Fund for Social Justice

MEDICAL ASSISTANT

Ammonoosuc Community Health
Bedford Commons OB-GYN, PA
Capital Region Family Health Center
Community Medical Center
Dartmouth-Hitchcock Clinic
The Doctor's Office
Family Physicians of Penacook
Lahey Cardiology
Parkland Physician Services
Southern NH Internal Med. Assoc.
Bay Medical Associates
Bedford Women's Health Care Assoc. PA
Concord Hosp.d/b/z C.H.Phys. Grp.
Derry Medical Center
Family Physicians of Pembroke
Huggins Hospital
Manchester Community Health Ctr.
Seacoast Family Practice
Wentworth Douglas Hospital

NURSING

Catholic Medical Center
VNA Home Health & Hospice
Dunbarton Elementary School
Elliot Hospital
Greenbriar Terrace Healthcare
Horne Street School
Manchester Health Dept.
Mental Health Center
Parkland Medical Center
Southern NH Medical Center
Dartmouth-Hitchcock Manchester-YMCA/Concord
Easter Seals
Exeter Health Resources
Harborside Healthcare Rehab/Nursing
Infusion Solutions
Manchester School Department
Our Place
St. Joseph Hospital
Veterans Administration Hosp.

PHLEBOTOMY

Avis Goodwin Community Health Ctr.
Concord Hospital
Frisbee Memorial Hospital
New London HospitalAssn, Inc.
St. Joseph Hospital
Veteran's Administration Medical Ctr.
Wolfeboro Hospital
Catholic Medical Center
Elliot Hospital
LRG Healthcare
Path Laboratory
Spear Memorial Hospital
Wentworth Douglas Hospital

Workforce Development

Professional Development

The Workforce Development Center at MCC responds quickly to the changing needs of business and industry and provides lifelong learning 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
- Communication skills
- Computer and information technology
- Customer service
- Cultural awareness
- Flagger training
- Industry-specific English for non-native speakers
- Languages
- Leadership
- OSHA -10
- Project management
- Safety

For more information about corporate and customized training, call (603) 668-6706 ext. 369. For more information about open enrollment non-credit courses, call (603) 668-6706 ext.369.

Running Start

The New Hampshire Project Running Start (RS) 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:

Project Running Start

www.ccsnh.edu/prs

2009-2010 Programs Of Study

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.

Accounting & Finance

Accounting	Finance
Associate in Science	**Certificates**

Accounting is a field of study 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.

Program Outcomes

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 so as to continue their accounting education in a seamless manner.

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 in the future.

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/Transfer Opportunities

Job Opportunities

MCC has a working partnership with Robert Half International *(placement agency for accounting professionals)*, where they can assist our 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.

Transfer Opportunities

The Accounting Associate 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 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/First 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 I	4	0	4
INT101	College Success Seminar	1	0	1
MATH131	College Algebra I	3	0	3
	Total	**16**	**2**	**17**

First Year/Second 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/First 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/Second 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 and Financial Reporting I	3	0	3
ACCT123	Accounting and 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

Accounting Operations-Specializations Description

MCC offers a series of classes focusing on specialized accounting skills. The courses will prepare you for entry level jobs and for national certification in one of the specialized areas of Accounting Operations. The Accounts Payable-Entry Level class also features 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 the 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.

Individual classes that teach skills and prepare for national certification

ACSP101 Payroll Fundamentals-Entry Level 2-.5-2

ACSP101 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 1.5-.5-1.5

ACSP103 covers the skills needed in entry-level accounts payable 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)

ACSP104 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 Nework.

The Bookkeeping Certificate courses cover 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.

Bookkeeping Certificate

		TH	LAB	CR
ACCT100	Bookkeeping for Small Business	3	0	3
Or				
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	2	.5	2
ACSP110	Bookkeeping Internal Controls and Advanced Topics	2	0	2
ACSP111	Advanced Bookkeeping Applications	3	0	3

Total Credits - 16

Program Outcomes

Upon successful completion of this certificate, students will:

- Be able to function in relevant positions in small business or corporate settings.
- Be familiar with the relevant applications in QuickBooks.
- Be prepared to sit for the national certification examination leading to a national license.

Employment/Transfer Opportunities

MCC has a working partnership with Robert Half International *(placement agency for accounting professionals)*, where they can assist our accounting operations students to find temporary and permanent placement in accounts payable, payroll, bookkeeping.

Transfer Opportunities

The Accounting Operations-Specialization classes *(ACSP)* are unique and may transfer as general electives to four-year institutions. Southern NH University accepts 90 credits. Credits also transfer nationally to ACBSP-accredited colleges.

Finance Certificates

Executive Corporate Finance Certificate
Personal Finance Certificate

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 them 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.

Finance provides for stable employment filled with challenging, rewarding work and paying 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)*.

Program Outcome: Executive Corporate Finance

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.
- Be prepared to continue their education and earn an associate or bachelor degree in accounting/finance.

Program Outcome: Personal Finance Certificate

Upon successful completion of the certificate, the student will:

- Have a basic understanding of company financial statements in relation to investment selection, have a working knowledge of individual tax laws and how they apply to preparing a personal financial plan.
- Identify the components necessary to evaluate and prepare a personal financial plan, understand investment options and how to build an investment portfolio.
- Identify the components necessary for retirement, trusts, wills and estate planning, be prepared for an entry level position in an investment firm.
- Be prepared to continue their education and earn an associate or bachelor degree in accounting/finance.

Admissions Requirements

Applicants must comply with the college admission requirements. Student must have completed: ACCT113, ACCT123, and BUS221prior to being accepted into the Executive Corporate Finance Certificate.

Employment/Transfer Opportunities

Job Opportunities

Students with a personal finance certificate will be prepared for entry level work in an investment center or personal financial planning organization. Student with the executive corporate certificate will be prepared for an entry level position as a corporate financial analyst or a financial manger depending on prior work experience.

Executive Corporate Finance Certificate

Student must have completed: ACCT113, ACCT123, and BUS221 prior to being accepted into this certificate program.

		TH	LAB	CR
ACCT244	Fed. Income Taxes-Corporations, Partnerships	3	0	3
FINC213	Applied Problems in Managerial Finance & Fin. 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 - 15

Personal Finance Certificate

		TH	LAB	CR
ACCT113	Accounting & Financial Reporting I	3	0	3
ACCT123	Accounting & Financial Reporting II	3	0	3
ACCT115	Concepts of Personal Federal Income Taxes	2	0	2
Or				
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 Planing	2	0	2

Total Credits - 16/17

Automotive Technology

Associate in Applied Science

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

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 in Automotive Technology. Curriculums designed to meet an individual student's area of interest include a comprehensive path covering Asian, European, and domestic makes. Additionally, Chrysler *(CAP)*, Ford *(MLR)*, and Toyota *(T-Ten)* specialized curriculums focus on manufacturer-specific products and provide manufacturer technician training certification.

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. This partnership with Chrysler, Ford Motor Company, Toyota, local dealerships, independent businesses, and Manchester Community College provides exceptional training, which leads to an Associate's Degree and an invaluable opportunity for full-time employment.

Technical Standards

In addition to the college wide admissions requirements, the following requirements and technical standards apply to program applicants:

- Must possess a valid driver's license and have a driving record that meets industry insurability standards.
- Should have driving experience with a manual transmission *(recommended)*.
- Should have strength to lift automotive parts, equipment, and for performance of manual tasks.
- Must have college assessment results that indicate that placement into College Composition 1 *(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.
- Are required to complete approximately 30 weeks of work experience at an approved co-op site.
- Are required to possess a specified tool set.

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.

DEGREE PROGRAM-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/Huma/Fine Arts Elect.	3	0	3
	Total	**10**	**13**	**14**

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**

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

DEGREE PROGRAM-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 I	4	0	4
	Total	**11**	**7**	**13**

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

Today, an automotive service technician must possess a high level of skills and knowledge. In the Automotive 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.

NOTE-The courses required for the certificate program are NOT the same as those required for the degree. The degree courses have a cooperative work component within them and the certificate courses do not. Students wishing to complete the certificate program must complete an automotive internship instead.

		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	3	3
AUTO106	Electronic Systems	2	3	3
AUTO107	Automotive Climate Control	2	3	3
AUTO108	Automotive Internship	0	15	5

Total Credits - 27

Building Construction Technology

Associate in Applied Science

Building Construction is an ever-changing industry. To qualify as a wage earner in the modern day construction field, a person must possess a technical knowledge of construction design and the skills to apply that knowledge.

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.

Program Outcomes

- Participation in the actual construction of a modular house, or similar project, gives the student practice in framing and in the installation of exterior and interior finish.
- Laboratory experiences in millwork projects and specialized methods of construction are also provided.

Admission Requirements *(beyond the requirements of the college)*

- Successful completion of Algebra I of "C" or better.
- Successful completion of Geometry of "C" or better.

Physical Requirements

- Adequate hearing for detection of changes in tone or sound of power equipment indicating malfunction or improper operational procedures. (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 with changing situations.

Transfer Options

- SNHU - Small Business Management
- UMass Amherst – Building Materials Technology
- Wentworth Institute of Technology – Construction Management

Certifications Available

- ACI Flatwork Technician
- ACI Field Tester Level I
- 10 – Hour OSHA Training Course in Construction Safety & Health

Employment Opportunities

- Carpentry
- Estimating
- Building material representative
- Self employment
- Related positions in the construction field

DEGREE PROGRAM-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 I	4	0	4
MATH111	Numerical Geometry	3	0	3
INT101	College Success Seminar	1	0	1
	Total	**13**	**9**	**16**

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

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**

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
For. Lang./Humanities/Fine Arts 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	2	3

Total Credits - 10

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

Computer Science

Associate in Science

Computer Science remains one of the fastest growing fields, with a projected shortage of qualified job candidates for the foreseeable future, both nationally and in the state. In this highly technical field, it is critical to obtain the required educational background. The Computer Science *(CS)* Associate's Degree Program *(formerly Computer Technologies)* 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. The program is designed to provide foundation level preparation, and focuses on the discipline and logic common to all computer science areas, rather than on specific application programs. In the second year of the program, students may choose to focus on one of several functional areas, including applications, database, networking/ web development, programming, or web graphics.

Program Objectives

The broad objectives for the Associate's Degree in computer science are to produce graduates who:

- Are competent in formulating and solving computer science problems;
- Understand computer science fundamentals along with supporting mathematics and science sufficiently well to be prepared for a wide range of jobs and to pursue further degrees;
- Are able to function in the workplace with the necessary technical skills and with appropriate oral and written communication skills; and
- Have a broad education that promotes professional advancement, lifelong personal development, and social responsibility.

The degree of Associate in Science with a major in Computer Science is awarded upon successful completion of the program. Many graduates will choose to continue their formal education in a bachelor's degree program at another college. Others begin professional careers by obtaining positions as technical support analysts, programmers, network administrators, database administrators or web site developers.

Students should see their advisor for specific recommendations based on possible future transfer plans.

The Department of Computer Science offers an Associate's Degree program for full-time or part-time students.

Students enrolled in this program should be advised that some classes may require them to purchase portable hard drives.

DEGREE PROGRAM-FIRST YEAR

Fall Semester		TH	LAB	CR
CIS111	Computer Technologies I	2	2	3
CIS112	Computer Technologies II	3	0	3
ENGL110	College Composition I	4	0	4
INT101	College Success Seminar	1	0	1
MATH141	Technical Mathematics	3	0	3
	Total	**13**	**2**	**14**

Spring Semester		TH	LAB	CR
CIS113	Database Design/Management	2	2	3
CIS116	Networking I	2	2	3
MATH171	Pre-Calculus	3	0	3
PSYC110	Introduction to Psychology	3	0	3
	English Elective	3	0	3
	Liberal Arts Elective	3	0	3
	Total	**14**	**4**	**18**

DEGREE PROGRAM-SECOND YEAR

Fall Semester		TH	LAB	CR
CIS124	Web Programming I	2	2	3
CIS146	Linux I	2	2	3
CIS148	Java Programming I	2	2	3
CIS	Technical Elective (Any Level)	2	2	3
	Liberal Arts Elective	3	0	3
	Science Elective	3	0	3
	Total	**14**	**8**	**18**

Spring Semester		TH	LAB	CR
HUMA150	Critical Thinking	3	0	3
CIS274	XML Programming I	2	2	3
CIS291	Capstone Senior Seminar	2	2	3
CIS	Technical Elective (Any Level)	2	2	3
CIS	Technical Elective (200 Level)	2	2	3
	Total	**11**	**8**	**15**

Total Credits - 65

Education

Early Childhood Education	Liberal Arts/Education
Associate in Applied Science	**Associate in Arts**

Early Childhood Education

Associate in Applied Science

The Early Childhood Education *(ECE)* program provides students with the knowledge and skills necessary to create a positive learning environment for young children, one that is nurturing and fosters creativity. Teachers who work with young children in high quality programs understand how young children grow and learn, and how to provide materials and activities that are developmentally and interest-appropriate.

The ECE program is designed to prepare individuals as 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 18-credit Lead Teacher Certificate is designed for students interested in meeting the minimum licensure requirements to be a child care teacher as well as qualifying to be a family home child care provider. The 24-credit Special Education Option provides training for students interested in becoming a paraprofessional working with infants, toddlers and young children with unique learning challenges.

The 24-credit Early Childhood Professional Certificate is designed for students wishing to become more qualified teachers of young children without completing their degree requirements or who choose to complete their degree at a later time. It is also designed for individuals with bachelor degrees in unrelated fields who wish to become childcare director qualified *(with work experience)*.

The 100% Online Family Childcare Certificate is designed specifically for students who wish to become in-home child care providers. All courses are offered 100% online so students will need access to a computer.

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

Admissions Requirements

Students are required to meet with the program coordinator before enrolling in the associate degree program.

Students wishing to participate in practicum are required by the NHCCL to undergo a criminal backgrounds check ensuring they are free from criminal convictions.

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 have been established to 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 to the program.

Students considering careers in early childhood education should explore the health requirements set forth by the State of NH licensing bureau and be prepared to submit a Child Care Health Form before beginning practicum. Prospective students with special needs requiring accommodations that may affect their practicum placement or employment options are advised to discuss specific career objectives with the program coordinator during the admissions process.

All students desiring to complete practicum courses are required to submit the Health Form provided by the NH Bureau of Childcare Licensing Rules. The health form must indicate the student is mentally and physically fit to work with young children.

Students enrolling in the ECE program must have sufficient strength, stamina and motor coordination to perform the following:

- 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.
- Frequent lifting, moving and transferring children, especially infants and toddlers.
- 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 as well as to interpret important instructions to children, co-workers and parents.
- 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.)

Core Courses		TH	LAB	CR
ECE 100	Child Growth and Development	3	0	3
ECE 104	Foundations of ECE	3	0	3
ECE 112	Practicum II: Learning Environments	2	3	3
ECE 116	Child Health, Safety & Nutrition	3	0	3
Electives *(choose 4 of the following)*				
ECE 110	Children's Literature and Language Arts	3	0	3
ECE 200	Math & Science Development in ECE	3	0	3
ECE 201	Children's Individual & Special Needs	3	0	3
ECE 204	Dev. Approp. Curriculum Infants/Toddlers	3	0	3
OR				
ECE 205	Dev. Approp. Prog. for School-Age Children	3	0	3
ECE 210	Child, Family and Community Relations	3	0	3
ECE 214	Approp. Guide/Discipline for Young Children	3	0	3
ECE 216	Art, Music, Drama and Dance in ECE	3	0	3
ECE 250*	Childcare Administration and Management	3	0	3

Total Credits - 24

*Required for Center Director Credential in the State of New Hampshire. This course is not transferable to the Associate Degree Program in Early Childhood Education.

Early Childhood Education

Associate in Applied Science

DEGREE PROGRAM

General Requirements		TH	LAB	CR
ENGL110	College Composition I	4	0	4
MATH131	College Algebra I	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
	For. Lang./Human/Fine Arts Elect.	3	0	3

Early Childhood Education Core Requirements		TH	LAB	CR
ECE100	Early Childhood Growth and Development	3	0	3
ECE102	Practicum I: Observation and Recording	1	3	2
ECE104	Foundations of Early Childhood Education	3	0	3
ECE105	Art, Music, Drama, Movement in Early Childhood Education	3	0	3
ECE110	Children's Literature and Language Arts	3	0	3
ECE111	Infant/Toddler Practicum: Nurturing Environ.	2	3	3
OR				
ECE112	Practicum II: Learning Environments	2	3	3
ECE116	Child Health, Safety and Nutrition	3	0	3
ECE200	Math and Science in Early Childhood Education	3	0	3
ECE201	Children's Individual and Special Needs	3	0	3
ECE202	Practicum III: Student Teaching	1	9	4
ECE210	Child, Family and Community Relations	3	0	3
ECE212	Practicum IV: Professional Development	1	9	4
ECE214	Appropriate Guidance and Discipline for Young Children	3	0	3

EARLY CHILDHOOD EDUCATION ELECTIVE COURSES
(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 - 69

Early Childhood Lead Teacher Certificate

This certificate will enable students to qualify as a lead teacher in an early childhood program according to NH state child care program licensing rules. All courses in this certificate program transfer directly into the Associate's Degree program for those 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	Practicum II: Learning Environments	2	3	3
ECE116	Child Health Safety and Nutrition	3	0	3
ECE201	Children's Indiv./Special Needs	3	0	3
	ECE Elective:Choose 1- *(ECE105, 110, 200, 204, 205, 210 or 214)*	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. They are members of the IEP or IFSP teams and need adequate training to effectively work with children with unique learning characteristics. A certificate option in Early Childhood Special Education is available to individuals interested in working as a paraprofessional in Early Intervention or Early Childhood Special Education and Inclusionary classrooms.

Birth-Grade 3 Option

		TH	LAB	CR
ECE100	Child Growth and Development	3	0	3
ECE104	Foundations of Early Childhood Education	3	0	3
PSYC110	Introduction to Psychology	3	0	3
ECE112	Practicum II: Learning Environments	2	3	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 & Implementation for Children with Unique Learning Characteristics	3	0	3

Total Credits - 24

Family Child Care Provider 100% Online Certificate Program

The Early Childhood Education Program offers a 12-credit online certificate program for Family Child Care Providers designed to meet the training requirements specified by the New Hampshire Childcare Regulations. All four courses are offered in a 100% online format to accommodate the unique scheduling needs of in-home child care providers. Students must have reliable Internet access and basic computer skills to be successful in these courses.

Required Courses		TH	LAB	CR
*ECE100	Child Growth and Development	3	0	3
*ECE116	Child Health Safety and Nutrition	3	0	3
ECE106	Curriculum & Environment for Family Child Care	3	0	3
ECE250	Childcare Administration & Management	3	0	3

Total Credits - 12

** The first two courses will transfer directly into the existing ECE professional certificate or Associate Degree programs.*

Infant/Toddler Lead Teacher Certificate

Quality infant/toddler care is a critical need in New Hampshire, and more caregivers are needed to be specifically trained in developmentally appropriate practices for this age group. As evidence of its importance, 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 Env.	2	3	3
ECE116 Child Health, Safety, and Nutrition	3	0	3
ECE 201 Individual and Special Needs	3	0	3
ECE 204 Dev Appropriate Infant/Toddler Curriculum	3	0	3

Total Credits: 18

Liberal Arts/Education

Associate in Arts

The Liberal Arts/Education degree is designed to allow students to transfer to a four-year degree program to become teachers. The program allows students to experience elementary, middle, and secondary education, and has a common first year of course work. 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 elective courses will demonstrate 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. Students are expected to declare their area of focus prior to the beginning of the second year of the program. This degree also meets the requirements for para-professionals seeking an associate degree in fulfillment of national and state requirements.

An interview with the program faculty advisor is also required as part of the admission process.

Liberal Arts/Education Transfer Credit 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 a criminal backgrounds check and fingerprinting. Students who expect to transfer to a four-year degree program will be required to take the Praxis I exam for admission to the college and for approval for student teaching. In addition, many four-year teacher training programs will require a minimum of a 3.0 GPA for acceptance. MCC has an online tutoring program designed to prepare students for the Praxis I exam that examines student's abilities in reading comprehension, writing, grammatical structure and math through Algebra II. Students seeking a career in the educational field should be physically and mentally fit to withstand a physically active work environment, withstand the stress of ever-changing circumstances and the ability to respond quickly and appropriately when events require.

Furthermore, students are 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

Fall Semester		TH	LAB	CR
EDU101	Introduction to Exceptionalities	3	0	3
EDU104	Foundations of Education	3	0	3
ENGL110	College Composition I	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**
Spring Semester				
EDU201	Teaching and Learning	3	0	3
PSYC210	Human Growth & Development	3	0	3
	Social Science Elective *(PSYC230, SOC109, 110, 250, AN101)*	3	0	3
	English Literature Elective *(ENGL200,205,218,220,225)*	3	0	3
	For. Lang./Huma/Fine Arts Elect. *(ARTS117,127,130,HIST120,130, HUMA105, 210,220,ENGL113,ASL, FREN, GERM, SPAN)*	3	0	3
	Total	**15**	**0**	**15**

DEGREE PROGRAM - SECOND YEAR

Fall Semester		TH	LAB	CR
MATH131	College Algebra I	3	0	3
	Education Transfer Focus Elective *(EDU206,215,220,225)*	3	0	3
	Lab Science Elective *(BIOL101,ESCI110,PHYS110)*	3	3	4
	For. Lang./Humanities/Fine Arts Elective *(ARTS117,127,130,HIST120,130, HUMA105, 210,220,ENGL113,ASL,FREN,GERM,SPAN)*	3	0	3
	Social Science Elective *(PSYC230, SOC109, 110, 250, AN101)*	3	0	3
	Open Elective	3	0	3
	Total	**18**	**3**	**19**
Spring Semester		TH	LAB	CR
	History/American Government Elective *(HIST202,204,POL110)*	3	0	3
	Math Elective *(MATH200,202)*	4	0	4
	Lab Science Elective *(BIOL101,ESCI110,PHYS110)*	3	3	4
	Philosophy Elective *(PHIL110,215,240)*	3	0	3
	Open Elective	3	0	3
	Total	**16**	**3**	**17**

Total Credits - 68

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.

Special Education Certificate

The certificate in special education can be earned independently or as part of the Liberal Arts/Education Associate's Degree. This certificate includes three courses that fulfill the requirements of the Education Focus Transfer electives described at left. The certificate is also useful for currently employed paraprofessionals seeking approval as highly qualified under federal No Child Left Behind requirements.

Courses in this certificate are:

Required Core Courses

		TH	LAB	CR
EDU215	Behavioral Challenges in the Classroom	3	0	3
EDU220	Families and Professionals in Special Ed.	3	0	3
EDU225	Curriculum Planning and Implementation for Childrenw/Unique Learning Characteristics	3	0	3
PSYC110	Introduction to Psychology	3	0	3

EARLY CHILDHOOD EDUCATION OPTION *(12 credits)*

OR

SCHOOL AGE OPTION *(12 credits)*

Early Childhood Education Option - must take all 12 credits

		TH	LAB	CR
ECE100	Child Growth and Development	3	0	3
ECE104	Foundations of Early Childhood Education	3	0	3
ECE112	Learning Environments	3	0	3
ECE201	Children's Individual & Special Needs	3	0	3

School Age Option - must take all 12 credits

		TH	LAB	CR
EDU101	Introduction to Exceptionalities	3	0	3
EDU104	Foundations of Education	3	0	3
EDU210	Teaching Methods	3	0	3
PSYC210	Human Growth and Development	3	0	3

Total Credits - 24 CREDITS

Electrical Technology

Associate in Science

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.

The Electrical Technology program provides training to give the student a solid foundation in fundamental electrical theory, hands-on experience with electrical equipment, in-depth coverage of the National Electrical Code, and thorough coverage of contemporary and evolving technologies. This program meets the requirements for electrical apprentice training, and in some areas, it will exceed those requirements.

This program provides the required theory training for an Electrician Apprenticeship as well as preparing students for entry into the workforce as Electrical Maintenance Technicians, Industrial Electrical Technicians, or Electrical Field Service Technicians. The Associate Degree schedules classes during the day and in the evening to accommodate a variety of scheduling needs. The evening schedule allows a student to complete the degree in four years. The day schedule allows a student to complete the degree in two and one half years including a *possible* summer semester. A certificate program is also available.

Program Admission Requirement

- Meet all college admissions requirements
- Read at the college level based on Accuplacer testing
- Placement into MATH131, College Algebra

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.

Electrical Technology Degree Requirements

DEGREE PROGRAM - FIRST YEAR

First Semester		TH	LAB	CR
ETEC110	Electrical Fundamentals I	3	3	4
MATH131	College Algebra I	3	0	3
ENGL110	College Composition I	4	0	4
INT101	College Success Seminar	1	0	1
	TOTAL	**11**	**3**	**12**

Second Semester		TH	LAB	CR
ETEC120	Electrical Fundamentals II	3	3	4
MATH141	Advanced Algebra & Trigonometry	3	0	3
	English Elective	3	0	3
	Foreign Lang./Huma./Fine Arts	3	0	3
	TOTAL	**12**	**3**	**13**

DEGREE PROGRAM - SECOND YEAR

First Semester		TH	LAB	CR
ETEC 150	Power, Transformers, and Rotating Machinery	3	3	4
ETEC 160	Residential/Commercial/Industrial Wiring	3	3	4
PHYS 135	College Physics I	3	3	4
	TOTAL	**9**	**9**	**12**

Second Semester		TH	LAB	CR
ETEC 210	Electrical/Electronic Motor Controls	3	3	4
ETEC 220	Communications/Low Voltage Building Systems	3	3	4
CIS 158	C++ Programming	2	2	3
	Business Elective	3	0	3
	TOTAL	**11**	**8**	**14**

DEGREE PROGRAM - FINAL SEMESTER

		TH	LAB	CR
ETEC 250	Advanced Control Systems I	3	3	4
ETEC 260	Advanced Control Systems II	3	3	4
	Social Science Elective	3	0	3
	Math or Science Elective	3	0	3
	TOTAL	**12**	**6**	**4**

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 Contr.	3	3	4
ETEC220	Comm/Low Voltage Building Sys.	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

The English as a Second Language *(ESL)* Program at MCC serves students from more than 55 different countries. 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.

The range of sequenced non-credit and credit courses provides instruction, support, and mentoring 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 Englis-language instruction.

Program Goals

- English language fluency & integration of all language skills
- Use of authentic materials
- Understanding and valuing different cultures
- Peer and self-assessment
- Computer literacy

Benefits for Students

- Academic support; assessment, placement, and advising
- Transfer and career counseling
- Peer and professional tutors
- Self-directed learning with computer programs
- Service learning and cross-cultural opportunities

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 Academic Planning and Support *(CAPS)*, Room 216. No appointment is necessary. Hours are posted on the college's website at: www.manchestercommunitycollege.edu.

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*

*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.

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 (603) 668-6706, ext. 369 for more information.

Exercise Science

Associate in Science

Exercise Science is a cross-disciplinary subject area involving the study of physical activity and the impact it has on health, fitness and human performance. The study of acute and chronic physiological responses within the body resulting from the exercise stimulus is integral to the discipline. The Exercise Science program is a hands-on program that emphasizes practical knowledge and skill development in the areas of cardiovascular and resistive programming, risk stratification, fitness assessment and exercise leadership. The major will also support further study within the disciplines of nutrition, injury prevention and rehabilitation.

Program Outcomes

Students will prepare to successfully complete the American College of Sports Medicine *(ACSM)* Health Fitness Instructor Certification as well as Personal Training Certifications from American Council on Exercise *(ACE)* and the National Strength & Conditioning Association *(NSCA)*.

Technical Standards

- Due to the physical component of the program students must possess health insurance and submit report of current physical exam.
- Student is responsible for any travel to and from Internship site, community service and site visits for EXER111.
- Students must complete American Heart Association HeartSaver CPR/AED or American Red Cross equivalent prior to participation of internship.
- Students must obtain professional liability insurance *(available at the college)* prior to participation in internship.

Accreditations/Certifications

The Exercise Science degree is endorsed by the American College of Sports Medicine and ensures the curriculum covers the knowledge, skills, and abilities expected of an ACSM Health/Fitness Instructor

Employment Opportunities

The program provides students an entrance into a field that has a broad choice of career options. Graduates may 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.

DEGREE PROGRAM-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 I	4	0	4
INT101	College Success Seminar	1	0	1
	Total	**14**	**8**	**17**

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

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**

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 - Rehabilitative Exercise	3	2	4
	For. Lang./Humanities/Fine Arts 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) (EXER114, 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

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.

This 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. Course work 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 Program 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.

Program Outcomes

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.
- Have the ability to accurately measure.
- 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

Admission Requirements

Applicants must have:

- Competence in high school level Algebra, English Composition, Reading and Writing *(grade "C" or better)*.
- 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.
- Ability to meet deadlines and work in a project-based environment.

Physical Requirements

Applicants must have:

- Eye-hand and fine hand motor coordination to perform drawing, painting, photography and welding techniques and operations.
- Capacity to stand or sit for extended periods of time *(adaptive equipment is acceptable)*.
- Good vision and manual dexterity to perform drawing, painting, photography and welding operations *(adaptive equipment is acceptable)*.

Fine Arts Transfer Credit 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 College, 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

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 I	4	0	4
INT101	College Success Seminar	1	0	1
MATH	Math Elective	3	0	3
	Total	**15**	**6**	**17**

Spring Semester		TH	LAB	CR
ARTS223	Drawing II	2	3	3
ARTS120	Digital Photography	2	3	3
ARTS117	Art History I	3	0	3
ENGL 214	College Composition II	4	0	4
	Science Elective	3	3	4
	Total	**14**	**9**	**17**

DEGREE PROGRAM - 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**

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 - 65

General Studies

Associate in Science

The General Studies degree program is designed to offer a flexible curriculum tailored to the student's professional needs. It also provides the opportunity to receive credit for significant prior learning experiences in a technical or occupational specialty. Typically, the technical or occupational specialty a student chooses should be in an area other than a current degree program at the college. The General Studies degree is intended be a unique, individualized program of study.

Students accepted in this program should plan to 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 curriculum 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. An interview with the Associate Vice President of Academic Affairs is required prior to acceptance into the program. More detailed information about the General Studies Degree and a General Studies Information Packet can be obtained from the Office of Admissions.

A minimum of 64 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

LIBERAL ARTS COURSE REQUIREMENTS - 30 CREDITS

ENGL110	College Composition I	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 *(AMER, ASL, ARTS, ENGL Literature, ENGL113, 210, 213, FREN, GERM, HIST120, 130, HUMA, PHIL, SPAN)*	3 credits
	Math Elective	3 credits
	Science Elective *(BIOL, CHEM, ESCI, PHYS)*	3 credits
	Social Science Elective *(AN, ECON, GEOG, HIST, POL, PSYC, SOC)*	3 credits
	Liberal Arts Electives	6 credits
	Open Elective	3 credits

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

Graphic Design

Associate in Applied Science

The Graphic Design program prepares students for a career in print and web design in the graphic arts industry. This 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.

Program Outcomes

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.
- Complete a graphic design internship.
- Participate 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.

Technical Standards

Applicants must have:

- Competence in high school level Algebra, English Composition, Reading and Writing (grade "C" or better).
- 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.

Physical Requirements

Applicants must have:

- Eye-hand coordination to perform labor intensive project construction.
- Capacity to stand or sit for extended periods of time *(Adaptive equipment is acceptable).*
- Good vision and manual dexterity to perform drawing operations *(Adaptive equipment is acceptable).*

Graphic Design 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

Students who have graduated from 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.

DEGREE PROGRAM-FIRST YEAR

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

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	**12**	**9**	**15**

DEGREE PROGRAM-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**

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,HUMA200, ARTS110, ARTS115, ARTS117, ARTS120, ARTS127, ARTS130, ARTS210, ARTS223)*	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	Two Dimensional Design for Graphic	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	Commercial Design I	2	3	3
CDI215	Digital Publishing Methods	2	3	3
CDI222	Computer Illustration	2	3	3
CDI225	Commercial Design II	2	3	3
CDI227	Internship Seminar	1	0	1
CDI228	Internship	0	8	2

Total Credits - 30

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	Two Dimensional Designfor 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	2	3
CIS224	Web Programming II	2	2	3

Total Credits - 21

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	Two Dimensional 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	Commercial 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

Heating, Ventilation & Air Conditioning

Associate in Applied Science

Students in this program receive training for careers as technicians in the field of climate control. Heating, ventilation, air conditioning, and their applications are a matter of health and comfort for the home or business.

A broad background in mathematics and physics supports the theory and extensive laboratory work. The program includes basic theory, application, estimating, installation, maintenance and service of residential and commercial air conditioning, heating, and refrigeration equipment.

Graduates may expect a rewarding career with ample opportunity for employment and advancement in the areas of service, sales, supervision, management, and/or ownership.

This program is offered with a two-year track, three-year track, or four-year track. This allows the student to reduce the number of credits taken each semester to facilitate meeting the student's needs.

In addition to college-wide admission requirements, applicants to the Heating, Ventilation, and Air Conditioning Degree program should:

- Have successfully completed courses in Algebra I, Algebra II and Science. Advanced levels of math and a physics course would be advantageous.
- Exhibit mechanical aptitude and an interest in mechanical components.

Technical Standards

It is highly recommended applicants have:

- The physical strength necessary to maneuver and/or lift heavy objects.
- Good manual dexterity.
- Adequate vision for reading printed instructions and blueprints and should not have color blindness *(Adaptive equipment acceptable).*
- Adequate hearing to distinguish various sounds and noises. *(Adaptive equipment acceptable.)*
- Ability to visualize and portray ideas graphically.

DEGREE PROGRAM-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 I Theory	3	0	3
HVAC115	Fundamentals of Heating I Lab	0	3	1
ENGL110	College Composition I	4	0	4
MATH111	Numerical Geometry	3	0	3
INT101	College Success Seminar	1	0	1
	Total	**17**	**9**	**20**

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

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**

Spring Semester		TH	LAB	CR
HVAC221	Residential and Commercial Air Conditioning and Heat Pumps Theory	3	0	3
HVAC222	Residential and Commercial Air Conditioning and Heat Pumps Lab	0	6	2
HVAC223	Warm Air Systems Theory	3	0	3
HVAC224	Warm Air Systems Lab	0	6	2
	For. Lang./Humanities/Fine Arts 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	3	3	4
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
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	Residential and Commercial Air Conditioning and 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

Gas Appliance Installation & Service Certificate

		TH	LAB	CR
HVAC116	CETP Basic Principles & Practices of Gas Industry	3	3	4
HVAC126	CETP Gas Appliance Installation & Gas Appliance Service	3	3	4

Total Credits - 8

Health Information Management

Associate in Science

Health Information Management (HIM) professionals play a vital role in the fast emerging field of health informatics. Their role in the collection, management, and analysis of health information data will allow physicians, nurses, and other health care providers to deliver quality health care in a variety of health care settings, from hospitals to outpatient clinics to rehabilitation facilities, nursing homes, and health insurance organizations. The move from a paper-based medical record to the electronic medical record will require HIM skills to guarantee the quality of patient information and patient care at every point in the health care delivery cycle. Some HIM professionals specialize in coding patients' medical information for insurance purposes while others specialize in cancer registry, reviewing patient records and pathology reports, and assigning codes for diagnosis and treatment of different cancers and selected tumors. Others may choose from such occupations as information security officers, quality improvement analysts, research coordinators, clinical health/data analysts, database administrators, software implementation specialists, and applications trainers, to name a few potential employment areas.

Program Outcomes

Graduates with an A.S. degree will be able to:

- Collect, maintain, and analyze health care data in monitoring and complying with HIM requirements and standards.
- Apply coding systems and medical reimbursement guidelines.
- Collect and analyze data for registries, quality management, statistics, research and performance improvement and other patient care needs.
- Interpret, apply, and communicate laws, regulations, licensure and accreditation standards to health care facilities.
- Interpret and comply with HIPAA privacy guidelines.
- Use specialized software for HIM processes and design, query, and generate reports.
- Apply principles of supervision and management and provide leadership by organizing and contributing to work teams and committees.

Admission Requirements

In addition to college-wide admissions requirements, applicants must interview with a member of the full-time faculty.

Health, Character and Technical Standards

- A grade point average of 2.0 or higher on a 4.0 scale of the most recent academic transcript *(high school or post-secondary)*
- All developmental coursework must be completed prior to registering for any AH, BIOL, MEDA, or HIM courses.
- Submit to a criminal background check.
- Have the ability to walk, sit, and stand for long periods of time *(two hours)* in succession. Typical jobs allow a meal break and two short rest breaks.
- Have the ability to calculate mathematical information such as hospital statistics, productivity information, quality improvement studies,etc. The individual must also be able to apply algebraic formulas when preparing computerized spreadsheets.
- Ability to keyboard a minimum of 40-45 words per minute.
- 20/20 vision *(with or without accommodation)* to read names and numbers on medical records, distinguish colors, read voluminous medical records, read code books and computer software documentation.
- Possess professional liability insurance for internships *(available at the college)*
- Possess and maintain personal health insurance for internships.
- Submit a report of a current physical exam, including vaccination status, up-to-date tetanus booster, TB test, Hepatitis B series, and chicken pox titer or varicella vaccine.
- Students are required to confer with HIM program faculty for curriculum planning due to prerequisites and because not all courses are offered each semester.

Employment Opportunities

According to the U.S. Department of Labor Bureau of Labor Statistics, "Employment is expected to grow faster than average. Employment of medical records and health information technicians is expected to increase by 18 percent through 2016—faster than the average for all occupations—because of rapid growth in the number of medical tests, treatments, and procedures that will be increasingly scrutinized by health insurance companies, regulators, courts and consumers.

Progression

Students must maintain a grade of "C" or better throughout the program.

DEGREE PROGRAM-FIRST YEAR

Fall Semester		TH	LAB	CR
HIM110	Healthcare Delivery Systems	3	0	3
AH110	Medical Terminology	3	0	3
CIS110	Microsoft Computer Applications	2	2	3
ENGL110	College Composition I	4	0	4
BIOL106	Human Body	3	0	3
INT101	College Success Seminar	1	0	1
	Total	**16**	**2**	**17**

Spring Semester		TH	LAB	CR
HIM120	Computers in Healthcare	1	3	2
HIM125	Health Data Content & Structure	3	0	3
BIOL112	Basic Pathophysiology	3	0	3
MATH131	College Algebra	3	0	3
MCOD100	ICD 9-CM Coding	3	0	3
MEDA123	Introduction To Pharmacology	3	0	3
	Total	**16**	**3**	**17**

Summer Semester		TH	LAB	CR
HIM115	Legal Aspects of Health Information	3	0	3
HIM200	HIM Practicum I	1	8	3
MCOD110	CPT Coding	3	0	3
	Liberal Arts Elective	3	0	3
	Total	**10**	**8**	**12**

DEGREE PROGRAM-SECOND YEAR

Fall Semester		TH	LAB	CR
HIM210	Health Info. Organization & Supervision	3	0	3
HIM215	Healthcare Registries & Statistics	3	0	3
MCOD215	Health Information Services Coding	3	0	3
HUMA150	Critical Thinking	3	0	3
	Total	**12**	**0**	**12**

Spring Semester		TH	LAB	CR
HIM220	Quality Improvement in Healthcare	3	0	3
HIM225	HIM Practicum II	1	9	4
ENGL113	Oral Communication	3	0	3
	Social Science Elective	3	0	3
	Total	**10**	**9**	**13**

Total Credits - 71

Interior Design

Associate in Applied Science

Creativity and innovation come with a passion for design and the desire to improve living, working and social spaces. The Interior Design program allows the student to prepare and pursue, in-depth courses in drafting, professional practices, sketching, lighting, measuring and preparing cost estimates, as well as required courses in Liberal Arts.

A portfolio preparation course, as well as an internship in the Interior Design field, completes the course of study in preparing the student for work or to continue in a bachelor's degree program at one of the area's colleges or universities.

The curriculum will prepare the student in the educational requirements to sit for the NCIDQ examination *(National Council for Interior Design)*.

Technical Standards

In addition to college-wide admission requirements, applicants for the Interior Design degree program should have the following:

- Competency in high school level Algebra, English Composition and Reading *(grade of "C" or better)*.
- Ability to work independently as well as in teams to find solutions for design problems.
- Ability to visualize a "finished" designed space from concept to completion.
- Ability to accept critique of design and make changes based upon constructive criticism.
- Ability to meet deadlines.

Program Outcomes

Graduates will:

- Possess the skills and knowledge for entry-level positions in residential design and commercial design, green design, hospitality and tourism, product evaluation, historic preservation and adaptive reuse, as well as public relations, education and energy conservation.
- Have working knowledge of applied art in all its aspects with the relationship to an interior space.
- Pursue continuing education in Interior Design and Facilities Planning and Management.
- Be able to communicate and interpret design concepts through presentation techniques such as AutoCAD, sketching, perspective and plan and elevation drawings.
- Understand and be able to apply correct professional practices in Interior Design.
- Have a clear method of communicating thoughts and ideas to the client and other persons involved in an interior design project.
- Possess the ability to present completed design concepts and specifications to the client.
- Be aware and be able to incorporate current concepts in design as they apply to technology, a green environment and the world in which we live.
- Successfully complete an interior design internship.
- Present a portfolio showing various design techniques as well as a significant picture of the graduate's ability to solve problems of space planning and design.

DEGREE PROGRAM-FIRST YEAR

Fall Semester		TH	LAB	CR
ID110	Interior Design I	2	3	3
BLDG100	Interior Drafting	1	2	2
HUMA118	Survey of European Architecture and Design	3	0	3
CIS110	Microsoft Computer Applications	2	2	3
ENGL110	College Composition I	4	0	4
INT101	College Success Seminar	1	0	1
	Total	**13**	**7**	**16**

Spring Semester		TH	LAB	CR
ID112	Color in Interior Design	2	3	3
ID114	Drawing For Interior Design	2	3	3
ID210	Interior Design II	2	3	3
HUMA119	Survey of American Architecture and Design	3	0	3
MATH131	College Algebra	3	0	3
	Total	**12**	**9**	**15**

DEGREE PROGRAM-SECOND YEAR

Fall Semester		TH	LAB	CR
ID200	Materials and Components	3	0	3
ID212	Lighting Design	3	0	3
ID215	Textiles	3	0	3
ID220	Auto CAD For Interior Design	2	3	3
ENGL113	Oral Communications	3	0	3
	Social Science Elective	3	0	3
	Total	**17**	**3**	**18**

Spring Semester		TH	LAB	CR
ID223	Interior Design III	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
ID110	Interior Design I	2	3	3
ID112	Color in Interior Design	2	3	3
ID200	Materials & Components	3	0	3
ID210	Interior Design II	2	3	3
ID215	Textiles	3	0	3
ID220	Auto CAD for Interior Design	2	2	3
ID225	Interior Design Internship	1	8	3
HUMA118	Survey of European Architecture & Design	3	0	3

Total Credits - 24

Liberal Arts

Associate in Arts

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. The 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 wide variety of choices exist 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.

Program Outcomes

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.

Transfer Credit 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, math, and foreign language coursework proposed for transfer has been completed no more than 10 years prior to the request for transfer credit.

English Composition Transfer Credit Policy

English Composition coursework will be considered for transfer to the Liberal Arts program under the following conditions:

- The college's minimum grade requirement is met.
- The composition course proposed for transfer must be college-level *(including a research paper)* and have been completed no more than 10 years prior to the request for transfer credit. The 10-year stipulation may be waived under the following conditions:
- Placement into ENGL 110 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 for Graduates

Students in the Liberal Arts program have successfully transferred to many colleges and universities around the country, including the following: 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 originally not accepted at Keene State College, Plymouth State University, or UNH to attend MCC and, if they meet certain standards, be automatically accepted into their original school of choice without having to reapply or pay a fee. Each of the three USNH schools requires program participants to take a minimum of 12 credits for two consecutive semesters, maintain a minimum 2.8 grade-point average and earn at least a 'C' in every course. *(KSC's minimum GPA is set at 2.5.)* For more information, contact MCC's Office of Admissions, (603) 668-6706 ext. 208.

Liberal Arts Degree Program of Study

Required: Passing Accuplacer scores in English, Mathematics and Computer Science

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 I	4 credits
ENGL113	Oral Communication	3 credits
ENGL213 or 214		3 credits
	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 *(2)* Open Electives as appropriate to other programs' prerequisites 100 or 200 level– must include at least three *(3)* courses at the 200 level. A computer literacy course can be included within the open elective area.

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

Suggested Program Sequence

Due to the individualized nature of the Liberal Arts Degree program, students should work very closely with their Liberal Arts advisor when making course selections that will support future academic objectives.

DEGREE PROGRAM-FIRST YEAR

Fall Semester		TH	LAB	CR
INT101		1	0	1
ENGL110		4	0	4
HUMA150		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**

Spring Semester		TH	LAB	CR
ENGL113		3	0	3
ENGL213 or 214		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

Fall Semester		TH	LAB	CR
POL110 or HIST202 or HIST 204		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	**16**	**0/2**	**16/17**

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

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.

Program Outcomes

Graduates of the AA Degree in Liberal Arts/Business Studies will:

- Be prepared for an entry-level career in the business labor market.
- Possess the framework necessary for successful careers in: banking, communications, health care, high-tech industries, management, manufacturing, marketing, service industries, and non-profit organizations
- Be prepared for transfer to a four-year institution
- Understand 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.

Admissions Requirements

Applicants for admission to the Liberal Arts/Business program must comply with the college admission requirements; no specific program requirements apply.

Physical Requirements

None

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 ten-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 ninety 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

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 I	4	0	4
INT101	College Success Seminar	1	0	1
	Total	**16**	**2**	**17**

Spring Semester		TH	LAB	CR
ACCT123	Accounting and Financial Reporting II	3	0	3
ENGL 214	College Composition II	3	0	3
ECON134	Macroeconomics	3	0	3
MKTG125	Principles of Marketing: A Global Perspecitve	3	0	3
MATH131	College Algebra I	3	0	3
	Business Elective *	3	0	3
	Total	**18**	**0**	**18**

DEGREE PROGRAM-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
	For. Lang./Humanities/Fine Arts Elective	3	0	3
	Total	**17**	**0**	**17**

Spring Semester	TH	LAB	CR
Lab Science Elective	4	0	4
For. Lang./Humanities/Fine Arts 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, BUS221, BUS224, MKTG205, MKTG210)*

Management

Associate in Science

Manchester Community College offers a Management Associate Degree, and certificates in Management and in Small Business Management.

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 needed 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 for 2009, management is again in the top five degrees in demand.

Program Outcomes

Graduates with a degree in Management will:

- Know the fundamentals of management theory and practices.
- Demonstrate written and oral proficiency in business communications.
- Understand the foundations and importance of business ethics.
- Possess basic competency in the functional areas of business: accounting, marketing, human resources, finance, computers, economics, and business law.
- Be prepared to enter the workforce in an entry-level management position.
- Possess a solid management foundation for transfer.
- Understand the necessity for a commitment to life-long learning to ensure employability.

Admissions Requirements

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

Physical Requirements

None.

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 ten-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/Transfer Opportunities

Employment

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.

Transfer

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.

DEGREE PROGRAM-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 I	4	0	4
INT101	College Success Seminar	1	0	1
MATH131	College Algebra I	3	0	3
	Total	**16**	**2**	**17**

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

Fall Semester		TH	LAB	CR
BUS124	Small Business Management	3	0	3
BUS 224	Human Resource Management	3	0	3
ECON135	Microeconomics	3	0	3
MKTG125	Principles of Marketing: A Global Perspecitve	3	0	3
PHIL240	Ethics	3	0	3
	Total	**15**	**0**	**15**

Spring Semester		TH	LAB	CR
BUS210	Organizational Communications	3	0	3
BUS221	Business Finance	3	0	3
BUS282	Capstone Research	3	0	3
	Business Elective *(ACCT, BUS, FINC, MKTG)*	3	0	3
	For. Lang./Humanities/Fine Arts 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, FING, MKTG)	3	0	3

Total Credits - 24

Small Business Management Certificate

This Small Business Management Certificate teaches the student how 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 really for the technical trade person or small business owner who has the technical skills and now wants to learn how to run the business.

Program Outcomes

Graduates with a certificate in Small Business Management will:

- Create a viable business plan to set up a business and secure financing if needed.
- Learn how to set up, enter transactions, and create reports in QuickBooks software. Additionally, the student will learn about the various IRS reports needed once employees are hired.
- Be aware of the various types of business insurance that are needed and how to obtain them.
- Be able to apply management techniques for effectively dealing with and motivating employees. The student will also learn human resource laws for hiring, firing and handling daily employee issues.
- Effectively know how to market and promote the business.
- Be aware of business and contract laws and how it relates to their business practices.

Admissions Requirements

Applicants for admission to the Small Business Management Certificate 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)*. Our national accreditation allows our graduates to transfer to four-year colleges and universities in all regions of the country.

Employment/Transfer Opportunities

Employment

Students with this certificate would be able to manage their own business, or would qualify for promotion to management or business manager positions of small businesses.

Transfer

The Small Business Management certificate would transfer into the management or marketing associate degree programs at Manchester Community College. This certificate would also transfer in its entirety to many four-year colleges and universities. Southern New Hampshire University accepts 90 credits from Manchester Community College and awards scholarships to Manchester Community College management graduates based on academic performance. Plymouth State University, UNH-Manchester, and Franklin Pierce University are also a few other local colleges that accept business graduates. Additionally, credits transfer to nationally ACBSP-accredited colleges.

		TH	LAB	CR
ACCT100	Bookkeeping/Sm. Bus	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 Mgmt.	3	0	3
MKTG125	Prin. of Marketing: A Global Perspective	3	0	3

Total Credits - 18

Marketing

Associate in Science

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.

Program Outcomes

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.

Admissions Requirements

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

Physical Requirements

None.

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.

Employment/Transfer Opportunities

Employment

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.

Transfer

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.

DEGREE PROGRAM-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 I	4	0	4
INT101	College Success Seminar	1	0	1
MATH131	College Algebra I	3	0	3
	Total	**16**	**2**	**17**

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**	**1**

DEGREE PROGRAM-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**

Spring Semester		TH	LAB	CR
MKTG135	Global Consumer Behavior	3	0	3
MKTG205	International Marketing	3	0	3
MKTG224	Sales & Sales Management	3	0	3
BUS210	Organizational Communications	3	0	3
BUS282	Marketing Research	3	0	3
	For. Lang./Humanities/Fine Arts Elect.	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 & Sales Management	3	0	3
ACCT113	Accounting and Financial Reporting I	3	0	3
BUS282	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

Medical assistants are multiskilled health professionals specifically educated to work in ambulatory settings performing administrative and clinical duties. The practice of medical assisting directly influences the public's health and well-being, and 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 to obtain 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.

Graduates of the MA program are trained to work under the direction of physicians to provide quality health care, including patient intake, taking vital signs, giving injections, administering EKGs, drawing blood, and assisting the physician with patient exams, clinical procedures and office surgeries. Administrative training includes scheduling appointments, processing insurance claims, posting insurance/patient payments, and completing physician referrals. Both clinical and administrative classes include training in electronic medical records.

Both degree and certificate programs are competency based so that graduates are comprehensively prepared to enter any medical office with confidence. Graduates of both programs are eligible to sit for the national certification exam for medical assistants *(CMA-AAMA)*.

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

Our 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

Admissions Requirements

In addition to college-wide admissions requirements, applicants must interview with a member of the full-time faculty to determine appropriateness for admission to the program.

Health, Character and Technical Standards

1. Placement into College Composition I based on Accuplacer scores before registering for any AH or MEDA courses.
2. Must demonstrate reading, writing, and listening comprehension competencies in English 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 61 *(internet-based)*, 173 *(computer-based)* or 500 *(paper-based)* is required for admission.
3. Sufficient hearing to assess patient needs and to understand instructions, identify emergency signals and engage in telephone conversations.
4. 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.
5. 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, physicians, peers and other ancillary medical personnel.
6. Ability to work with frequent interruptions, to respond appropriately in emergencies or unexpected situations and to cope with variations in workload and stress levels.
7. Sufficient strength to perform CPR and the ability to stand for extended periods of time.
8. Sufficient tactile ability to assess pressure, temperature, position, vibration, and movement.
9. Sufficient 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.
10. Criminal background checks are required of all students prior to entering the clinical setting. Drug screening may also be required, dependent on the clinical setting. No students will be exempt from either process. Cost to be incurred by student.
11. Additional requirements for Clinical Lab Procedures I include uniform, stethoscope, blood pressure cuff, and watch with a second hand.

Other Program Criteria

- Possess professional liability insurance for clinical classes and practicum *(available at the college)*.
- Possess and maintain personal health insurance for clinical classes and practicum.
- Submit a report of a current physical exam, including vaccination status, up-to-date tetanus booster, TB test, Hepatitis B series and documentation of chicken pox or varicella vaccine prior to registering for Clinical Lab Procedures I.
- Be CPR/AED for the Professional Rescuer *(American Red Cross or American Heart Association equivalent)* and First Aid certified prior to Clinical Lab Procedures I.
- All MEDA and AH courses must be taken within three years of Medical Assistant Practicum.
- Associate Degree students must enroll in MEDA218 immediately following MEDA125. MEDA223 must immediately follow MEDA218.
- Students who place into MATH070 or MATH080 based on the Accuplacer test must successfully complete MATH080 and successfully pass a basic math test before registering for MEDA123 and MEDA125.
- Students who do not possess verifiable touch keyboarding skills of 30-35 cwpm must take ADMN111 Keyboarding I prior to ADMN122 Executive Keyboarding.

Employment Opportunities

According to the U.S. Department of Labor Bureau of Labor Statistics, "employment of medical assistants is expected to grow 35 percent from 2006 to 2016, much faster than average for all occupations... particularly for those with formal training or experience, and certification."

MCC has an outstanding placement rate for program graduates. Employer surveys document a high level of competency in our medical assistants, and our graduates have an exemplary record of passing the national certification exam.

Progression

Students must maintain a grade of "C" or better in most major required courses. Please consult the course descriptions for further information.

DEGREE PROGRAM-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
PSYC110	Introduction to Psychology	3	0	3
INT101	College Success Seminar	1	0	1
	Total	**12**	**4**	**14**

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

Fall Semester		TH	LAB	CR
MEDA218	Clinical Lab Procedures II	2	3	3
AH200	Transcultural Health Care	3	0	3
ENGL110	College Composition I	4	0	4
MATH131	College Algebra I	3	0	3
	For. Lang./Humanities/Fine Arts Elective	3	0	3
	Total	**15**	**3**	**16**

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 Elective	3	0	3
	Liberal Arts Elective	3	0	3
AH115	Phlebotomy	3	0	3
	Total	**13**	**15**	**18**

Total Credits - 65

Medical Assistant Professional Certificate

		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	Internship Seminar	1	0	1
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
ENGL110	College Composition I	4	0	4
INT101	College Success Seminar	1	0	1
PSYC110	Introduction to Psychology	3	0	3
AH115	Phlebotomy	3	0	3

Students who place in MATH070 or MATH080 based on the Accuplacer test must successfully complete MATH080 and successfully pass a basic math test before registering for MEDA123 Introduction to Pharmacology and MEDA125 Clinical Lab Procedures I.

Total Credits - 44

Other Program Criteria

- Professional Certificate students must be enrolled in MEDA223 Medical Assistant Practicum immediately following MEDA125 Clinical LabProcedures I.
- Students who place in MATH 070 or MATH080 based on the Accuplacer test must successfully complete MATH080 before enrolling in MEDA123 Introduction to Pharmacology and MEDA125 Clinical Lab Procedures I.
- Students who do not possess verifiable touch keyboarding skills of 30-35 cwpm must take ADMN111 Keyboarding I prior to ADMN122 Executive Keyboarding.

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 unmet demand for qualified medical coders. The 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.

		TH	LAB	CR
MCOD100	ICD-9-CM Coding	3	0	3
MCOD110	CPT Coding	3	0	3
MCOD215	Health Information Serv. Coding	3	0	3
AH110	Medical Terminology	3	0	3
BIOL106	Human Body	3	0	3
BIOL112	Basic Pathophysiology Theory	3	0	3
MEDA124	Insurance for the Medical Office	4	0	4

Total Credits - 22

NOTE: MCOD100 and MCOD215 are only offered in the **spring** semester; MCOD110 is only offered in the **fall** semester; please plan accordingly.

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
ADMN122	Executive Keyboarding	2	2	3
AH110	Medical Terminology	3	0	3
BIOL106	Human Body	3	0	3
ENGL110	College Composition I	4	0	4
CIS110	Microsoft Computer Applications	2	2	3
CIS221	Adv. Word Processing	2	2	3

Total Credits - 36

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.

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. Fine motor skills and some mobility 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 clerical duties. Good communication skills are critical in dealing with patients, clients, physicians, nurses, and other health care workers. Internships are limited and offered as sites become available. Students must have complete documentation of physical exam, immunization records, TB testing, and health insurance coverage 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.

Students who successfully complete this program 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.

Applicants for the Phlebotomy Program must satisfy the general requirements for admission to the College. Student's health status must be compatible with the skills of PBT.

Health, Character and Technical 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.

PBT students must:

1. Demonstrate reading, writing, 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.
2. Have sufficient hearing to assess patient needs and to understand instructions and identify emergency signals.
3. 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.
4. Have 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. 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)*.
5. Ability to work with frequent interruptions, to respond appropriately in emergencies or unexpected situations and to cope with variations in workload and stress levels.
6. Ability to stand for extended periods of time.
7. Sufficient 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.
8. Criminal background checks are required of all students prior to entering the clinical setting. Drug screening may also be required, dependent on the clinical setting. No students will be exempt from either process. Cost to be incurred by student.
9. Submit a report of current physical status, including immunization against measles, mumps, rubella (MMR), varicella, and hepatitis B *(at least 2 in 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.
10. Possess and maintain personal health insurance while in both AH115 Phlebotomy and AH135 Internship. Documentation will be required at the first class.
11. Possess professional liability insurance for both the AH115 Phlebotomy class and the Internship (available through the college).
12. Provide own transportation to and from the internship site.

Phlebotomy Certificate

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

Total Credits - 6

Consult the college website for more information.

Nursing

Associate in Science

The Associate's Degree in Nursing 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, 1-404-975-5000 *(www.nlnac.org)*.

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 goal of the Associate's Degree Nursing Program is to prepare the student to provide direct care to patients in acute care, long term care and other structured settings. As a member of the discipline, the student collaborates with the health care team to provide and manage the care of patients. The student utilizes the nursing process as a basis for decision-making in caring for well patients and patients with possible or actual health problems.

Learning experiences and clinical practica may vary in time and in locations, including 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 re-entering the program must meet current requirements necessary for graduation. 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. Enrollment in these courses does not guarantee acceptance into the Nursing program. 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.

The nursing program maintains articulation agreements with Emmanuel College, Endicott College and articulation and dual admission with UNH and Franklin Pierce University. Further information on application for dual admission can be obtained from UNH, FPU or from the Director of Nursing at MCC.

Admissions Requirements

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

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 admissions consideration:

- Proof of satisfactory completion of high school algebra, biology and chemistry with grades no lower than a "C" is required. 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) 668-6706 ext. 208.

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 initial selection process may be assigned to a prioritized waiting list based on the above criteria. They may be susequently 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.

Nursing 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. 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)*. 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 consideration to the Director of the Department of Nursing. In this letter, briefly and generally outline the reason(s) you were previously unable to continue in the program and identify to which Nursing course you are requesting readmission.

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.

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 concurrence, grade earned and length of time since completion. Excelsior College and NLN examinations are available for the challenge process and are necessary to meet Nursing course requirements as follows:

Advanced Placement

You must be a currently licensed LPN and successfully complete the following examination:

Placement into NURS112 - "Decision Score" of 70% or better on the National League for Nursing Acceleration Challenge Exam Book One: Foundations of Nursing.

Transfer

In order to be considered for Transfer from another nursing program into NURS 112 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. A minimum grade of "C" or better is required in order to be granted credit.

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.

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 a 10 year period from the time of acceptance into the Nursing program.

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 CPR for the Health care Provider.
- Have a satisfactory criminal background check *(cost to be incurred by student)*. **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 clinical facility requirements.
- Provide documentation of Hepatitis B vaccine or submit a signed waiver.

Health, Character, Technical Standards

MCC must ensure that patients/clients are not placed in jeopardy by students during learning experiences. Therefore, students in clinical experiences 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 judgement, accept direction and guidance from a supervisor or faculty member and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and/or patients/clients and their families.

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.

1. Sufficient hearing to assess patient needs and to understand instructions, emergency signals and telephone conversations.
2. 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.
3. Sufficient verbal ability to express and exchange information and ideas and to interact with patients, family members, physicians, peers and other ancillary medical personnel.
4. Ability to work with frequent interruptions, to respond appropriately in emergencies or unexpected situations, and to cope with extreme variations in workload and stress levels.
5. Sufficient strength and motor coordination to perform the following physical activities: manual dexterity in handling and lifting equipment, frequently moving, lifting, and transferring patients; and performing CPR.
6. Travel Policy: Transportation to and from the clinical site is the responsibility of the student.

DEGREE PROGRAM-FIRST YEAR

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

Spring Semester		TH	LAB	CR
NURS112	Nursing II	4	15	9
BIOL120	Human Anatomy & Physiology II	3	3	4
PSYC210	Human Growth & Development	3	0	3
	Total	**10**	**18**	**16**

DEGREE PROGRAM-SECOND YEAR

Fall Semester		TH	LAB	CR
NURS211	Nursing III	4	15	9
BIOL210	Microbiology	3	3	4
ENGL110	College Composition I	4	0	4
	Total	**11**	**18**	**17**

Spring Semester		TH	LAB	CR
NURS212	Nursing IV	3	18	9
MATH131	College Algebra I*	3	0	3
or				
MATH202	Probability & Statistics	4	0	4
	For. Lang./Huma/Fine Arts 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.

Social & Developmental Support Certificates

These certificates provide the skills and competencies to offer appropriate support to people, and to continue to grow personally and professionally. Students completing certificates can work in the areas of developmental disabilities, mental health, child and family services, substance abuse, homelessness, acquired brain injury, and others.

Students participating in Professional Seminars must present a crimial records check to their placement site. Some sites may also require a health form. Students who test below college level reading and writing abilities must complete developmental courses prior to participating in Professional Seminars or other Human Services courses.

Direct Support Certificate

		TH	LAB	CR
HUMS111	Introduction to Human Services	3	0	3
HUMS116	Professional Seminar I	2	3	3
HUMS213	Issues in Developmental Disabilities	3	0	3
PSYC110	Introduction to Psychology	3	0	3

Total Credits - 12

Substance Abuse Prevention Certificate

		TH	LAB	CR
HUMS111	Introduction to Human Services	3	0	3
HUMS116	Professional Seminar I	2	3	3
HUMS117	Professional Seminar II	2	3	3
HUMS210	Substance Abuse Prevention	3	0	3
HUMS217	Chemical Dependency	3	0	3
ENGL110	College Composition I	4	0	4
ENGL113	Oral Communication	3	0	3
PSYC110	Introduction to Psychology	3	0	3
PSYC210	Human Growth and Development	3	0	3

Total Credits - 28

Welding

Associate in Applied Science

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.

Program Outcomes

Graduates of the A.A.S. program in Welding will:

- Possess basic competency in the four major processes.
- Understand the basic concepts and practices of technical drawing and develop a practical understanding of the blueprint reading required by the welding industry.
- Know the safety issues and fundamental use of machine tools in both manufacturing and repair environments.
- Understand the basic concepts and practices of producing drawings by Computer Aided Drafting (CAD).

As a result of participation in the second year of the Welding Technology program, learners will:

- Possess refined welding skills to meet code requirements for heavy plate and pipe welding.
- Understand materials structures; heat treatment processes; the composition of ferrous and non-ferrous alloys; and the effects of heat-treatments on metals.
- Know proper industrial quality control procedures with respect to welder qualification, welding procedure qualifications, materials control, and quality assurance organization.
- Possess theoretical and practical knowledge of fabricating techniques and cost estimation.
- Understand the principles of applied statics and strength of materials as they are related to weldments, weld testing, material testing, pressure vessels, beam selection, and related rigging.

In addition to college-wide admission requirements, applicants to the Welding Technology Degree program should:

- Have successfully completed courses in algebra and geometry.
- Possess an understanding of the technology through experience, prior courses, reading, or observation of skilled welders *(highly recommended)*.

Technical Standards

- Normal vision for reading instructions and for performing tasks *(Adaptive equipment acceptable)*.
- Good manual dexterity with both hands and good hand and eye coordination.
- Ability to visualize and portray ideas graphically.

DEGREE PROGRAM-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 I	4	0	4
INT101	College Success Seminar	1	0	1
	Total	**10**	**17**	**16**

Spring Semester		TH	LAB	CR
WELD121	MIG/TIG Welding Lab	0	12	4
WELD122	MIG/TIG Welding Theory	3	0	3
WELD125	Manufacturing & Repair Tech.	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**	**6**

DEGREE PROGRAM-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**

Spring Semester				
WELD 220	Fabrication Techniques & Estimating	2	2	3
WELD 221	Pipe Code Welding Lab	0	12	4
WELD 223	Materials and Testing	2	2	3
PHYS 100	Introductory Physics	2	3	3
	For. Lang./Humanities/ Fine Arts Elective	3	0	3
	Total	**10**	**20**	**16**

Total Credits - 67

Welding Technology Professional Certificate *(Days only)*

		TH	LAB	CR
WELD 111	Gas/Arc Welding Lab	0	12	4
WELD 112	Gas/Arc Welding Theory	3	0	3
WELD 113	Technical Blueprint Reading	0	3	1
WELD 121	MIG/TIG Welding Lab	0	12	4
WELD 122	MIG/TIG Welding Theory	3	0	3
WELD 125	Manufacturing & Repair Tech.	0	3	1
WELD 186	Blueprint Reading for Welders	3	0	3
CAD 113	CAD for Non-Majors	1	3	2
ENGL110	College Composition I	4	0	4
MATH 111	Numerical Geometry	3	0	3
INT 101	College Success Seminar	1	0	1
CIS 110	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
WELD 180	Basic Arc & Gas Welding	1	3	2
WELD 181	Intermediate Arc & Gas Welding	1	3	2
WELD 182	Welder Qualification & Testing	1	3	2
WELD 183	Advanced (SMAW) Pipe/Plate Welding	1	3	2
WELD 184	Gas Tungsten Arc Welding (TIG)	1	3	2
WELD 185	Gas Metal Arc Welding (MIG)	3	0	3
WELD 186	Blueprint Reading for Welders	3	0	3
MATH 111	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.

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**
Writeplacer score of 4; Writeplacer score of 5 or above PLUS Accuplacer reading score below 80.	**ENGL 099**
Writeplacer score of 5-8 PLUS college-level reading skills determined by one of the following criteria: o Accuplacer score of 80 or above o Completion of ENGL 097 with a grade of C or better.	**ENGL 110**

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

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. QuickBooks software is used. 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, uncollectible 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
This course introduces accounting as the language of business and the need for accounting in the business world. Students will develop an understanding of the concepts and usage of assets, liabilities, equity, revenue and expense accounts. The student will be 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
This course 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. Prerequisite: none.

ACCT123 Intro to Accounting & Financial Reporting II 3-0-3
A continuation of the concepts covered in Accounting and Financial Reporting I. Emphasis is placed 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 placed 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 2-.5-2
A hands-on approach to learning the payroll cycle within an accounting operation. Coverage will begin with various laws, rules and regulations that govern the payroll process to completion of payroll disbursements, impact of benefits on payroll processing and the filing of various tax and information returns related to payroll deductions and payroll liabilities. Topics include: the logical process of work within the payroll department; the fundamentals of federal, state and local laws as they relate to the payroll process and reporting requirements; internal control procedures; various payroll fringe benefits and the impact on the payroll function of such benefits; and the responsibilities and skills needed to succeed and manage a successful payroll department. The student will complete a payroll practice case to gain hands-on knowledge. Upon successful completion of the course, students will be ready for entry- level positions as payroll professionals and will receive a certificate of completion of the Payroll-Entry Level course, which they may present to prospective employers as verification of payroll education. Students will also be prepared to take the American Payroll Association's Fundamental Payroll Certification Examination.

ACSP103 Accounts Payable-Entry Level 1.5-.5-1.5
This hands-on class teaches accounts payable department functions, from the receipt of a purchase order through the completed payment of the invoice using a QuickBooks software package. Topics 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. The student is required to complete a minimum of 30 hours of related service-learning work experience. Upon successful completion of the course, students are ready for entry- level positions as accounts payable processors and will receive a document listing service learning hours completed. Students will also be prepared to take the Accounts Payable-Entry Level 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. Prerequisite: ACCT113 with a grade of C or better.

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. Student 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 as well as 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.
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 primarily to cultural anthropology, its key concepts, terminology, theories, and research. Some aspects of physical anthropology and linguistics are covered. Topics 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.)*

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 flamecut 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 is on the development of visual receptive and expressive skills for effective communication with the deaf and hard-of-hearing. Through a variety of classroom experiences, students learn to recognize and produce manual and non-manual behaviors that reflect an understanding of the language's grammatical, semantic, spatial and cultural frameworks. *(Fulfills Foreign Language requirement.)*

ASL120 American Sign Language II **3-0-3**
Builds on skills developed in ASL110. Introduces more advanced vocabulary and grammatical features. Emphasis is on conversational fluency. Also covers the historical and cultural evolution of ASL . Prereq: 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.

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 Internship **0-15-5**
The Automotive Internship 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 with the internship coordinator and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the internship coordinator and site supervisor, and will be the basis for the final grade.
Prerequisite: AUTO101 with a 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 turbo-charger/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 internship coordinator 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. 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.

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 internship coordinator and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the coordinator and supervisor, and will be the basis for the final grade. Prereq: AUTO 131, AUTO 132, AUTO 133 with a 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.

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 Co-op coordinator and their site supervisor. Periodic evaluations based on performance and other issues related to successful employment will be completed and reviewed by the internship coordinator 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 Hydraulic & Mechanical Systems **2-3-3**
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 will 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 for Anatomy & Physiology **1-0-1**
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 or equivalent or permission of instructor and placement into ENGL110.

BIOL102 Introduction to Botany **3-3-4**
A one semester introductory course in Botany. Studies will include 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.
Prerequisite: high school biology and placement into ENGL110.

BIOL106 Human Body **3-0-3**
A one-semester course that introduces the structure and function of the human body. It includes the anatomy and physiology of each of the organ systems of the human body and practical discussions of disease and health.

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, biochemistry 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**
This course is designed to give a student of any health or medical science a thorough background in anatomy and physiology. Current, in-depth information is presented on the structure and function of human cells, tissues, and organ systems including the skin, skeletal, muscular, nervous and sensory systems. Laboratory work augments lecture topics and includes exercises in microscopy, the study of fresh and preserved specimens, and exercises in human physiology. Prerequisites: successful completion *(grade C or better)* of high school level Chemistry and Biology, or successful completion *(grade C or better)* of BIOL 090 and H.S. Biology and permission of the instructor.

BIOL112 Basic Pathophysiology Theory **3-0-3**
An introductory science course for non-majors which provides students with 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. A brief overview of the anatomy and physiology relevant to each body system will be included when each system is explored. Prerequisite: BIOL106.

BIOL113 Basic Pathophysiology Lab **0-2-1**
A series of laboratory experiences designed to enhance and reinforce the concepts of Introduction to Human Disease. The course will cover normal and abnormal anatomy and microanatomy, diagnostic tools, and study of disease organisms. Corequisite: BIOL112.

BIOL120 Human Anatomy and Physiology II **3-3-4**
A continuation of Human Anatomy and Physiology I. This course includes current, in-depth information of the structure and function of the endocrine, digestive, respiratory, blood, cardiovascular, lymphatic, urinary, and reproductive systems. Laboratory work augments lecture topics 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.

BIOL150 Nutrition **3-0-3**
This course is a study of normal and medical nutritional therapy, including the digestion, absorption, transport, and metabolism of the macro and micronutrients throughout the life cycle. The students will study 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, chromosomes, cells, tissues and organs, individuals, and populations. Hands-on laboratory exercises are designed to reinforce the lecture material and include investigations in mitosis and meiosis, Mendelian genetics, chromosome structure, control of gene expression, mutation, and genetic technologies. Prerequisite: high school biology, a 100 level college biology course or permission of instructor.

BIOL210 Microbiology: Principles and Practices **3-3-4**
Provides an introduction to 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 appropriate control measures for microbial diseases caused by viruses, bacteria, fungi, protozoa and helminthes. Students are required to have protective eyewear *(available in the bookstore*) and lab coats for the first lab session. Prerequisite: BIOL110 with C or better.

BLDG100 Interior Drafting **1-2-2**
This course develops basic drawing skills necessary for a student to complete satisfactory drawings in the residential interior design field. Drawings deal with basic drafting concepts such as orthographic projection, isometrics, and obliques. Drawings of floor plans and elevations of a house from the foundation to the ridge are also completed.

BLDG111 Construction Drafting I **1-3-2**
This course develops basic drawing skills necessary to complete satisfactory drawings in the light residential construction field. Drawings in this course 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**
The student learns to identify 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 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, 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**
The student learns to identify 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**
The student gains 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**
An introduction to the practice of the proper installation of materials necessary 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**
An introduction to the principles, practices, and materials in energy-efficient building construction. Heat transport, insulation, air movement and indoor air quality, vapor diffusion and air barriers, moisture and condensation are studied. Sound transmission and absorption, solar energy, lighting, space and domestic hot water heating and other topics are discussed. 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. An introduction to individual septic system design is discussed. Prerequisite: BLDG212 or permission of the instructor.

BLDG223 Methods of Construction V Theory **3-0-3**
A course on the identification and installation of flooring materials, stair parts, and cabinetry. The proper installation of stair treads, risers, skirt boards, newel posts, handrails and balusters are studied. The students are also introduced to 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**
This lab continues Methods III Lab with interior finish: jamb extensions, baseboard, window and door casings and other finish work, 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**
The student learns 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**
This course is an introduction to the basic concepts and practices of producing drawings by Computer Aided Drafting using IBM compatible personal computers and AUTOCAD software. Anticipated benefits of CAD capability would 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**
This course is 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**
This is an introductory course designed to provide students with 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**
This course 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.

BUS116 Organizational Behavior **3-0-3**
This course develops 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 and case studies.

BUS124 Small Business Management **3-0-3**
This course gives students 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 will be introduced to effective techniques for starting businesses, getting loans, hiring and supervising employees, marketing products and services 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**
This course 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**
This course will introduce and expand upon the basic principles and concepts of team building and self-directed work teams as they pertain to the workplace environment. Through the use of lecture, interactive discussion, workshop-type group exercises, videos, and guest speakers the key concepts of how teamwork can influence and benefit the workplace will be explored.

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**
Business Law I will encompass some of the common topics in criminal, civil and business law. Topics to be taught and discussed 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**
Business Law II will continue to encompass some of the common topics in criminal, civil and business law. Topics to be taught and discussed 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.

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**
This course is designed to survey 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**
This course is designed to provide 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.

BUS282 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.

BUS291 Internship **0-9-3**
This course is 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: BUS282 or ACCT 233.

CAD113 CAD for Non-Majors **1-3-2**
An introduction to the basic concepts and practices of producing drawing by Computer Aided Drafting using IBM compatible personal computers and AutoCAD software. The course will cover setting up for electronic drawing, drawing accurately, controlling the graphic display, basic drawing techniques, graphic entities and an introduction to editing.

CDI111 Electronic Publishing I **2-3-3**
Students will produce pre-designed and original publications using Introductory QuarkXPress and Photoshop on a Windows based PC. The focus is on the principles, skills and equipment used in the electronic publishing process. Knowledge of basic layout and paste-up methods is necessary along with basic computer application skills.

CDI112 Print Design Basics **2-3-3**
This course is an introduction to the basics of printed reproduction and demonstrates the historic, modern and future implications of printed communications. The student 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 move into using computer equipment in a Windows 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**
This course 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 gives 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. Prerequisite: CDI111.

CDI122 Color Theory for Graphic Arts **2-3-3**
Color theory for graphic arts and design concepts are explored in this course. 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. This course cannot be substituted for ID112, Color for Interior Design.

CDI124 Typography **2-3-3**
This course is an introduction to typefaces from an aesthetic and communicative perspective. The history and background of typography is explored to give the student 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 about the ways to recognize and solve design problems using type. Prerequisites: CDI111,CDI114.

CDI211 Illustration I **2-3-3**
This course will provide 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**
This course is a continuation of CDI211 Illustration I, 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 a Windows-based PC. 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 an 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 will be required to attend a business luncheon seminar. Prerequisites: all freshman courses and CDI211, CDI213, CDI215, CDI227.

CDI230 Time Based Design **2-3-3**
This project-based course introduces students to the creation of animated sequences and GIF animations using Adobe Flash. 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.

CDI 235 Web Design **2-3-3**
This project-based course introduces students to the fundamental information needed to design a web site. Instruction focuses on the planning and designing of web sites using the leading professional web design software: Adobe Dreamweaver. Editing in HTML is addressed but is not the center of the web-design process. Topics include creating visual interest, creating a root folder; producing multiple pages; importing images; creating links, tables, and templates; and addressing design problems. Students learn the basic layout and imaging skills needed to create attractive, informative, easy-to-navigate web pages that are not only functional but also artistic and aesthetically pleasing with attention to the creative aspects of good web design. The course involves the designing of original and functional web sites. Prerequisites: CDI114, CDI122, CDI124, CDI230, CIS224

CE110 National Electric Code Update **Non-credit**
This course will cover 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**
This chemistry course provides students with a sound foundation in the basic principles of chemistry. The course includes topics such as structure of matter, stoichiometry, chemical reactions, quantum theory and atomic structure, chemical periodicity, chemical bonding, gases and their properties. Laboratories are used to reinforce the principles and concepts presented in lectures and to develop critical thinking and scientific writing. Prerequisites: High school chemistry and biology with a grade of C or better, high school Algebra I or MATH 131.

CIS097 Computer Fundamentals **0-2-1**
This course is designed for students with little or no computer skills or for those who are 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 environment and learn to manage, save, copy and delete files and folders.Students will also gain knowledge of current trends and topics in computer technology and will learn the terms and skills needed in today's computer literate society. This course may not be applied to meet certificate or degree requirements.

CIS110 Microsoft Computer Applications **2-2-3**
This one semester course 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 Computer Technologies I **2-2-3**
The purpose of this course is to provide students with the fundamental background and understanding of various critical components of computer technology. A required course for all computer majors, this course provides students with a firm foundation in computer technology including: hardware components, software applications, processors, memory management, secondary storage, file management, operating systems, networking essentials, ethics, and emerging technologies. Students will also explore various ethical issues surrounding the use of digital information, as well as the impact of technology on business and society.

CIS112 Computer Technologies II **3-0-3**
This course will emphasize systems thinking as an approach to solving computer problems and understanding formal logic. Programming theory and logic will be presented with hands-on practice in model environments, while students are provided with essential problem-solving methods, techniques and disciplines. Control flow, data manipulation, and planning methods will be emphasized. Students will develop confidence in applying programming solutions, will be exposed to pertinent terminology, and will learn the effective use of reference materials.

CIS113 Database Design and Management 2-2-3
This course is an introduction to database analysis, planning, designing, and implementation with emphasis on the relational model. Students will study the theory behind relational databases, relational database nomenclature, and relational concepts. The course will include sections studying Structured Query Language (SQL) and optimizing databases through normalization. Students will apply their knowledge with hands-on exercises designed to teach the intricacies of database design methodology.

CIS116 Computer Networking I 2-2-3
This course introduces students to the fundamentals of computer connectivity. Students will compare peer-to-peer versus client-server configurations, Windows, Unix and Mac Network Operating System Environments, local and wide-area networks, in addition to relevant network communication protocols.

CIS118 Visual Basic.Net Programming I 2-2-3
This course will provide the students with an understanding of structured, procedural, and event-driven programming. The 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 Visual Basic language and programming environment. Co-requisite: CIS112.

CIS123 Microsoft Access 2-2-3
In this course, students are exposed to beginning, intermediate and advanced concepts of relational database design and management using Microsoft Access. Topics covered include creating and maintaining a database, querying a database, creating forms and reports, and importing and exporting data. This course is a hands-on database design, implementation, and administration class, and students will develop multiple database projects, which assures that the material is understood theoretically and mastered practically. Prerequisite: CIS113.

CIS124 Web Programming I 2-2-3
In this course the student will gain knowledge of the web site development process and learn to develop web pages using XHTML standards. Through the use of different text editors and validation programs, students will study in detail XHTML syntax and will develop well-formed and valid web pages. Students will also incorporate text, graphical, and form components into web pages and will use text formatting, tables and CSS for page layout and site design.

CIS135 Introduction to PhotoShop 2-2-3
Adobe PhotoShop brings the art and science of photo manipulation to the Web and other computer applications. An overview of the PhotoShop environment, color processes and channels, image modes, scanning, compositing, adjustment layers, masks, type manipulation, filters, actions, file formats, and web/multimedia considerations are among the many topics covered in this course.

CIS145 Introduction to Multimedia 2-2-3
This project-based course introduces students to multimedia concepts through a production environment. Students will learn how to create and manipulate objects, develop screen designs, and begin to build computer applications to incorporate graphics, animation, audio and video. Students will be introduced to current industry standards using Macromedia Director.

CIS146 Linux I 2-2-3
The purpose of this course is to provide students with the fundamental skills needed to work in a Linux environment. A recent version of the popular public domain operating system, Linux, will be used as a vehicle for course delivery. Topics to be covered include the file system, file management, text editors, running and creating shell scripts, X windows, and basic system administration. Installing the Linux operating system and networking issues will also be discussed.

CIS148 Java Programming I 2-2-3
The purpose of this course is to provide a solid foundation in the Java programming language. Program planning, object oriented design, and Java language syntax will be emphasized. This course will prepare students for advanced study of the Java language as well as introduce students in other fields of computer study to general object programming. If students do not have any previous programming experience, CIS112 is required as a prerequisite.

CIS149 Open Source Applications 2-2-3
In this course, students will explore the various common open source business applications. These include Star Office, Open Office, Evolution, Mozilla, Gimp, and many other useful, open-source programs, which are generally available free from sources on the Internet.

CIS158 C++ Programming I 2-2-3
This course introduces students to the fundamentals of structured programming and to the procedural aspects of the C++ programming language. Students will create programs to demonstrate the topics of program control, functions, arrays, and pointers. Microsoft's Visual C++ will be used as the primary development tool; however, other environments may also be utilized. Emphasis will be placed on the creation of platform-independent applications in order to allow students to become familiar with the core features of the C++ language. Prerequisite: CIS112 or permission of instructor.

CIS207 Windows Server I 2-2-3
This course will prepare the student to take the current version of MCSE Exam 70-210 Installing, Configuring, and Administering Microsoft Windows Server. The student will install Windows Server Professional under several scenarios to include stand-alone and Windows Server Remote Installation Services *(RIS)*. Topics covered include methods to upgrade from previous versions of Windows, installation troubleshooting, implementing and conducting administration of resource responsibilities, trouble-shooting hardware devices, installing drivers, and configuring user accounts, profiles and policies. Prerequisite: CIS116.

CIS208 Data Structures in C++ 2-2-3
This course uses the C++ programming language to examine basic abstract data types and their representations, fundamental algorithms, and algorithm analysis. Specific topics include linked lists, stacks, queues, trees, searching and sorting, graphs, and hashing. The abstract data types are presented in the spirit of OOP *(object-oriented programming)*. Students will therefore be given a basic understanding of the object-oriented C++ features, such as the class construct, inheritance, overloading, and class templates. Prerequisite: CIS158.

CIS216 Web Server Administration 2-2-3
Discover what goes on behind the scenes in order to access your favorite web pages. Learn how to set up and maintain the hardware and software needed for both Internet and Intranet web sites. Emphasis will be placed on setting up a UNIX/Linux system with Apache web server; however, other platforms will be discussed throughout the course. Prerequisites: CIS146.

CIS217 Windows Server II 2-2-3
Building upon the skills gained in CIS207, this course prepares students to take MCSE Exam 70-215 Installing, Configuring and Administering Microsoft Windows Server. Windows Server is designed to work in medium to large-scale environments serving 200-26,000+ users and in multiple physical locations. The typical services provided by Windows Server will be in the area of database server, messaging, file server, print server, communications server, desktop management, proxy server or firewall and web hosting. Students will learn to configure Windows Server hardware devices and drivers, manage resource access and storage use, optimize system performance, and monitor and troubleshoot Windows security issues.
Prerequisite: CIS207.

CIS218 Visual Basic.NET Programming II 2-2-3
This course will expand the students' understanding of structured, procedural and event-driven programming. The students will learn advanced programming methods, and will gain further experience in the nut-and-bolts of program design as they complete lab work and assignments. Prerequisite: CIS118.

CIS221 Advanced Word Processing 2-2-3
This course encompasses the intermediate and advanced features, commands, and functions of the most current version of Microsoft Word to achieve mastery-skills level. Students will learn to prepare, enhance, and customize documents from basic communication formats to more complicated formats. Advanced tools and techniques will be introduced such as graphics, tables, charts, drawings, multimedia clips as well as cut and paste, macros, formatting and design plus mail merge, columns, wizards and OLE files. Prerequisite: CIS110.

CIS224 Web Programming II 2-2-3
Building upon web development skills taught in CIS124, this course enables students to create dynamically-built web sites using JavaScript and other client-side scripting languages. Students also gain advanced XHTML and CSS skills, and gain familiarity with programming concepts and terminology common to many web scripting languages. Prerequisites: CIS124

CIS231 Advanced Worksheets 2-2-3
This application course employs the basic accounting concepts and principles in a computerized environment. Students will apply problem-solving and critical-thinking skills while mastering advanced spreadsheet application techniques using the latest version of Microsoft Excel. Students will learn layouts, format design, and presentation skills to enhance formal spreadsheet reports and projects. Prerequisite: CIS110.

CIS233 Oracle I **2-2-3**
Students in this course will gain an understanding of the internal structures and organization of an Oracle database. Students will create Oracle databases, tablespaces, user accounts, views, indexes, and other objects necessary to support an application. The course will present a structured approach to the monitoring and managing of the most recent version of the Oracle database software. Prerequisite: CIS113.

CIS243 Oracle II **2-2-3**
Students will continue their study of the concepts of how to successfully design, manage and administer a relational database using the toolsets built into the Oracle RDBMS. Backups, recovery, user rights, roles and other configuration and administration concepts and tools will be discussed. Prerequisite: CIS233.

CIS246 Linux II **2-2-3**
Building upon fundamentals previously acquired, students will further develop Linux skills and knowledge in a hands-on environment. Students will install a dual boot operating system, develop shell scripts for application management, configure secure business productivity applications, discuss Linux security issues, and gain a further understanding of Linux administration with respect to using and configuring various network services, including the Apache web server, Send Mail, MySql and others. Prerequisite: CIS146.

CIS248 Java Programming II **2-2-3**
This course will extend knowledge of object-oriented programming through the use of the Java programming language. Develop applets for use in web pages as well as stand-alone applications. Application design, planning, language syntax, and a variety of Java environments will be covered. Individual and group projects are emphasized throughout the course. Prerequisite: CIS148.

CIS249 Linux Databases **2-2-3**
In this course, students will establish a firm foundation in Linux database installation, design, construction and use. Students will install and use My SQL and Postgres SQL, two popular open source database programs, along with a variety of useful tools to work with these databases. Students will also write basic PHP/Perl code to link these databases to websites. Prerequisites: CIS113 and CIS146.

CIS254 Scripting Language Programming I **2-2-3**
Students will learn how to create intelligent sites by extending HTML with a variety of scripting languages for the web. Develop pages that can verify forms, open new windows, set cookies and create new HTML documents "on the fly." Emphasis will be placed on JavaScript, CGI programming with Perl, and server-side languages such as ASP, JSP and PHP. Prerequisite: CIS112.

CIS258 C++ Programming II **2-2-3**
This advanced programming course emphasizes the C++ implementation of object-oriented designs. It expands upon both the structured techniques introduced in the CIS158, CIS208, and CIS238. While concentrating on the creation of C++ object systems, students will learn advanced language topics such as function overloading, default arguments, inheritance, virtual functions, and run-time type information. Prerequisite: CIS158.

CIS274 XML Programming I **2-2-3**
This class will focus 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.

CIS276 TCP/IP: Intro to Inter/Intra Networks **2-2-3**
This course provides an in-depth study of TCP/IP, the technical foundation of today's Internet and the growing number of private intranets. Students will compare Microsoft and Novell's competing Internet/intranet design models. Hands-on exercises will introduce students to routing services, TCP/IP management, diagnostics and troubleshooting techniques. Students will be required to design, install and test a TCP/IP internetwork environment. Other topics will include connectivity to the Internet, the role of DNS, IP addressing, various related protocols, and evolving technological trends. he course will help prepare students for the Microsoft Certified Program exam (#70-59) Internetworking with Microsoft TCP/IP. Prerequisite: CIS116.

CIS291 Capstone Senior Seminar **2-2-3**
This Capstone course is 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. Prereq: 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**
This course provides an in-depth study of normal growth and development from conception through age twelve with an emphasis on the needs and characteristics of each developmental level. Prominent theories of child psychology will also be introduced such as Piaget, Erikson, Maslow and behaviorism. Observation of children will be required as part of the course requirements.

ECE102 Practicum I: Observation and Recording of the Developing Child **1-3-2**
Practicum I consists of a weekly seminar as well as a weekly internship within an assigned early childhood facility. The emphasis is on the study of the observational and recording techniques used by professionals in the field of Early Childhood Education. Students will have an opportunity to interact with children and to implement observation and recording techniques during the practicum experience.

ECE104 Foundations of Early Childhood Education **3-0-3**
This course 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 Art, Music, Drama and Dance in Childhood Education **3-0-3**
This course 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.

ECE106 Curriculum & Environment for Family Child Care **3-0-3**
This 100% online course is intended for early childhood educators who are currently providing care for children in a home-based setting. The focus of the course is on creating developmentally appropriate environments and curriculum suitable for a multi-age group of children. Students observe and evaluate the effects of the environment on development and learning. Students plan, implement, and evaluate developmentally appropriate learning activities. This course is part of the online Family Childcare Certificate but does not count towards other ECE certificates or the Associate's Degree.

ECE110 Children's Literature and Language Arts **3-0-3**
This course is designed to provide an overview of developmentally and interest-appropriate literature for young children. Students will 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: ECE110, ECE104 or permission of instructor.

ECE111 Infant/Toddler Practicum:Nurturing Environments **2-3-3**
The manner in which a "prepared environment" leads to play while stimulating the development and educational growth of infants and toddlers *(birth – 36 months)* is the focus of ECE111. 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 Practicum II: Learning Environments for Young Children **2-3-3**
The emphasis of this course is on 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 will be the focus of the course. Students will 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**

This course provides a variety of health, nutrition and safety concepts that will enable the individual to implement preventive health and safety practices based on New Hampshire Childcare Regulations. Students will be able to 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 Development in Childhood Education **3-0-3**

This course will provide students with 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 will be 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**

The course will focus 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 Practicum III: Student Teaching in Early Childhood Education **1-9-4**

Students in Practicum III spend 9 hours/week in a college-approved early childhood facility that allows students to gradually assume teacher responsibilities under guided supervision. Students assume teacher responsibilities in a variety of Early Childhood settings under guided supervision. Students will bridge the gap between theory and practice by applying and implementing theoretical knowledge and developmentally appropriate methodology in their work with young children. Students assume increasing responsibility for teaching and classroom management throughout the semester by planning activities across the curriculum. Weekly seminars are scheduled to discuss issues of appropriate practice, discipline, lesson plans, observations, and other concerns. Students will complete Practicum III at a college-approved Early Childhood Education facility. 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, ECE102, ECE104, and ECE112.

ECE204 Developmentally Appropriate Curriculum for Infants and Toddlers **3-0-3**

A study of 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 for School-Age Children **3-0-3**

This course will focus 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 early childhood educators in planning and providing developmentally appropriate learning experiences for school age children, 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 will be required to complete 8 hours of observation and volunteer in a program for school-aged children. Prereq: ECE100, ECE104 or permission of instructor.

ECE210 Child, Family, and Community **3-0-3**

The young child is studied in relation to the family, school/center, and community. Students explore the societal changes affecting the contemporary American family and the subsequent impact upon children. A focus of the course is on the importance of the parent-teacher relationship. Students participate in "mock" parent-teacher conferences, and prepare formal and informal means of sharing information with families about their child and the program. A Community Service project will be required.
Prerequisites: ECE100 and ECE104.

ECE212 Practicum IV: Professional Development **1-9-4**

This course is designed to extend the student's experiences in bridging the gap between theory and practice in Early Childhood Education by working with children of a different age level than the previous practicum. Students assume increasing responsibility throughout the semester by planning activities across the curriculum. Weekly seminars are scheduled to discuss issues of early childhood facility management and professional development. Students will create a professional portfolio as part of the final requirement for this course. This course is designed to help bridge the gap between theory and practice by giving students in early childhood education 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. Prerequisite: ECE202.

ECE214 Appropriate Discipline and Guidance for Young Children **3-0-3**

The emphasis of the course is on 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. The influence of developmental, environmental, and health factors will be examined. Theories behind the approaches and techniques of discipline and guidance issues will also be discussed.
Prerequisites: ECE100 and ECE 104.

ECE250 Childcare Administration and Management **3-0-3**

This course provides students with 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. The 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**

This course examines the international economy and globalization, international trade relations and international monetary relations. Topics of discussion will 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 will be discussed. Prerequisite: ECON134. *(Fulfills Social Science Requirement.)*

EDU101 Introduction to Exceptionalities **3-0-3**

This course 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**
A survey of education in the United States. Examines the philosophical, historical and social/cultural characters of education, as well as how schools function organizationally. Topics include the roles of education, system philosophy, and trends that have influenced our current educational system. Students are required to complete 20 hours of observation in a school setting.

EDU201 Teaching and Learning **3-0-3**
An overview of strategies for organizing and teaching instructional content in elementary, middle, and secondary schools. Emphasis is on teaching students with diverse learning styles and backgrounds, classroom organization and management, lesson planning, and the use of technology in the classroom. In-class and outside-of-class activities will result in creation of a teaching methods portfolio and reflective practice journal for the course. Students will develop and teach two lessons appropriate to their teaching goals. Prerequisite: EDU104.

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. This course prepares students for success in advanced methods and materials courses. Students are required to complete a minimum of 10 observation hours in a school setting. Prerequisite: EDU104.

EDU205 Technology in Education **2-2-3**
Provides strategies to incorporate the use of technology into the classroom. Emphasis is on technology as a tool that facilitates learning and enhances the teaching process. Students will explore the value of technology as it directly relates to student achievement, professional growth, and classroom management.

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**
Explore the history, philosophy, principles, organization, and operation of career and technical education in the United States. Students develop a functional understanding of the role and responsibilities of a professional career and technical educator. This course provides the foundation and skills to design, implement, and manage a curriculum in career and 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 are explored. Prerequisites: EDU104.

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. Prereq: Grade "C" or better in EDU101 and EDU104 or ECE104 and ECE114.

EDU225 Curriculum Planning and Implementation for Children with Unique Learning Characteristics **3-0-3**
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 "C" or better in EDU101 and EDU104 or ECE104 and ECE114.

ENGL094 Intermediate College Reading Skills **3-0-3**
Designed for students with a score of 54 or below on the Accuplacer Reading assessment. Students develop proficiency in the fundamental communication skill of reading *(at the 8th – 12th grade level)*. Course emphasizes comprehending main ideas and details, making inferences, developing vocabulary, understanding the logical relationship among the parts of paragraphs, and applying study skills as they relate to textbook comprehension. This course may not be applied to meet certificate or degree requirements. A grade of C or better is required to advance to ENGL 097. Prerequisite: Placement testing.

ENGL097 Advanced College Reading Skills **3-0-3**
Designed for students with a score of 55-79 on the Accuplacer Reading assessment. Students 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 ENGL 094.

ENGL098 College Writing Skills I **4-0-4**
This course strengthens students' language skills through reading and 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. Prereq: Placement testing or grade of C or better in ESL 098.

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 ENGL 098 or ESL 120.

ENGL110 College Composition I **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. Prereq: Placement Testing or grade of C or better in ENGL099 and a grade of C or better in ENGL 097 if course is required.

ENGL113 Oral Communications **3-0-3**
This course is designed to give a student confidence and poise in a public speaking situation through practice in speech preparation and presentation.
(Fulfills English or Humanities requirement.)

ENGL 200 Themes in Literature **3-0-3**
In this course, students study 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: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL 201 Survey of Poetry **3-0-3**
In this course, students read and analyze a variety of poems. 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: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL 205 The Novel **3-0-3**
In this course, students study 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. Prerequisites: ENGL 110 with a grade of "C" or better or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL206 Professional Communication **3-0-3**
Builds on skills developed in College Composition I. Introduces the 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. Prerequisite: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English elective requirement.)*

ENGL210 Communications 3-0-3
In this course, students develop interpersonal and public communication skills, using informative and persuasive modes of written and oral presentations. This course builds upon the skills developed in College Composition. Prerequisite: ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL213 Creative Writing 3-0-3
In this course, the student will learn the techniques of creative writing. These techniques will run the gamut from brainstorming exercises to revising and editing. The student will learn these techniques through a combination of lecture, in-class exercises, and workshops. Prerequisite: ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL214 Creative Non-fiction 3-0-3
Building on skills developed in College Composition I and incorporating artistic techniques such as scenes, dialog, and detailed descriptions, this course introduces students to 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. Prerequisite: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL 218 Short Story 3-0-3
In this course, students study the short story as a major literary genre, reading, interpreting, and analyzing a representative selection of texts. Students apply critical contexts and practice various theoretical approaches to the readings. Prerequisite: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL 220 American Literature 3-0-3
In this course, students study American fiction, poetry, and drama - reading, interpreting, and analyzing a representative selection of texts. Students apply critical contexts and practice various theoretical approaches to the readings. Prerequisite: ENGL110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ENGL 225 Shakespeare 3-0-3
In this course, students study 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. Prerequisite: ENGL 110 or equivalent, or permission of the instructor. *(Fulfills English or Humanities requirement.)*

ESCI110 Earth Science 3-3-4
This course will explore the basics of Earth Science including geology, meteorology, and astronomy. The geology section will include the many earth processes that change the face of the planet such as plate tectonics and erosion. In meteorology, 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 and our place in it.

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 create weather maps and local forecasts.

ESCI115 Contemporary Issues in Ecology 3-0-3
This one semester course covers basic ecological concepts and explores contemporary environmental and resource management issues. Included in these issues are global warming and loss of species diversity. Prerequisite: Placement in ENGL110. High school biology recommended.

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 beginning 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
This intermediate course 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. Analysis of audio and videotapes of fluent speaker conversation provides students with opportunities to improve their speaking and listening skills. These credits do not count toward graduation requirements. Prerequisite: Permission of Instructor.

ESL098 ESL Intermediate 3-0-3
At this level, emphasis is on comprehending and producing English in written and in spoken form. The course focuses 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. Students use 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 Test. These credits do not count toward graduation requirements.

ESL120 ESL Advanced 3-0-3
Provides instruction and practice in all language domains: listening, speaking, reading, writing, and cultural appreciation. The course provides opportunities for students to develop communicative skills through presentations. Students continue to use readings as models for developing effective academic writing skills. Beyond the course reader, students will use other reading materials *(i.e., magazines, journals, and college textbooks)* for discussion, and reaction papers. Prerequisite: a qualifying score on an ESL Pro - ACCUPLACER Test, or ESL098 ESL Intermediate with a passing grade of C or better.These credits do not count toward graduation requirements. *(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 in this course 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 includes AC theory, electrical distribution, wiring methods and requirements, branch circuits and feeders, grounding and bonding, and overcurrent protection. The material presented in this course satisfies NH Electrical Apprentice training requirements. Laboratory work provides for reinforcement and application of theoretical concepts. Prerequisite: ETEC110 and MATH131 or permission of instructor. Co-requisite: MATH 141.

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 throughout this course as it applies to the subject matter. The material presented in this course 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 in this course 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 in this course 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. Course 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 the combining of 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.

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 in this course 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. Course 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 the combining of 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 will be congruent with the theoretical component.
Prerequisite: BIOL110.

EXER116 Health Fitness Assessment & Programming **2-4-4**
Course focuses on health screening and risk stratification, pre-test evaluation, and basic principles and guidelines of physical fitness assessment. The assessment of cardio-respiratory capacity and body composition is emphasized. Calculation and interpretation of data from the fitness assessments is an integral part of the course. The course 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 is incorporated into the course framework. Prereq: 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. Prereq: BIOL110, BIOL120, EXER113. Coreq: EXER114.

EXER213 Resistance Training Essentials **2-3-3**
This course will focus 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 upon the integration of theoretical and applied aspects of human motion. Applied anatomy and analysis of exercise from a biomechanical and kinesiological perspective will be the major themes. A weekly laboratory session will be congruent with theoretical component. Prerequisites: BIOL110, BIOL120, EXER213.

EXER240 Injury Prevention & Post-Rehabilitative Exercise 3-2-4
The course provides a basic background in sports medicine as it relates to the Health Fitness Instructor (HFI). Primary emphasis will be 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
This course is designed to provide the student with an effective learning experience in personal finance. Emphasis is 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 & Financial Policy 3-0-3
This course is designed to be case driven. The cases will involve decision making for real-world situations. Topics covered 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
This course is designed to introduce the student to various investment options such as stocks, bonds, mutual funds and commodities. The focus will be on the decision-making process for investment and portfolio management.

FINC216 Budgeting and Forecasting 3-0-3
This course is designed to evaluate the process of corporate budgeting and forecasting. The course will use real world applications of comprehensive profit planning and control. Methods for forecasting will be evaluated.

FINC217 International Corporate Finance 3-0-3
This course is designed to teach students how 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
This course is designed to build upon the personal finance information learned in the personal financial management class and go more in depth into personal financial planning. The focus will be on establishing effective retirement goals, evaluation of retirement portfolio options, selecting appropriate investments for long term objectives, selecting appropriate investing options for college funds, evaluation of 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. It is directed for students whose learning objectives and needs are in any of the following categories: 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 through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences. Language lab 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 who have had the equivalent of one year of high school French or one semester of college French. The course is designed for French students whose learning objectives and needs are in any of the following categories: for French language students, for business purposes and 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. The course continues 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. Language lab activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing, and culture. 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
The course is an introduction to the geographic and cultural elements of the world's major regions. Demographics, origins, language, religion, geopolitics, and agricultural features of the regions will be covered. 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.)

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. It is directed at students whose learning objectives and needs are in any of the following categories: 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 the correct usage. Language lab activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing and cultural appreciation.

GERM120 German II 3-2-4
A continuation of the introductory German course for students who have had the equivalent of one year of high school German or one semester of college introductory German. The course is designed for German students whose learning objectives and needs are in any of the following categories: for German language students, for business purposes and for travelers. The emphasis is to consolidate and reinforce the skills acquired in German I or equivalent and to continue building communicative skills and cultural competency. The course continues 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 the correct usage. Language lab activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing and culture. Prerequisite: GERM110 with a passing grade of 'C' or better.

HIM110 Healthcare Delivery Systems 3-0-3
This course will introduce the student to the organization, financing, and delivery of health care services in the U.S. The focus will be 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. 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--all following site guidelines. Direct supervision is provided by the clinical professional. Prerequisite: completion of all HIM first year courses.
Offered Summer after freshman year only.

HIM210 Health Information Organization & Supervision 3-0-3
This course is an introduction to the principles of organization and supervision in a health information department. The course 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 classroom 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. Social, political, economic, and spiritual forces and patterns that shaped the eras of Western history are discussed. History as the record of human struggle and achievement, change and continuity is emphasized. *(Fulfills Social Science or Humanities requirement.)*

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. Social, political, economic and spiritual forces and patterns that shaped the eras of Western history are discussed. Emphasizes history as the record of human struggle and achievement, change and continuity.
(Fulfills Social Science or Humanities requirement.)

HIST202 United States History to 1870 3-0-3
Examines the political, social, and cultural development of the United States from settlement to1870, 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)*

HIST203 Topics in History 3-0-3
This course will vary by semester. Historical topics are chosen to reflect faculty and/or student interest, and then focus on an in-depth coverage of that topic. All courses will focus on historical events, forces, personalities, ideas and values shaping the contemporary world. Critical thinking, speaking and writing skills are emphasized, as well as the ability to analyze historical sources. *(Fulfills Social Science requirement.)*

HIST204 United States History - 1870 to the Present 3-0-3
Covers the political, social, and cultural development of the U.S. from the period following Reconstruction to the present. Emphasis is on 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.)*

HIST205 History of Russia 3-0-3
A survey of the history of Russia and the Soviet Union. Emphasis is 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.)*

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 which constitute recurrent elements in Chinese history. *(Fulfills Social Science requirement.)*

HIST211 Modern Middle East History 3-0-3
A survey of the main political, economic and religious currents in the Middle East. Emphasis is 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, the role of the state in an Islamic society, and 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 instructor.
(Fulfills Social Science requirement)

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.)*

HUMA112 Introduction to Humanities from Antiquity to the Renaissance 3-0-3
Covers samples of the various forms of literature, art, music, the social and behavioral sciences, and philosophy representative of the time and culture under discussion. The course focuses on the recurring questions and changing responses concerning the human condition. Though the emphasis is on the Western tradition, examples from various world cultures may be included. (*Fulfills Humanities requirement.)*

HUMA113 Introduction to Humanities from the Renaissance to the Present 3-0-3
Covers various forms of literature, art, music, the social and behavioral sciences, and philosophy representative of the time and culture under discussion. The course focuses on the recurring questions and changing responses concerning the human condition. Though the emphasis is on the Western tradition, examples from various world cultures may be included. *(Fulfills Humanities requirement.)*

HUMA114 History of Photography and Publishing 2-0-3
Covers the history of photography and publishing. Topics revolve around the birth of photography, historical photographic techniques, the impact photography had on society, and photography as an art form. Studies will look at selected historical photographers. The evolution of printing and publishing and its impact on society will also be studied. *(Fulfills Humanities requirement.)*

HUMA118 Survey of European Architecture & Design 3-0-3
Provides an analysis of the elements, style and design concepts of period architecture and decorative arts from ancient Egypt to 19th century Europe.

HUMA119 Survey of American Architecture & Design 3-0-3
Provides an analysis of the elements, style and design concepts of period architecture and decorative arts. Students will also compare styles of Europe, previously studied, with styles in America. Prerequisite: HUMA118.

HUMA126 Introduction to Film 3-0-3
This course involves viewing, discussing, researching and analyzing representative films. Students view a variety of film of different genres, answer questions, write papers or present their view-points based on documentation. *(Fulfills Humanities requirement.)*

HUMA200 Film and Society 3-0-3
Studies American film as an expression of American society, with an emphasis on film as a reflection of social trends and changes. Students study 5 *(minimum)* genres: Film Noir, the Western, War films, Science Fiction and Horror films. Film's influence on social and cultural values is discussed. Prereq: ENGL110. *(Fulfills Humanities requirement.)*

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.)*

HUMA210 The Darker Side of Man 3-0-3
Students will critically read and discuss works from primary sources that reveal the dark side of human nature according to the Western tradition. Readings from literature, poetry, drama, philosophy, history and politics form the core of study, as well as related works in art, music, and film as appropriate. One formal research paper and short papers on a weekly basis. *(Fulfills Humanities requirement.)*

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.)

HUMS111 Introduction to Human Services 3-0-3
Introduces the background information and concepts necessary to understand the theory and practice of human services. The information is from the disciplines of history, sociology, and psychology, joined together by values-based themes of social role valorizations, ethical behavior, and philosophy, as well as the practice of work in the human services.

HUMS116 Professional Seminar I 2-3-3
Provides initial exposure to human services programs, agencies, and their consumers. The student will develop professionally and survey human services agencies and programs. Focusing on issues of professionalism, ethics, the development of interviewing skills, and the analysis of case studies, students are expected to become familiar with a variety of agencies or programs. Students will most likely be required to obtain physical exams and a state police criminal check, and will spend 16 hours in site observations.

HUMS117 Professional Seminar II 2-3-3
Introduces students to the field culture of human services. The focus of this skill-building course is to maximize the fit between the students as potential human services providers and the current and future needs of human services agencies. Towards this end, the course includes professional skill development; i.e., a review and expansion of leadership, conflict, negotiation, and group dynamic skills. Students will improve professional relationship skills and required legal knowledge. Students spend 45 hours at a human services agency. Students will most likely be required to obtain physical exams and a state police record check.
Prerequisite: Satisfactory completion of HUMS116.

HUMS210 Substance Abuse Prevention 3-0-3
Focuses on the concepts of substance abuse prevention for today's society. The connection between the science of prevention and the practice of prevention is thoroughly examined to learn what does and does not work. The course covers the basics of alcohol, tobacco and other drugs of abuse, as well as the attitudes of society that help to perpetuate problems with each. Theoretical concepts of prevention and prevailing strategies are discussed and incorporated into hands-on work that will include creating a prevention program; developing a logic model and evaluation tool; preparing a media campaign and communication strategy; searching for and writing a grant for program funding; and presentation of the program concept at a public forum.

HUMS213 Issues in Developmental Disabilities 3-0-3
A seminar course that surveys issues related to understanding developmental disabilities. The first half of the course discusses the major types of developmental disabilities, their causes and treatments, and reviews the physical, psychological, and social impact of having a developmental disability. For the second half of the course, students will select and discuss topics of interest to them. Prerequisite: HUMS111.

HUMS217 Chemical Dependency 3-0-3
Introduces the concepts relevant to the diagnosis and treatment of chemical dependency. Discusses the disease concept of chemical dependency, the concept of denial, and the provision of support and treatment for people with chemical dependency and related issues. Prerequisite: HUMS111.

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. Topics covered include: 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
Introduces residential high pressure, gun-type burners which includes an in-depth, hands-on course covering the components, component testing, replacement, maintenance and burner troubleshooting, and steady-state efficiency testing.
Prerequisite/Corequisite: HVAC113.

HVAC116 CETP Basic Principles and Practices of the Gas Industry 3-3-4
This course, combined with HVAC126, provides the theory and hands-on training to gain national certification in the gas industry's Certified Employee Training Program. Upon successfully passing third party testing, the student will be certified in Basic Principles and Practices, Appliance Installation, and Appliance Service for both propane and natural gas. Basic Principles and Practices teach the student the physical properties and combustion characteristics of propane and natural gas, identifying propane and natural gas industry standards, safety codes and regulations, identifying the basic parts of tanks, cylinders, and bulk storage installations, maintaining a safe working environment identifying commonly used hand tools and supplies, and serving the customer. This course covers more than half of the Appliance Installation Course; the remainder will be completed in HVAC126.Students learn to place propane and natural gas utilization equipment in service, identifying the fundamental principles of venting and ventilation, pressure testing and leak checking propane and natural gas piping systems, controlling propane/air and natural gas/air mixtures for proper combustion, and sizing and installing natural draft venting systems.

HVAC121 Fundamentals of Refrigeration II Theory 3-0-3
A continuation of Fundamentals of Refrigeration I, this course covers electrical circuits, 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 Fundamentals of Refrigeration Lab I, 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.

HVAC126 CETP Gas Appliance Installation and Gas Appliance Service **3-3-4**

This course, combined with HVAC116, provides the theory and hands-on training needed to gain national certification in the gas industry's Certified Employee Training Program. Upon successfully passing third party testing, the student will be certified in Basic Principles and Practices, Appliance Installation, and Appliance Service for both propane and natural gas. This course will complete the Appliance Installation course begun in HVAC116. Here the student learns to place propane and natural gas utilization equipment in service, identifying the fundamental principles of venting and ventilation, pressure testing and leak checking propane and natural gas piping systems, controlling propane/air and natural gas/air mixtures for proper combustion, and sizing and installing natural draft venting systems. Appliance Service will cover identifying trouble-shooting skills in electrical circuits/systems, measuring electrical quantities, identifying operating characteristics and components of common sensing devices, and troubleshooting control devices basic to gas-operated equipment. Prerequisite: HVAC116.

HVAC211 Commercial Refrigeration Theory **3-0-3**

This course 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.

HVAC220 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 basics and 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. This course is intended for students with prior training in electrical theory and practice with electrical equipment. A review of basic electrical theory will precede 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 intended for students who have taken and successfully 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 in order to fully prepare the student for advanced control systems applications. 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 in this class on systems and equipment. Every attempt is made to keep the material in this course as current as possible. This is an advanced course and its intent is to provide the student with the knowledge, ability, and experience to work confidently with existing control technology and adapt to new technology as it develops. Prereq: HVAC243 with a minimum grade of "C" or better.

ID110 Interior Design I **2-3-3**

Students are introduced to the principles and elements of interior design: the application of color and lighting; space planning and design compositions; the use of materials; furniture selection, styles, and arrangements.

ID112 Color in Interior Design **2-3-3**

The planning of color relationships is key to a successful interior design. This course explores the basics of color theory with special emphasis on the specific needs of interior design. Color decisions related to buying furniture, carpet or drapery, choosing paint color or wallpaper, hanging a picture or placing an object, are all explored here. Students will have the opportunity to work with various color media in the lab. This course cannot substitute for CDI122. Prerequisite: ID110.

ID114 Drawing for Interior Design **2-3-3**

Students will develop their freehand sketching skills and design abilities through effective instruction in freehand sketching of interior design elements and furnishings. Success in artistic creativity depends upon extensive visual exposure leading to acute visual perception and imagination. Through beginning, intermediate and advanced scenarios, the student will learn visual literacy and how to interpret various design concepts to the client through sketching presentations.

ID200 Materials and Components **3-0-3**

Surveys the architectural and decorative materials used by interior designers. Presented are 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. Co/Prerequisite: ID110.

ID210 Interior Design II **2-3-3**

Application of the principles and elements of interior design continues with emphasis on public and commercial design. Layouts for interiors, use of color, materials and finishes are studied and employed in a variety of projects through plan, elevation and perspective drawing. Prerequisite: ID110.

ID212 Lighting Design **3-0-3**

A comprehensive course for the advanced interior design student who is familiar with the design process and has fundamental drafting skills. Included are principles of quality lighting as applied to the fundamentals of lighting, elements of lighting systems, case studies and presentation of lighting solutions. Prerequisites: ID110, ID210, BLDG100.

ID215 Textiles **3-0-3**

Covers the study of textile materials with emphasis on fabrics used by interior designers. Fiber content, yarn and fiber type, construction, coloration, and finishes are examined. Projects focus on the use of textiles within residential and office interiors.
Co/Prerequisite:ID110.

ID220 AutoCAD for Interior Design **2-3-3**
A basic 2D drawing course for Interior Design students interested in learning to put their ideas into digital media using AutoCAD software. Covers menus, layers, toolbars, solids, arrays, working with photographs of interiors, color plotting, making blocks of design pieces and dimensioning, drawing of floor plans and evaluations. Prerequisite: CIS110.

ID223 Interior Design III **2-3-3**
Application of principles and elements learned in Interior Design I and II with emphasis on spatial issues. Geared for students who are at least on an intermediate level of design, have knowledge of all of the basic elements as well as competency in drafting, materials, finishings and other similar fundamentals. Emphasis is on the designer's role in helping the clients make sense of their physical world, showing specific ideas and how to implement them and ultimately promote critical thinking. Prerequisite: ID210.

ID224 Professional Practice in Interior Design **3-0-3**
A complete working knowledge of effective business practices such as developing and implementing a good business plan, managing finances, negotiating contracts, price, products and set fees, as well as becoming familiar with business formations, legal responsibilities and selling techniques. The student will become familiar with forms and documents and learn how to adapt them for use by any firm. Prerequisite: ID110.

ID225 Interior Design Internship **1-8-3**
Involves a cooperative work experience program consisting of training in area Interior Design establishments and businesses related to the 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 include resume and cover letter preparation, role-playing of interview techniques, managerial training, and evaluation of career opportunities. Prerequisites: All Interior Design freshmen courses.

ID226 Portfolio Preparation for Interior Design **1-3-2**
Students will produce a professionally mounted portfolio of at least 15 pieces, a press release, a mini-portfolio, and an electronically produced portfolio. They will learn to develop a layout and utilize marketing tools. Preparation for interviews and practice interviews will also be included. Prerequisites: All Interior Design freshmen courses.

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. The course 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 either 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.

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.

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). 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.

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)*. Quadratic functions, composite and inverse functions are introduced. Solving systems of linear equations of three and more variables by matrices and solving systems of inequalities are covered. Solving of exponential and logarithmic equations are introduced.
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**
Covers: functions, relations, graphs, domain and range, composition of functions, inverse functions; exponential and logarithmic functions and expressions; trigonometric functions; fractions, roots and radicals; complex numbers; and the conic sections. Also includes topics in algebra, geometry and trigonometry. Prerequisite: Satisfactory placement test scores as defined by the mathematics faculty; or MATH141 with C or better; or permission from the 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.

MATH214 Calculus II **4-0-4**
A second course in calculus. Topics include area, volume, arc length, surface area, pressure force; integration of trigonometric, 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.

MCOD100 ICD-9-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-9-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 Health Information Services Coding **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**
Students explore, study, and practice numerous administrative responsibilities associated with work in a medial office. Course focuses on career opportunities, professionalism, appointment scheduling, letter composition relevant to the medical office, telephone techniques, office management, banking duties, and maintenance of patient accounts. Electronic Medical Records will be introduced as a vital part of the administrative process. Keyboarding ability is needed to complete course requirements. **NOTE:** A grade of C or better is recommended in this course for successful completion. Prerequisite: ADMN111 and AH110.

MEDA123 Introduction to Pharmacology **3-0-3**
Exposes students to the knowledge necessary for a basic understanding of the principles and practices of pharmacology. Focus is on current and common medications, sources of drugs, sources of drug information, classification of drugs, drug action, adverse affects, contraindications, administration of drugs, drug calculation, medicolegal responsibilities, and the Medical Assistant/Secretary's responsibilities in drug therapy. Simulated problems and case scenarios are based upon actual clinical situations. Prerequisites: AH110, BIOL106.

MEDA124 Insurance for the Medical Office **4-0-4**
Provides students with a comprehensive overview of the tasks and job requirements of the medical biller, specifically in the physician office practice setting. Covers a wide array of skills and knowledge requirements the biller will need to be successful -- from a legal perspective including patient confidentiality and filing legitimate claims, to the proper use of the CMS-1500 claim form, knowledge of medical terminology and usage of correct medical codes utilizing CPT, HCPCS, and ICD-9 manuals. Major insurance carriers are covered as well, including Medicare, Medicaid, Blue Cross, Workers' Compensation and various managed care plans. Prerequisite: AH110.

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**
Explores issues facing medical assistants including: why patients sue, how doctors' offices can protect themselves from litigation, informed consent, types of malpractice, and responsibility. Genetic engineering, sterilization, abortion, AIDS, and the allocation of health care resources are ethical issues to be discussed. The medical assistant's responsibilities concerning malpractice, patient consent, and litigation are also reviewed.

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, considerations will be taken for the physiological aspects of working with special populations. 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. Certificate students may complete an internship during the summer semester following their first year. Degree students are scheduled for internship during their last semester. All internships are unpaid positions and students must be up-to-date on all vaccinations and have completed the Hepatitis B series prior to going on internship. In addition, students must be covered by their own health care insurance and purchase liability/malpractice insurance available through the college. There are no evening or weekend internships. Consult with your Academic Advisor. Coreq: MEDA225. Prereq: MEDA125/MEDA218 with a grade of "C" or better.

MEDA225 Practicum Seminar **1-0-1**
Students in the Medical Assistant Internship course meet for a one-period seminar to review their internship 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.

NURS111 Nursing I **6-12-10**
Students begin learning 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 to assess well patients and patients with common actual or possible alterations in health. The roles of the nurse, communication theory, life span development, ethical-legal standards, and nursing process are basic concepts to the practice of nursing for the Associate Degree Nurse. Students are introduced to the concept that the person is a system in dynamic interaction with the 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 – long term/sub-acute care.
Corequisites: BIOL110, PSYC110.

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. Students plan the care of the patient/family using 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.
Prerequisite: 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 using 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. A research paper is required concerning current health care/nursing trends. 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.)*

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.)*

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.)*

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. Prereq: MATH 080.

PHYS120 Physical Science II **3-2-4**
Continues the "hands-on" exploration of the basic concepts initiated during Physical Science I. 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. Prereq: 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 political process in the U.S., and explains political activity at the 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.)*

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.)*

PSYC110 Introduction to Psychology **3-0-3**
Introduces the various areas of psychology, including scientific investigation and prominent theories. Topics include, but are not limited to, motivation, emotions, personality, physiological foundations of behavior, psychological disorders and therapy, perception, learning, and human development. *(Fulfills Social Science requirement.)*

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.)*

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.)*

PSYC120 Leadership Development **3-0-3**
Studies leadership and the skills of 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. Students develop a personal leadership philosophy and essential leadership skills through study, observation, and application. Prereq: ENGL110. *(Fulfills Social Science requirement.)*

PSYC210 Human Growth and Development **3-0-3**
Covers human growth and development with a specific emphasis on the physical, cognitive, social, and emotional dimensions relative to the prenatal period through later adulthood. An examination of major theorists is presented. Prerequisite: PSYC110. *(Fulfills Social Science requirement.)*

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.)*

PSYC220 Adult Development **3-3-4**
Offers a detailed discussion of adult development, including cognitive, social, and personality development, and other issues. Focuses on the application of theories of typical development to the challenge of aging. Students are 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.)*

PSYC230 Educational Psychology **3-0-3**
Reviews the application of psychological principles to the educational environment. Theories of cognitive processes and development, learning, and social and moral development are discussed as they apply to learning and teaching. Also covers issues involving assessment, classroom management, individual differences, and socioeconomic and developmental influences on learning. Application of theoretical perspectives to classroom teaching will be emphasized. Prereq: PSYC110. *(Fulfills Social Science requirement.)*

PSYC235 Health Psychology **3-0-3**
Examines issues of health and wellness based on the triangle of health psychology: mind, body, and spirit. Covers 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 overall quality of life. Students learn 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. Prerequisite: PSYC110 with a grade of C or better. *(Fulfills Social Science Requirement)*

SOC109 Contemporary Social Problems **3-0-3**
Covers contemporary American social problems from sociological perspectives. Students 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)*

SOC110 Sociology **3-0-3**
Introduces the fundamental theories and concepts of sociology, examines various social institutions, and probes multifaceted dimensions of social issues and events. Also explores collective behavior and social movements. *(Fulfills Social Science requirement.)*

SOC120 Society and Technological Change **3-0-3**
Covers the relationship between technology and society. It is an attempt to identify, analyze, and evaluate technology and its role in society. *(Fulfills Social Science requirement.)*

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, including the influence and pressures of changing social, political, technological, and economic factors. Much of the focus compares ideals with realities of the system. Law enforcement, the courts, and correctional aspects are examined. Prereq: ENGL110. *(Fulfills Social Science requirement.)*

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.)*

SOC210 Changing American Family **3-0-3**
Examines the dynamics of relationships in transition and the changing family unit. Also explores social, medical, spiritual, financial and legal perspectives of relationships, and attempts to answer the question: Is marriage a legal technicality, a symbolic commitment and/or a measurement of maturity? Prerequisite: SOC109 or SOC110. *(Fulfills Social Science requirement.)*

SOC245 Disability Studies **3-0-3**
Introduces the range, issues, and effects of various disabilities across the life span and within the social world. Students will become familiar with different types of disabilities, including intellectual, behavioral, physical, emotional, cognitive, communicative and sensory, and begin to understand how these disabilities impact the lives of individuals and the persons with whom they have relationships. Attention is drawn to the effects of gender, race and class on the personal and social experience of disability. Also focuses on broader social issues affecting disability, including law, economics, and the history of disability in U.S. and Western culture. *(Fulfills Social Science requirement.)*

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: SOC 109 or SOC 110 with a grade of "C" or better. *(Fulfills Social Science requirement.)*

SPAN110 Spanish I **3-2-4**
A fully integrated, introductory Spanish course for beginning Spanish students with little or no prior knowledge of Spanish whose learning objectives and needs are in any of the following categories: for Spanish language students, for business purposes, and for travelers. The emphasis is to develop a proficiency in basic communicative skills concentrating on the dynamic application of the living language 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 the correct usage. Language lab activities reinforce class content. These objectives are achieved through speaking, listening, reading, writing, and cultural appreciation. *(Fulfills Foreign Language requirement.)*

SPAN120 Spanish II **3-2-4**
A continuation of introductory Spanish for students who have the equivalent of one year of high school Spanish or one semester of college Spanish. Designed for Spanish students whose learning objectives and needs are in any of the following categories: for Spanish language students, for business purposes, and for travelers. The emphasis is to

consolidate and reinforce the skills acquired in Spanish I, or equivalent, and to continue building communicative skills and cultural competency. Course reviews basic first-term grammar structures, while developing proficiency and advancement in communicative skills concentrating on the dynamic application of the living language 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 the correct usage. Language lab activities reinforce class content. These objectives will be achieved through speaking, listening, reading, writing, and culture. Prerequisite: SPAN110 or equivalent. *(Fulfills Foreign Language requirement.)*

WELD111 Gas and Arc Welding Lab 0-12-4
At the successful completion of this course, each student will be able to: (1) safely use oxy-fuel cutting equipment to cut shapes and prepare material for welding; (2) safely use oxy-fuel welding equipment to weld various mild steel joints in the four welding positions; (3) safely use 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, including the proper use of drawing equipment, linework and lettering, construction and interpretation of multi-view orthographic drawings, sectional views, and auxiliary views. Other topics include dimensioning and tolerances, sketching and structural steel shapes. Throughout the course, emphasis is 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 use of machine tools in manufacturing and repair environments. Covers turning, milling, drilling, broaching, abrasive machining, and precision measurement. The lab session applies these techniques to manufacture welding fixtures and dimensionally restore parts, which were repaired by welding. Coreq: WELD121.

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, horizonta,l 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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