Welcome to Lakes Region Community College, a fully-accredited, comprehensive community college. Whether your goal is immediate preparation for a career or transfer to a four year university, you will find at LRCC an educational experience that is both stimulating and rewarding.

At LRCC, we offer twenty-four associate degrees and a broad range of certificate programs in an environment that is focused upon student achievement and success. Quality, accessibility and customer satisfaction are the cornerstones of our college. We have a highly qualified, dedicated and caring faculty and staff, whose goal is to ensure that you approach your academic careers with confidence. Your academic success is our primary concern.

Many of our programs are unique and not available at any other community colleges in the State. Electrical Systems Installation and Maintenance, Fine Arts, Fire Science, Graphic Design, Marine Technology, and Energy Services and Technology are a few examples of our signature programs. All of our programs are designed to have a major impact on the professional and educational opportunities available to our students.

The college also provides non-credit courses and workshops both for professional development and personal enrichment. Our Workforce Development Office serves as our outreach to business and industry. We offer customized training to meet specific business needs, offered either on-campus or at the work site.

Our guaranteed transfer agreement with the University System of New Hampshire assures that all of your credits in the Liberal Arts program with a grade of “C” or higher will transfer to the University of New Hampshire, Keene State College, Plymouth State University, and Granite State College. A transfer agreement with Franklin University in Columbus, Ohio, allows students to continue their studies and earn the baccalaureate degree on-line. There are numerous other transfer possibilities as well with excellent four year institutions such as Rochester Institute of Technology and Southern New Hampshire University, for example.

Committed to a supportive student-centered approach to education, the college offers an array of student services including financial aid, tutoring, advising, counseling, athletics, and job placement.

We hope you will take full advantage of the exciting educational opportunities that have been created for you at LRCC. We look forward to meeting you and working with you to achieve your educational goals.

Scott J. Kalicki, Ph.D.
President

ASSOCIATE DEGREES

Accounting – Concentration in Business
Accounting – Concentration in Computer Applications
Advanced Manufacturing
Automotive Service Education Program (ASEP GM)
Automotive Technology
Business Management
Computer Technologies
Computer Technologies – Concentration in Accounting
Culinary Arts
Early Childhood Education
Electrical Power and Control Technologies
Electrical Systems Installation and Maintenance
Electro-Mechanical Technologies
Energy Services and Technology
Fine Arts
Fire Protection
Fire Science
General Studies
Graphic Design
Human Services
Liberal Arts
Marine Technology
Media Arts and Technology
Nursing
Office Technology Management
Office Technology Management – Concentration in Administrative Office Assistant
Office Technology Management – Concentration in Medical Office Assistant
Pastry Arts
Restaurant Management

CERTIFICATES

Accounting
Administrative Office Assistant
Advanced Manufacturing
Application Developer
Associate Teacher (Early Childhood Ed.)
Business Management
Career and Technical Education
Commercial Construction Wiring
Database Administrator
Developmental Disabilities
Early Childhood Education Advanced
Electrical Power and Control Technologies
Electrical Systems Installation and Maintenance
Energy Services and Technology
Fire Protection
Fire Science
Gaming and Animation Developer
Gerontology
Graphic Design
Human Services
Industrial Construction Wiring
Institutional Food Service
Integrated Arts
Lead Teacher (Early Childhood Ed.)
Licensed Nursing Assistant (LNA)
Marine Technology
Medical Office Assistant
National Electrical Code Interpretation
Network Administrator
Pastry Arts
Personal Computer Systems Manager
Residential Construction Wiring
Restaurant Management
Technologies for Education
Website Developer

DRIVING DIRECTIONS to LRCC
From the South:

1. Follow I-93 North and get off at Exit 20 (Laconia/Tilton exit).
2. At the end of the exit, turn LEFT.
3. Continue toward Laconia for approximately 7 miles (You will pass the Belknap Mall on your left)
4. Just past the Belknap Mall, turn RIGHT onto the entrance ramp for US-3/RT-11
5. Take the first exit (Belmont RT-106).
6. At top of ramp, turn RIGHT and proceed on Route 106 South. The College is approximately ¼ mile on the right.

From the North:

1. Follow I-93 South and get off at Exit 20 (Laconia/Tilton exit)
2. At the end of the exit, turn LEFT
3. Continue toward Laconia for approximately 7 miles (You will pass the Belknap Mall on your left)
4. Just past Belknap Mall, turn RIGHT onto the entrance ramp for US-3/RT-11
5. Take the first exit (Belmont RT-106).
6. At top of ramp, turn RIGHT and proceed on Route 106 South. The College is approximately ¼ mile on the right.

From Vermont/the West:

1. Take I-89 south to the RT-11 E - Exit 11- toward NEW LONDON/KING RIDGE RD. 0.17 miles
2. Turn LEFT onto KING HILL RD N/NH-11. Continue to follow NH-11. 10.48 miles
3. Turn LEFT onto FRANKLIN HWY/NH-11. Continue to follow NH-11 W. 11.91 miles
4. NH-11 W becomes US-3. 9.43 miles
5. Turn RIGHT onto US-3 N/LACONIA GILFORD BYP/NH-11 E. 1.24 miles
6. Take the RT-106 ramp toward RT-107/LACONIA/BELMONT. 0.29 miles
7. Turn RIGHT onto BELMONT RD/NH-106. 0.36 miles

From Maine/the East:

1. Take I-95 south to the US-4/RT-16 exit- exit number 5- toward US-1 BYP/PORTSMOUTH/NEWINGTON. 0.29 miles
2. Stay straight to go onto US-4 WEST RAMP. 0.48 miles
3. Merge onto NH-16 N (Portions toll). 20.56 miles
4. Take the RT-11 W exit- exit number 15- toward FARMINGTON/ALTON. 0.16 miles
5. Merge onto NH-11 N. 31.53 miles
6. Turn LEFT to take the US-3 S/RT-11 W ramp. 0.16 miles
7. Merge onto US-3/LACONIA GILFORD BYP/NH-11. 4.16 miles
8. Take the RT-106 S ramp toward BELMONT/CONCORD. 0.32 miles
9. Merge onto BELMONT RD/NH-106. 0.41 miles

DRIVING DIRECTIONS to Belmont Mill:

Culinary Arts Program at Belmont Mill, Belmont, NH 03220

From Rt. 93 North, Exit 20

1. Take exit 20 for US-3/NH-11/NH-132/Laconia toward NH-140/Tilton
2. Turn slight left onto NH-140E/Tilton Rd. - continue to follow NH-140 E (4.6 mi.)
3. Turn right onto Main St. (308 ft.)
4. Take the 1st right onto Mill St. (328 ft.) Food for Thought Café will be on the right

From Rt. 93 South, Exit 20

1. Take exit 20 for New Hampshire 132/New Hampshire 11/U.S. 3/East Main Street
2. Turn left onto NH-11 E/NH-132 N/US-3 N/E Main St
   Continue to follow NH-11 E/NH-132 N/US-3 N
3. Take the 1st right onto NH-140 E/Tilton Rd
   Continue to follow NH-140 E
4. Turn right onto Main St
   Take the 1st right onto Mill St
   Destination will be on the right

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DISCLAIMER

Lakes Region Community College has made every effort to assure the accuracy of the information in this catalog. Students and others who use this catalog should note that policies, rules, procedures and regulations change and that these changes may alter the information in this publication. This catalog is not intended to be a complete statement of all policies, rules, procedures and regulations. More current or complete information may be obtained from the appropriate administrative office on the campus.

The college reserves the right to change without notice any academic or other requirements, course offerings and course contents contained in this catalog.

This catalog does not constitute a contract or terms of a contract between the student and the college.

GENERAL INFORMATION

The Lakes Region Community College is one of seven colleges in the Community College System of New Hampshire. For information on any of the colleges dial toll-free 1-800-247-3420.

COLLEGE MISSION

The mission of Lakes Region Community College is to serve all students seeking a high-quality education, emphasizing active learning and personal attention, whether their goal is to transfer to a four-year college or university, enter immediately into employment in a technical or professional field, or simply improve their current skills and knowledge. We prepare students to meet their personal goals as well as the needs of business, industry, and the community; and we support the community through our involvement in educational, social, cultural and economic development activities.

SYSTEM MISSION

The Community College System of New Hampshire will provide comprehensive, market-driven, accessible, quality programs of higher education and services that respond to the changing needs of students, businesses and communities.

DISABILITIES SERVICES MISSION

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

HISTORY

In the heart of the Lakes Region, LRCC, located on Route 106/Belmont Road, was established in 1967. The main campus underwent a physical expansion in 1980, adding the Robert H. Turner wing to its facility. In September 2005, a new academic building was completed and is home to Computer Technologies, Electrical Technologies, Energy Services and Technology, Fine Arts, Fire Technologies, Graphic Design and Media Arts and Technology.

In 1996, "Community" was added to the college name and as the college grows, plans are underway for new courses, new buildings, and a wider variety of options for learners. However, the basic philosophy remains to provide area residents with a first-rate two-year college education. Our graduates are competitive in the job market, advance on the job and grow as individuals.

In the forty years of its existence, the college has consistently sought to provide quality education, allowing each student the opportunity to choose an occupation of interest and to gain the personal and professional skills needed to be successful in a competitive job market.

The student body has grown significantly and now includes a wide spectrum of ages and experiences. Courses for traditional and adult students are available day and evening and at some satellite sites. Programs uniquely blend theoretical information with practical application and maintain low student-faculty ratio. The faculty is here exclusively to teach and to prepare students for success.

CAMPUS AND STUDENT BODY

The Lakes Region Community College campus is located in the Lakes Region of New Hampshire, adjacent to the Belknap Mountains and the Gunstock Ski Area. The White Mountains Recreation Areas are a short drive to the north, and the cities of Concord and Manchester and the Seacoast are less than an hour to the south. Laconia has a population of approximately 18,000, and Belknap County, in which the College is located, has a population of approximately 62,000.

Approximately 1,600 students attend the College each semester (1040 FTE) in its technical, professional and transfer programs. 54% of the students are male and 46% are female. 61% of the students are enrolled full time in a degree or certificate program, 34% are non-matriculating students, and 5% are enrolled in non-credit courses. The average age of students is 24, with an age range from 16 – 61 overall.

NOTICE OF NON-DISCRIMINATION

Lakes Region 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, political affiliation, veteran status, sexual orientation, or marital status. This statement is a reflection of the mission of the

Community College System of New Hampshire and LRCC and refers to, but is not limited to, the provisions of the following laws:

- Titles VI and VII of the Civil Rights Act of 1964
- The Age Discrimination Act of 1967
- Title IX of the Education Amendment of 1972
- Section 504 of the Rehabilitation Act of 1973
- The Americans with Disabilities Act of 1991
- Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974
- NH Law Against Discrimination (RSA 354-A)

Inquiries regarding discrimination may be directed to **Larissa Baia**, Lakes Region Community College, (603) 524-3207, or to **Sara A. Sawyer**, Director of Human Resources for the Community College System of New Hampshire, 26 College Drive, Concord, NH 03301, (603) 271-6300. Inquiries may also be directed to the US Department of Education, Office of Civil Rights, Region 1, 1875 JFK Federal Building, Boston, MA 02203, (617) 565-1340; the NH Commission for Human Rights, 2 Chennell Drive, Concord, NH 03301, (603) 271-2767; and/or the Equal Employment Opportunity Commission, JFK Federal Building, Boston, MA 02203, (617) 565-3200.
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AFFIRMATIVE ACTION
The College President serves as the Affirmative Action representative for the college. For issues related to Affirmative Action, you may reach the President at Lakes Region Community College, (603) 524-3207.

ACCREDITATION
Lakes Region Community College is accredited by the New England Association of Schools and Colleges (NEASC) Commission on Institutions of Higher Education, a non-governmental, nationally-recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

Accreditation means the institution meets or exceeds criteria for quality as determined through a peer group review process. An accredited college is one that has the necessary resources to achieve its stated purpose through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the future. Institutional integrity is also addressed through the accreditation process.

Accreditation provides reasonable assurance about the quality of opportunities available to students who attend the college.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the college. Individuals may also contact the New England Association of Schools and Colleges, 209 Burlington Road, Bedford, MA 01730, (781) 271-0022.

ENROLLMENT
Students may matriculate in degree, professional certificates and certificate programs on a full- or part-time basis and enroll in classes offered in the day and evening. Students may extend their coursework beyond the number of semesters outlined in the program profiles. Non-matriculated students may attend, taking credit and non-credit courses days or evenings.

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

TRANSFERABILITY
Lakes Region Community College offers over forty degrees, professional certificates and certificates. In addition to these programs, there exists many opportunities to start your education here and continue your education with other institutions of higher education. Our students now benefit from many articulation agreements and guaranteed transfer programs to many other colleges. The transfer process can be started at any time while attending LRCC. A student may enroll at LRCC knowing that they plan to continue their education, or they may decide to continue their education as they work toward completion of their program here. It's never too early, however, the sooner the process is started the easier it is to meet transfer requirements and maximize transfer credits and options.

Students can begin their education at a two-year college in the Community College System of New Hampshire (CCSNH) and transfer their credits toward a degree at a University System of New Hampshire (USNH) college or university. Formal articulation agreements between the two systems now allow for the transfer of general education course credits completed at a CCSNH college to any USNH institution. Many specific program courses are also eligible for transfer. Visit www.nhtransfer.org for more information.

With increased transferability of courses and programs, greater opportunities and possibilities for continuing education now exist. The Associate in Arts curriculum is designed to offer students an opportunity to take the first two years of a liberal arts college curriculum at LRCC and transfer to four-year institutions Students may start these programs in the fall, spring or summer. Grades of a C or better are generally required to transfer. It is important for students interested in transferring or continuing their education to work closely with their faculty advisors, the college transfer counselor and the institution to which they intend to transfer.

COMPLETION/GRADUATION RATE

Of the 222 full-time, first-time degree/certificate-seeking students entering LRCC in the fall of 2008, 79 completed their programs within 150% of the normal time, resulting in a graduation rate of 36%.

CAMPUS SECURITY

Campus Commitment to Safety

All of us at Lakes Region Community College are concerned about the safety and well-being of everyone on campus. Of course, a truly safe campus can only be accomplished through the cooperation of the entire college community, which includes students, faculty and staff. College community members must assume responsibility for their own personal safety and the security of their personal belongings by taking simple, common sense precautions, some of which are outlined in the student handbook.

Security Policies and Procedures

Lakes Region Community College strongly encourages the reporting of crimes, accidents, incidents and other emergencies.

Potential or actual criminal activity and other emergencies can be reported directly by any student, faculty member or employee to the local police department or appropriate faculty/staff at the contact number listed. The college encourages reporting directly to local authorities in situations where the need is obvious, such as a theft you see taking place or the need for immediate medical attention, etc. Notification of college personnel should take place after the emergency authorities are enroute by calling the switchboard or the Student Affairs Office.

Reporting Procedures

To report criminal activity, emergencies or other behavioral incidents you believe require the attention of the college administration, contact Security at 545-4392 or the Vice President of Student Affairs at 524-3207. Students/employees may also report any classroom emergency to the Reception Office. This information will be given to the Vice President of Student Affairs and the Vice President of Academic Affairs. You will be asked to complete an incident report form once the situation no longer poses an immediate threat. These forms are available in the Student Affairs office for your convenience, and a confidential reporting option is also available at http://www.lrcc.edu/crimereportform.html. Do not hesitate to seek the supportive assistance of a member of the Student Affairs staff, faculty/colleague or a close friend.

Annual Crime Statistics					
Category	**2008**	**2009**	**2010**	**2011**	**2012**
Murder, Non-negligent Manslaughter	0	0	0	0	0
Negligent Manslaughter	0	0	0	0	0
Sex Offenses, Forcible	0	0	0	0	0
Sex Offenses, Non-Forcible	0	0	0	0	0
Robbery	1	0	0	0	0
Aggravated Assault	0	0	0	0	0
Burglary	0	0	0	0	0
Motor Vehicle Theft	0	0	0	0	0
Arson	0	0	0	0	0
Liquor Law Arrests	0	0	0	0	0
Liquor Law Violations Referred for Disciplinary Action	0	0	0	0	0

Drug Law Arrests	0	1	0	0	0
Drug Law Violations Referred for Disciplinary Action	0	0	0	0	0
Illegal Weapons Possession Arrests	0	0	0	0	0
Illegal Weapons Possession Violations Referred for Disciplinary Action	0	0	0	0	0
Hate Crimes*	0	0	0	0	0

***Crimes in which victims are selected because of actual or perceived race, gender, religion, sexual orientation, ethnicity or disability.**

If a crime has been committed it must be reported as to the specific location. The following codes will indicate the campus location and be listed in parentheses next to the type and number of crimes.

(A) = on campus
(B) = in or near a non-campus building or property
(C) = public property
(D) = dormitory or other residential facility

The annual report is also viewable at http://www.lrcc.edu/crime-stats.html.

Campus Sex Crimes Prevention Act

In October 2002, the Federal Government amended the Campus Sex Crimes Prevention Act (Public Law 106-386) to require colleges to inform students, faculty and staff where to obtain information concerning sex offenders. Accordingly, the college refers to the State of New Hampshire Sexual Offender website for information. The website address is www.state.nh.us/soupermail/secure/disclaimer.html.

Class & Lab Safety

Proper safety glasses must be worn at all times in all science and technology laboratories when participating in activities where eye injuries might occur. Certain technical labs may require safety shoes/boots or other safety gear. Check with faculty member for specifics. This college does **NOT** provide emergency medical/nursing staff. In the event of an accident, the Reception Office must be notified immediately. When accidents occur, an accident form must be completed and an investigation will be conducted.

ADMISSIONS POLICIES AND PROCEDURES

Admission to the Lakes Region Community College is open to anyone whose academic record and personal qualifications suggest that he or she may pursue profitably one of its programs of study.

The following procedure is to be followed by each applicant for degree, professional certificate or certificate programs. A student must take at least one course per year to maintain matriculated status, or must apply for readmission and abide by any new requirements in force at that date.

1. Submit evidence of graduation from a regionally accredited high school (or its equivalent) with an official transcript of courses, grades and standardized tests.
2. File a Lakes Region Community College application form including the application fee, and when requested, complete a personal interview with a college representative.
3. Participate in the placement exam or other admissions exams as required by specific curricula.
4. Present recommendations from a high school source and/or employer(s) when appropriate. The recommendations should reflect character, personality, special abilities and general qualifications for college study.
5. Submit an official transcript of all previous postsecondary work with course descriptions.
6. Submit the health survey prior to registering for classes. A physical examination may also be necessary to meet the requirements of selected programs, or to participate in athletics.
7. Apprise the college of eligibility for Veterans Administration and other aid programs.

It is the applicant's responsibility to request that official transcripts of previous study be mailed directly to the Admissions Office. High school transcripts must be received prior to consideration of the application.

Official application forms for Lakes Region Community College are available at high school guidance offices, at the college, or from the college's website at www.lrcc.edu. A $20 non-refundable application fee is required. The application fee is waived for Jobs for New Hampshire Graduates when the application is accompanied by a letter from the Community College System of New Hampshire Chancellor. Running Start students are also eligible for an application fee waiver.

Matriculation

A student is considered matriculated if he/she has formally applied and been accepted into a degree or certificate program

by the college Admissions Office, and takes at least one class per semester after being admitted. A student is considered non-matriculated if he/she has not been formally admitted to a degree or certificate program.

Professional Conflict Due to Prior Criminal Convictions
Students may be required to participate in a criminal background check, and should be aware that a prior criminal conviction may affect their ability to enter and/or be certified within a given profession. They should immediately contact the Department Chairperson for the program to which they are considering applying to inquire about possible conflict with their ability to enter the profession in which they are interested.

Processing of Applications
In most cases, applicants will be notified of admission status by mail within 30 days of the date the college receives all necessary admission data and testing is completed. Certain programs, however, have specific application deadlines and notification procedures. Please check the specific program information in this catalog for details.

Residency
A student's permanent home of record determines residency for tuition purposes. Normally, this is the location (town, city, state) from which the student enrolls for college. The determining factor is the official address listed on federal tax returns.

New residents may qualify for in-state tuition only after a one-year period of continuous domicile in New Hampshire, i.e., purchasing/renting property, obtaining a N.H. driver's license, vehicle registration and voter registration. Any request for a change of residency status must be received in writing in the Admissions Office prior to September 1st for the Fall Semester, January 1st for the Spring Semester, and June 1st for the Summer Semester. See the Admissions Office for details listed in the Community College System of New Hampshire policy manual.

Out-of-State Applicants
The determination of residency is made by the Admissions Office at the time of admission. Students who wish to appeal a residency decision may request detailed information from the Admissions Office.

New England Regional Student Program
The New England Regional Student Program (NERSP) enables New England residents to enroll in out-of-state public colleges and universities in the six-state region at reduced tuition rates for certain degree programs that are not offered by their home state public institutions.

Transfer Applicants
Applicants with previous college credit should furnish official transcripts and course descriptions from post-secondary institutions previously attended. **Determination of transfer credit is explained on page 22.**

Transferring Courses
Many programs at other CCSNH campuses serve the entire state. Potential students often wish to take courses in one location and later transfer them to a program in another location. Students should take advantage of such opportunities, but it is recommended that prior written agreement to transfer the credits be secured from the college to which the student wishes to transfer.

Admissions Policy for International Students
International students considering attending Lakes Region Community College should contact the college's Admissions Office for additional information and requirements.

Admissions Policy for Disabled Students
The college shall not discriminate against otherwise qualified handicapped persons solely by reason of his/her handicap. This policy extends to persons with identified, specific learning disabilities under provision of Section 504 of the Rehabilitation Act of 1973. An "otherwise qualified" person is one who is able to meet all program requirements in spite of his/her disabilities. Students with documented disabilities are encouraged to self-disclose their disability to be eligible for reasonable classroom accommodations. These students should provide the Coordinator of Disability Services with the documentation of their disability, including the most recent psychological and academic testing within three years. The Learning Center provides the latest assistive technology as well as tutors and workshops for learning and study strategies, note-taking and organizational skills.
For more information, contact Maureen Baldwin at (603) 524-3207 Ex. 6770

Readmission to the College
A student who has withdrawn from the college, has been suspended, or has not enrolled for three consecutive semesters must apply for readmission through the Admissions Office.

Change of Major
A currently enrolled student who changes major need not submit a new application but does need to complete a Change of Major/Credential form. Students currently enrolled in a program who wish to be considered for admission to the Nursing program are required to submit a new application for admission to the Nursing program along with the $20.00 application fee.

Additional Associate Degrees
Students can have only two majors at one time. To qualify for a second major, the student must have first successfully completed one semester in another major, and then submit a second application for the second major, along with a dual major request form. Both forms are available in the College Admissions Office. A second major is defined as a program of study identified by its own unique title as it appears on the credential, a title different from that of the first major.

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:

1. Complete all requirements of each program of study, including general education requirements not in common with the additional program(s), and
2. Earn a minimum of fifteen (15) additional credits at the college, beyond those required for the first and subsequent degrees, *excluding Credit by Examination, Credit for Experiential Learning, College Level Examination Program (CLEP), and Transfer Credit*.

Matriculated students, who want a credential less than a degree, while still pursuing the degree, can pursue the lesser credential as a second major. The student does not have to withdraw from the degree and apply to the certificate.

COST OF ATTENDANCE

TUITION AND FEES
New Hampshire Residents: $210 per credit
New England Regional Student Program (NERSP): $315 per credit
Out-of-state & International: $478 per credit

VA Students enrolled under the Veterans Educational Assistance Improvement Act of 2010 shall be charged in-state tuition.

GM ASEP Students
Effective Fall, 2011, all New England resident students enrolling at Lakes Region CC in the General Motors ASEP automotive program will be charged in-state tuition rate rather than the New England Regional rate.

A non-refundable Advanced Tuition Deposit of $100 must be paid within 30 days of receipt of letter of acceptance.

ALL FEES SUBJECT TO CHANGE

Full-time status for financial aid and/or insurance purposes requires a minimum of 12 credits each semester, except for co-op students.

FEES (Full and part-time students)
Comprehensive Fee: Students enrolled full or part-time, day or evening, will be assessed a Comprehensive Fee of $6 per credit in each semester of attendance. The fee is administered in part by the Student Senate within administrative guidelines.

Laboratory/Clinic/Practicum: A fee will be charged for laboratory/clinic/practicum or other similar experiences. This fee will be calculated by subtracting the number of class 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. This fee will be charged to all

students with no exceptions. Effective January 1, 2009, no fee will be charged for co-ops and internships. No other lab fees are permitted without the written authorization of the Commissioner of the Community College System of NH.

Example:		**CL**	**LAB**	**CR**	
LSCI1450	Anatomy & Physiology I	3	2	4	4 - 3 = 1 x 60 = $60

Other Fees

Application Fee*.....$20
Graduation Fee (plus $20 for additional or replacement diplomas) $125
Payment Plan Fee (when applicable)* .....$30 or 5% of total charges (whichever is less)
Payment Plan Late Fee $10
Orientation Fee*.....$30
Accuplacer Exam Fee* $20
Protested Checks Fee*.....$35
Culinary Fundamentals (hospitality sanitation test).....$39
LNA Competency exam - written.....$80
LNA Competency exam - clinical.....$80
NLN Pre-Admission Exam Fee.....Up to $70
NLN Pre-Admission Rescheduling Fee $10
ATI Nursing Exam Prep fee for NUR1300.....$195
ATI Nursing Exam Prep fee for NUR2200, NUR1400, NUR2300 .....$110
N. American Board of Certified Energy Practitioners Certification (NABCEP), students $80
N. American Board of Certified Energy Practitioners Certification (NABCEP), non-students....$100
Proctor Exam Fee for non-CCSNH students.....$50
Replacement Fee (unreturned library books) $30
SCBA (Self Contained Breathing Apparatus)** $350
Turn Out Gear**.....$100

*Non-Refundable
***These charges apply to Fireground Procedures classes.*

Graduation Fee Policy

Each student will be charged a graduation fee of $125.00 when he/she files the Intent to Graduate Form. The fee will be used to cover the costs associated with program completion and will be assessed to all students who have completed their program requirements regardless of their participation in the Commencement ceremony
This fee is non-refundable, unless a student scheduled to graduate, including those who are eligible under the 6 credit rule, fails to meet mandatory requirements at the time of Commencement. However, a student eligible under the 6 credit rule who participates in the Commencement ceremony but subsequently fails to complete program requirements will not be entitled to a refund.

Liability Insurance

Student Personal Professional Liability Insurance is mandatory for all students in health and human service related programs which include clinical requirements. This may also be required for students in other programs who participate in an off campus practicum or internship. Fee ranges from $20.00 to a max of $65.00 per year.

New England Regional Student Program (NERSP)

The New England Regional Student Program provides qualified out-of-state New England residents with reduced tuition based on in-state tuition plus 50 percent. Eligibility for this program is established if the academic program to which the student is applying is not offered in the student's home state, or if the program offered at this college is closer to home. Determination of eligibility is the responsibility of the Vice President of Student Affairs. NERSP students are liable for full payment of all fees.

Senior Citizen Tuition

Senior citizens (65 or older) will pay 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.

Payment of Tuition
It is the policy of the College to require payment or arrangements for payment of all semester charges 10 calendar days prior to the start of the semester. Failure to make payment in full or arrangements for payment 10 days prior to the start of the semester may result in the cancellation of the student's registration. Students will then need to re-register and make payment or arrangements for payment providing that the course(s) still has space available. Each semester/session of the college year, including summer sessions, is billed separately. **Effective Spring Semester 2012, students *will only receive tuition bills electronically*. New e-bills will be sent via e-mail message to a student's College e-mail address upon registration.**

Tuition is based on a per credit charge. Students enrolled in 12 credits or more are considered full-time students. Credits earned during co-op work experience are college credits for which there are tuition fee charges payable by the student.

Books, Tools and Supplies
The college furnishes much of the necessary lab equipment and tools, but students must purchase their own textbooks and personal equipment. Faculty advisors of each curriculum will discuss these needs during the orientation/advising process. The cost of textbooks and supplies varies with each program.

Delinquent Accounts
An account becomes delinquent 30 days after the start of the semester. Any account unpaid or in arrears for more than 60 days will be referred to the College System Office Collection Department. Accounts that continue to be delinquent will be referred to a private collection agency by the College System Office. Please note that additional fees of up to 35% of the amount owed to the college will be assessed by the collection agency. Once the account goes to a collection agency, the student can no longer rectify the situation with the college, but must resolve it directly with the agency.

Protested Checks
The college will charge a $35 fee for any check, draft or money order returned for insufficient funds, plus all protest and bank fees, in addition to the amount of the check, draft or money order, to the person presenting the check, draft or money order to the department or institution to cover the cost of collection.

Student Account Deferred Payment Based on Student Hardship
1) If a student requests a deferred payment based on known student hardship, the request shall be made in writing to the president. Evidence of good cause to receive a student hardship deferral shall include, but not be limited to:
   - death in the student's family;
   - medical emergency;
   - military commitments;
   - family emergency; or
   - a similar problem beyond the control of the student
2) Within 10 calendar days of the date of receipt of the student's request for a deferral, the president shall grant or deny the request. FINANCE 13 10/18/07
3) Upon approval, the following requirements and procedures shall apply:
   - The president shall execute a written agreement with the student.
   - The agreement shall state when full payment is due.
   - The agreement shall state how full payment is to be made.
   - The agreement shall be dated and signed by the president and student.
   - The agreement shall be on file in the business office.

Payment Plan: A payment plan is available through E-Cashier NELNET. Go to www.lrcc.edu and look for the link to E-Cashier for more information or contact the Business Office at the College.

Tuition Refund Policy
Effective Fall Semester, 2011, students who officially withdraw from the college or an individual course by the end of the fourteenth (14th) calendar day of the semester will receive a 100% refund of tuition, less non-refundable fees. Students in classes that meet in a format shorter than the traditional semester (15-16 weeks) will have seven (7) calendar days from the designated start of the term to withdraw for a full refund. If the seventh (7th) or fourteenth (14) calendar day of the term falls on a weekend or holiday, the drop refund date will be the first business day following the weekend or holiday. Exception: students in courses that meet for two weeks or fewer must drop by the end of the first day of the class in order to get a 100% refund. Students registered for workshops must withdraw in writing at least three (3) days prior to the first workshop session in order to receive a full refund of tuition and fees. **STUDENTS WHO HAVE NOT MADE PAYMENT**

ARRANGEMENTS 10 CALENDAR DAYS PRIOR TO THE START OF THE SEMESTER (OR ALTERNATIVE TERM START DATES) WILL BE DROPPED FROM THE CLASS ROSTER.

All Federal Title IV funds (i.e., Pell, SEOG, Perkins Loan) are prorated and refunded according to the rules and regulations mandated by the U.S. Department of Education.

Students registered for workshops through system divisions of Community Education or Center for Workforce Development must withdraw in writing at least three (3) business days prior to the first workshop session in order to receive a full refund of tuition and fees.
In extenuating circumstances, the President (or designee) is authorized to offer alternative compensation in the form of tuition credit or waiver to students on a case-by-case basis. Tuition credit on a student account must be used within one calendar year from the date of authorization.

Tuition Refund/Tuition Credit/Tuition Waiver Policy
Tuition Refund
The policy of the Community College System of New Hampshire is to grant a refund of tuition only when a student formally withdraws by the 14th calendar day of the semester or other prorated enrollment period.

Under special circumstances and for compelling reasons beyond a student's control, the College may grant an exception to this policy. Students may request such an exception by completing a form available from the office of the Vice President of Student Affairs.

Tuition Credit
A tuition credit must be requested in writing and is granted when circumstances meet one of the following criteria: a death in the family, a medical emergency, a military commitment or a situation beyond the control of the student. In addition, a tuition credit is granted only when tuition has been paid. Tuition credits are not given when the account shows an outstanding balance. Tuition credit forms are available from the office of the Vice President of Student Affairs.

Tuition Waiver
A tuition waiver may be granted when circumstances meet one of the following criteria: a death in the family, a medical emergency, a military commitment or a situation beyond the control of the student. Tuition waiver forms are available from the office of the Vice President of Student Affairs.

FINANCIAL AID

The college is well aware of the financial burden of meeting college costs. The Financial Aid Office at the college encourages students to apply for assistance. The basic forms of assistance available are scholarships, grants, loans and work-study. The Federal College Code on the FAFSA for LRCC is: 007555.

To be considered for aid, the student must first be admitted into a program of study that leads to a degree, professional certificate or eligible certificate. Second, the student must be making satisfactory academic progress and must demonstrate financial need.

In order to be evaluated for aid, the student must complete the following:

1. The Free Application for Federal Student Aid (FAFSA). File the FAFSA electronically at www.fafsa.ed.gov.
2. Any other required documentation upon request.

Note: Federal, state and private scholarship funds are often limited. Applicants with greatest financial need receive first consideration for assistance. Application materials should be filed by May 1 to receive priority consideration.

Admission, registration and class attendance must be confirmed before financial aid reimbursement expense checks can be issued to the student. Please allow at least 30 days from the beginning of the first class. In addition, books ($800 estimated per year) must be paid for in cash, by credit card or by check. Students experiencing difficulty should contact the Financial Aid Office.

SOURCES OF FINANCIAL AID

The following are brief descriptions of various programs, scholarship opportunities, and miscellaneous sources of possible support. More detailed information about these matters and application procedures can be obtained by visiting the Financial Aid webpage at www.lrcc.edu.

GRANTS

Federal Pell Grants

The Federal Pell grant program provides need-based grants to low-income students. Pell grants range from $287 to $5645 for full-time students. Use the FAFSA to apply for a Federal Pell Grant. Students with a Bachelor's degree are not eligible.

Federal Supplemental Educational Opportunity Grant Programs (FSEOG)

This is a smaller grant program funded by the federal government and the institution for the neediest students. Awards range between $100 and $1000 at the colleges in this system. Use the FAFSA or Renewal FAFSA to apply for this grant. Students with a Bachelor's degree are not eligible.

Carl Perkins Grant (formerly Project: RENEW)

Project RENEW provides financial support for single parents and displaced homemakers who are pursuing an education. Money available through this federal college grant program is used for tuition. Students must file an application form and essay. Awards are based on need, number of dependent children, whether the student is working and whether the student has other sources of income.

LOANS

The Federal Perkins Loan program provides funding for the neediest students. This loan program carries a 5 percent interest rate. Students are generally awarded $200-1,500 per year, with repayment beginning nine months after leaving college.

Direct Subsidized Stafford Student Loan

This is a loan program that is subsidized by the federal government (subsidized loan is a loan that will not accrue interest during enrollment periods of at least half-time status). Students enrolled below ½ time (6 credits or less) for any given term are ineligible for loan disbursements. First time borrowers must complete entrance counseling and complete master promissory note at www.studentloans.gov.

Direct Unsubsidized Stafford Student Loan

This loan program follows similar criteria as the subsidized Stafford student loan except the student is liable for the interest while in school. Student enrolled below ½ time (6 credits or less) for any given term are ineligible for loan disbursements. First time borrowers must complete entrance counseling and a master promissory note at www.studentloans.gov

Direct Parent Loan for Undergraduate Students (PLUS)

Parent Loans for Undergraduate Students are available to provide additional funds for educational expenses. These loans are made to parents of dependent undergraduate students. Parents may borrow up to the student's cost of attendance less anticipated financial assistance. More information is available on-line at http://ccsnh.edu/links.html.

Alternative Loans for Parents and Students

These programs are developed by various agencies to assist parents and students meet their educational expenses. Such funds may assist families that do not qualify for, or need to supplement, other forms of financial aid. More information is available on-line at: http://ccsnh.edu/links.html.

FEDERAL WORK-STUDY PROGRAM

Three different work-study opportunities exist at Lakes Region Community College. Hourly wages range from $7-9 per hour.

On-campus part-time jobs are available throughout the campus.

Off-campus limited part-time jobs are available throughout the community in non-profit agencies. Students must provide their own transportation.

America Reads Program offers part-time placement in area elementary schools. Students provide reading tutor skills for grades K-3. Geared for Early Childhood Education majors, this opportunity is also open to all eligible students. Students must provide their own transportation and background search costs.

SCHOLARSHIPS
Students are urged to investigate private scholarship opportunities. Many religious organizations, clubs, businesses, banks and individuals provide scholarship assistance. Visit our Financial Aid webpage at www.lrcc.edu for more scholarship opportunities and applications. The following are examples of such voluntary assistance:

Foundation of the Flexographic Technical Association – The Foundation of the Flexographic Technical Association offers several significant scholarships for students with a "B" or better average who demonstrate interest in a career in flexography/graphic arts.

Dale T. Jones Memorial Scholarship – Available to students from Vermont, enrolled full-time, in a Fire Technology curriculum.

Lakes Region Scholarship Foundation – A number of scholarships are offered to residents of Laconia, Gilford, or Belmont, or to graduates of Laconia, Gilford, or Belmont High Schools. Applicants are selected on the basis of academic achievement, extracurricular activities, self-help through employment and savings and with consideration of students' plans and financial needs.

NASA Space Grant/PSNH Scholarship
The NASA Challenge Scholarship was created as an initiative to promote scientific and technical careers, and to encourage enrollment in math, science and technology programs at the college. The application consists of three parts: the FAQ's (Frequently Asked Questions), the two-page application and the Recommendation Form. Deadline dates are May 15th for announcement on June 1st, and if there are still funds available, a second round of applications will be accepted until August 30th for announcement on September 6th.

New England Graphic Arts Scholarships – Awards ranging from $500 to $1,300 are made for each of two years to applicants who have indicated an interest in continuing in graphic arts. Eligible applicants must be residents of New England and be admitted to the Graphic Design program at LRCC. Senior applicants must possess at least a 2.5 academic average.

New Hampshire Charitable Fund Scholarships – New Hampshire residents pursuing undergraduate study are eligible to apply for scholarships based upon academic achievement, extracurricular participation and demonstrated financial need.

NH Scholars CCSNH Scholarships

- Each CCSNH college will provide annually a $500 scholarship for up to 12 scholarships in high schools in its region for students who successfully complete the NH Scholars program (max cost = $6000).
- The scholarship will be applied to the first $500 of tuition and fees only at the CCSNH college awarding the scholarship. Scholarships are not transferrable to other CCSNH colleges.
- The scholarship is valid for one year following the student's high school graduation date.
- While priority will be given to high schools within their regions, Presidents, at their discretion, may offer scholarships to students outside their respective regions.

SEMA Memorial Scholarship Fund
The SEMA Memorial Scholarship Fund was founded in 1984 to foster leadership in the specialty equipment marketplace and support educational goals for students pursuing careers in the automotive aftermarket. SEMA Scholarships are awarded annually and have been distributed to hundreds of students in support and encouragement of their educational goals. More information and applications can be found on the SEAMA website, www.seam.org/scholarships.

OTHER SOURCES OF AID

POW/MIA Children's Benefits – Children of persons domiciled in New Hampshire while serving in the U.S. Armed Forces after February 28, 1961, and officially interned or missing in action during the Southeast Asian conflict, are eligible to receive full tuition. Information may be obtained from a high school guidance counselor or the State Board of Education, Concord, NH 03301.

Veterans Administration Assistance Program – The programs of the Lakes Region Community College are approved by the New Hampshire State Approving Agency (Postsecondary Education Commission) for Veterans Education Programs for persons eligible for educational benefits under the GI Bills. Students who have questions about their eligibility should call the Veterans Administration at 1-888-442-4551. Students who request veterans' educational assistance are required to have all

previous postsecondary experience evaluated for possible transfer credit in order to be eligible for benefits. For more information, contact the Registrar's Office.

VA Students enrolled under the Veterans Educational Assistance Improvement Act of 2010 shall be charged in-state tuition.

Veterans' Dependents and Survivors – Education benefits for up to 45 months may be paid to a student whose parent was permanently disabled or died in service or of service-connected disabilities. This benefit is also extended to wives, widows or widowers. There are also allowances for non-service connected disabilities. (See registrar's office for more information)

War Orphan Benefits – Residents of New Hampshire, age 16-25, whose veteran parent(s) died as a result of service in World War I, World War II, the Korean conflict or the Southeast Asian conflict and whose veteran parent(s) were legal residents of New Hampshire at the time of death are eligible to receive full tuition and a maximum of $250 per year for room, board, books and supplies. Information can be obtained from: The NH Postsecondary Education Commission, 2 Industrial Park Drive, Concord, NH 03301.

REFUND OF TITLE IV FUNDS FOR FINANCIAL AID RECIPIENTS

A Financial Aid recipient who does not complete all of the days he/she was scheduled to attend during the payment period may be required 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 the Direct Loan program (student loans), the unearned portion of the loan money will be returned to the Department of Education.

The exact amount returned will vary depending on the amount of grant and loan money received and at what point the student withdraws from the college.

In addition, the student is 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 Direct Loans (DL). If a student is in the first year of an undergraduate program, is a first-time borrower under the DL Program, and withdraws from the college prior to 30 days into the term, the student becomes INELIGIBLE for the Direct Loan.

Students who choose to withdraw from the college must complete an official Withdrawal Form. This form must be signed and returned to the Registrar's office.

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 2/3 of the credits attempted
Maximum Timeframe Component	Can receive financial aid for up to 150% of the number of credits

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	2.00	1.70
28 – 40		1.80
41+		2.00

QUANTITATIVE STANDARD

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

For example, a student who has enrolled in 36 credits throughout 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 Probationary Periods?	Yes, Probation prior to Suspension
Is there an Appeal Process?	Yes
Can you re-gain 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 will no longer be eligible to receive FSA at the institution until such time that s/he is able to meet the standards of SAP.

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

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

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

DEVELOPMENTAL/REMEDIAL/ESL COURSES – Credits from these course 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. Full tuition is charged for all audited classes. See full audit policies.

CREDIT BY EXAMINATION
Financial Aid does not cover courses in which a matriculated 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. The cost of credit by examination is $25 per credit.

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.

VETERANS ADMINISTRATION
The Registrar's Office Veteran's Certifying Official assists students in receiving their VA educational assistance entitlement. Enrollment certifications are electronically reported to the Veteran's Administration after the add/drop period. Any changes in enrollment status will be reported to the VA, which may affect your benefit payments.

New Veteran Students:
1. Complete VA Form 22-1990 (Application for Educational Benefits) available online at www.gibill.va.gov or in the Registrar's office. This form should be mailed to the VA Regional Office in Buffalo, NY. It may take 8-12 weeks for your claim to be processed. If you have already applied for the benefits, please provide a copy of your Certificate of Eligibility, issued by the VA, to the Veteran's Certifying Official.
2. Provide a copy of your separation papers, DD214 (active duty) or an original "Notice of Basic Eligibility" from your reserve unit (reservists), or, if you have already applied for benefits, please provide a copy of your Certificate of Eligibility, issued by the VA.
3. Apply for admission into an eligible degree or certificate program with our Admissions office.

You will find additional information on how to apply for educational benefits, benefit eligibility and changes in enrollment status online at www.gibill.va.gov or you may contact the college Veteran's Certifying Official at (603) 524-3207 Ext 6721.

Complete Financial Aid Handbook is available on-line at http://www.ccsnh.edu/links.html

STUDENT SERVICES

Mission Statement
Student services provides high-quality, student-focused support, assistance and services responsive to individual needs in a caring environment that enhances success and empowers students to maximize their potential.

The administration, faculty and staff regard student services as an integral part of the total educational experience at this college. A wide range of student service programs helps to meet the needs and interests of the student body. Every effort is made to know students as individuals and to serve their needs individually.

Academic Advising
Academic advising is available to all matriculated students. A faculty member is assigned to assist the student from matriculation through graduation. The academic advisor helps a student register for courses and approves all registration decisions; including course add/drop changes and withdrawals. The advisor assists students in identifying academic and personal resources on campus, and helps students select and choose various program options. Advisors may help students with decisions about career goals or further education. The more clearly students define and communicate their own goals, the more productive the student/advisor relationship.

Activities and Sports
Students at the college often organize their own activities guided by faculty advisors and supervised by the Vice President of Student Services.

The college offers a variety of intramural sports for students. We recognize the value of providing recreational programs to facilitate student interaction outside the classroom. Our main objective is to allow students the flexibility needed to properly balance their interest in recreation with academic success. The determining factor for athletics depends on student interest.

The Student Senate shares in the responsibility of promoting and coordinating student events and activities, and is responsible for allocating and disbursing student activity funds to support extracurricular activities/sports.

Activity Period
Two activity periods during the school week with minimal classes scheduled provide time for college activities including Student Senate and Honor Society meetings; student participation in clubs and activities of special interest; faculty and staff meetings; and seminars and discussion groups on various subjects such as health, law, politics, social issues and academic topics.

Alumni
Alumni are an essential component of collegiate success, and the largest group within the college community. Because a larger association of alumni strengthens us, the college encourages all its past students to remain actively involved

through guest lecturing, attending events, annual giving, promoting the college, and staying connected with those who shared the same college experiences. For many, attending college in Laconia was a life changing experience they will remember forever. Because our students live all across New England, the nation, and right here in our home community, one of the most valuable roles they play is to provide opportunities to other and future alumni in employment, leadership, and scholarship. In turn, it is the college's responsibility to provide our alumni with opportunities in career development, job postings, and maintaining an alumni association. To stay connected with the college, look for job assistance, post an opportunity, or to make a donation to the college, please contact the alumni office or visit the alumni page on the college's website at www.lrcc.edu.

Bookstore
All required textbooks, supplies and college novelty items are available through the bookstore, a contracted subsidiary of Follett Higher Education Group. Store hours are from 8:00 a.m. – 1:00 p.m., Monday – Friday, and extended hours at the start of each semester.

The Bookstore offers cash, check, MasterCard and Visa. The only non-cash services offered are based on written authorization from approved agencies.

The Bookstore now offers a Textbook Rental Program (not available on all textbooks). To be eligible to rent you must be 18 years or older, have a valid ID or be accompanied by an adult, credit/debit card for collateral (We won't charge it without telling you!) and email address (Choose one you check frequently – we'll send you important information regarding your rental.).

The Bookstore buys back books year round, at 50% of the new price for books, in good condition that have been ordered for the upcoming fall or spring semester, even is purchased used. **The half-price buying periods begin at finals and ends two weeks prior to the start of the new semester.** Current wholesale prices, determined by the Used book Wholesaler, will be offered for books for which a written book order has not been received.

College Transfers
The College is ready to assist students in identifying transfer opportunities to four year partners. Some of the transfer opportunities include transferring with junior credit status. All graduates of the College are encouraged to continue their education, and advisors play a key role in assisting in a transfer match.

Counseling
The college provides academic and career counseling services to all students. Counseling services assist students in successfully meeting academic goals and/or overcoming personal problems. Personal crisis counseling however should not be used as an appropriate substitute for long-term therapy. Students are encouraged to speak with the college counselor who works with them to identify and eliminate barriers to success. All counseling is confidential. Students may refer themselves for counseling services. The college also makes referrals to appropriate local health and social service agencies. The counselor implements the college's early intervention efforts for students experiencing academic difficulties in their classes.

Food Service
Food service is provided through a contracted caterer who offers a reasonably priced light breakfast, lunch, and dinner each weekday when classes are in session. The posted hours of operation are convenient to students. The college also operates the Food for Thought Café in the Belmont Mill just a few miles south on Route 106. The Café, operating in conjunction with the Restaurant Management and Culinary Arts programs, offers a very reasonably priced lunch menu several days a week.

Health Record
Each student must have a student health form, including proof of immunizations, on file at the college before registering for classes. Students enrolled in Nursing, Culinary Arts, Early Childhood Education and Fire Science, must also complete a physical examination prior to the beginning of the semester. Failure to provide documentation may remove a student from clinical/lab or team roster.

As a prerequisite to matriculation, all newly entering students, regardless of age, shall present documented proof of immunization against measles, mumps, rubella, tuberculin skin infection and tetanus as outlined in the college's immunization policy.

Honor Society
Students who have completed a minimum of 12 college-level credits with a 3.5 cumulative grade point average are invited to become members of Phi Theta Kappa National Honor Society for two-year colleges. The society was established to maintain and perpetuate the qualities of scholarship, leadership, service and fellowship. Initiation ceremonies are held during the academic year. Only matriculated degree students, full-time or part-time, day or evening, are eligible. Certificate and professional certificate students are not eligible.

Housing
While housing is the responsibility of the student, the college provides a comprehensive list of housing available within close proximity of the college. Because of the seasonal nature of the Lakes Region, LRCC is especially fortunate to have many housing opportunities available to its students. Condominiums, housekeeping cottages, motel efficiencies, private boarding and apartments are available. In addition, limited dormitory housing with a meal plan is available 30 minutes' drive from Laconia at our sister college, the New Hampshire Technical Institute, in Concord. This option is available on a space available basis and may not be an option in some years.

Insurance
The college offers an optional student accident and medical insurance plan, at a reasonable cost, with family coverage for students with families. Comprehensive health insurance is required for all health program students prior to beginning clinical experience. Health insurance is also required for Fire Science students and all students participating in intercollegiate sports. Insurance plans are available on an annual basis. The admissions office provides information on insurance.

Teaching, Learning & Career Center
The Teaching, Learning & Career Center, available to all students, offers a full range of academic and support services to enhance the educational opportunities for all students by giving them the tools to foster independent learning. The Center has a growing list of resources including books, handouts, video and audio tapes, computerized tutorials, and advanced assistive technology. Its human resources include learning specialist facilitators, peer and master tutors, and two reading specialists.

The Center provides training in writing, organizational and study skills, note taking and time budgeting. Tutoring is offered in almost all subject areas and master tutors will assist in some math classrooms.

Students who need academic support or who want to advance more rapidly in an academic area may contact the Center. Staff members will assist in meeting the individual student needs. Staff will also work with faculty for additional support or conferencing.

The TLC offers career support in the following areas:

- Resumes, cover letters, interviews, protocol sessions
- Job listings emailed to students
- Monthly newsletter provides job updates and career workshops

Part-time Employment
The college provides assistance in obtaining part-time work while in college through a campus job-referral service. Part-time jobs are posted on a bulletin board for students to pursue. Students should plan a reasonable balance between work hours and study requirements.

Peer Mentors

Peer Mentoring is an important service the school provides to our students free of charge. Peer mentoring is available for students enrolled in courses at LRCC. Students needing tutoring/ mentoring services should come to the Teaching, Learning and Career Center (TLC) Office (room 141) and fill out the "Request for Tutoring/ Mentoring" form. Tutors/mentors are available for most courses including math, college writing, accounting, computers and business management courses. Peer mentors are students (18 years and older) who have successfully completed the courses in which they are mentoring or have proven expertise on the subjects and are validated by a professor. Mentoring sessions are on a one-to-one basis and allow students to ask questions, learn at their own pace, and receive immediate feedback.

Master Mentors/Tutors
We also encourage anyone interested in <u>being</u> a tutor/mentor to see the tutor/mentor representative in the TLC Office. Our "Peer" mentors are paid hourly wages. Master Mentors/Tutors are also available for English, math and other various subjects. Please contact the Teaching, Learning & Career Center for additional information.

Services for Students with Disabilities
In compliance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act of 1991, LRCC does not discriminate against students with disabilities in the admission process or in accessing opportunities for academic success. Students with documented disabilities are encouraged to disclose their disability in order to see if they qualify for reasonable classroom accommodations.

Information regarding students' disabilities is kept confidential. The services available to students with disabilities vary according to the students' individual needs. Students without documentation, but who suspect that they might have a disability, should contact the Director of the Teaching, Learning & Career Center to discuss support service options.

Library
Bennett Library supports and enhances on-campus and distance learning for LRCC students with a wide variety of print, electronic, and multimedia resources. Reference and interlibrary loan services assist with research and informational needs. The Bennett Library webpage (http://www.lrcc.edu/library/index.html) provides 24/7 access to the online catalog, Ebscohost databases, Ebrary and netLibrary electronic book databases, and web links to other information resources. The Library staff collaborates with faculty to provide materials that support the programs and mission of the college, and to provide instruction to students in learning how to find, evaluate and use information – a life-long skill. The Library Computer Lab offers internet access and Microsoft Office software applications for research and for class projects. Wireless access is also available. The Library is open year round with abbreviated hours during the summer and holidays.

Placement/Transfer Opportunities
The Community College is proud of its continued excellent job placement record. Typically, between 89 and 93% of graduates find jobs related to their field or continue their education at a four-year institution.

Traditionally, the starting salary for graduates ranges from $22,000-$45,000. Below is a sampling of careers and salaries:

CAREERS	SALARY
Associate Degree Nursing	$39,000
Business Administration	$25,000
Computer Technology	$41,080
Culinary Arts	$30,000
Firefighter	$34,000
GM Automotive Technician	$30,000
Marine Engine Technician	$32,000
Office Technology Management	$22,500
Restaurant Management	$25,000

Faculty advisors maintain close contact with business and industry representatives and actively assist students in locating job opportunities. The college also assists students in the area of resume development, job interviewing techniques and career counseling.

Student Email Accounts
The college email network facilitates communication between students, faculty and the college community, including Blackboard. Students will be assigned a student email address within 24 hours of course registration and will no longer be allowed to change their primary e-mail address in Blackboard or SIS. This email account will serve as the official account for all electronic communication with the College. Your address and password are displayed under the Personal Information Menu in the secure area of the Student Information System. For more instructions regarding student email go to http://mymail.students.ccsnh.edu.

Student Information System
Students may access their college information online at www.lrcc.edu. The Student Information System (SIS) allows current students to register for classes, check seat availability, look up instructor email addresses, and to view class schedule, grades, financial aid status, student billing account and personal information.

Setting up your new Student Account on the Student Information System
If you have never accessed the SIS before, please use the following instructions to set up your student account:

- Go to the college web page at www.lrcc.edu and click on "Student Information System", and select "Enter Secure Area".

- Enter your LRCC ID#. Your LRCC ID is the assigned @ number (including the "@" sign). If you don't know your College @ID#, email Laconiahelp@ccsnh.edu or contact the Registrar's Office.
- Create your Personal Identification Number (PIN)
  1. Enter your six digit date of birth (MMDDYY) or the last six digits of your User ID as the PIN. You will be prompted to reset/create a new PIN for future access.
  2. Use your DOB or last six digits of your User ID as your old PIN, enter a new PIN (must be 6 - 15 numbers; do not use letters or characters), reenter your new PIN.
  3. Choose Security Question - Choose a question to reset your PIN in the event you forget it. Please use a question with an answer that is private and will not change in the future, such as your mother's maiden name.

Please protect your privacy and the privacy of others and do not share your PIN with anyone else.

If you have any questions regarding the Student Information System, please contact the registrar's office at 603-524-3207.

LRCC ALERTS
LRCC students are automatically registered to receive alerts via college email, but need to register (opt in) and provide emergency contact information to receive ALERTS via phone and/or text messaging.

There is no charge for **LRCC ALERTS** however students should check their phone plans for potential charges associated with text messaging. Be aware that LRCC will not reimburse for text messages.

To Register for LRCC ALERTS:
1. Have your Student ID and CCSNH email address handy – you will be asked for this during the registration process.
2. Visit www.lrcc.edu
3. Look for the LRCC ALERTS logo and click on it.
4. Read the important information and when you are ready, click on the link to register.

Call 603-524-3207 with any questions.

Student Senate
The experience of attending Lakes Region Community College is not limited to the academic life of the student. Our college philosophy is to educate the entire person so that he or she adapts to the ever-changing world.

The Student Senate serves as the governing group for the student body, with representatives elected from each curriculum. These representatives accept the challenges of leadership, authority and responsibility in dealing with their peers, faculty and administration. The Student Senate provides experiences that promote the general welfare of every student, plans social and cultural activities, and manages the expenditure of student funds. Activities may include field day, films, concerts, bus trips, lectures, clubs, athletic and social events.

ACADEMIC POLICIES/PROCEDURES

Academic Philosophy
At Lakes Region Community College, students are exposed to various methods of instruction. While some courses are lecture-based, others subscribe to a performance-based, student-directed learning philosophy. Performance-based learning is a systematic, organized approach to education and training that specifies the knowledge and skills required for graduates to perform competently and confidently in a rapidly changing economy and society. Programs and courses are structured within a competency-based framework. By defining competencies (knowledge, skills, and attitudes) in each course, educators and learners work together to maximize the potential of each individual in the learning process. Intellectual, interpersonal and physical-manual competencies are assessed continuously to assist learners in improving their performance. The college continually strives to provide a physical, intellectual and social environment that supports the unique learning styles, backgrounds and needs of each individual.

ACADEMIC REQUIREMENTS
Associate Degree

The Associate Degree prepares students for immediate employment or the opportunity to further their education. The curriculum provides students with the tools to think critically, reason, compute, communicate, and adapt to change. Associate Degree candidates must meet the following requirements:

1. A minimum of 64 semester hours.
2. A minimum of 32 semester hours in major and related courses.
3. In addition to major courses, a 24 semester hour minimum core program in general education courses consisting of:
   a. English Composition and Literature/Communication — 6 Semester Hours
   b. Science — 3-4 Semester Hours
   c. Mathematics — 3 Semester Hours
   d. Social Science — 3 Semester Hours
   e. Humanities/Fine Arts/Foreign Language — 3 Semester Hours
   f. Liberal Arts Electives — 6 Semester Hours*
   (minimum of two courses and six credits from areas a-e above)

   *The Associate in Applied Science requires 3 Semester Hours in Liberal Arts
4. The remaining eight semester hours or more shall include either technical or general education courses.
5. Any credit granted through options will count towards degree/professional certificate/certificate requirements, but will not be included in computing grade point averages.

Professional Certificate

All professional certificate programs require a minimum of 20 semester hours in major and related courses, as well as 12 semester hours from the general education core. A cumulative grade point average of 2.0 or higher is required. Only those courses in the certificate will be used to calculate the GPA.

Liberal Arts Categories

Liberal Arts courses are categorized as follows:

English	Courses with LENG prefixes and LHUM1600
Humanities	LENG2230, LENG2240, LENG2460, LENG2500, LENG2540, LENG2550, LENG2560, LENG2570, and courses with LART, LFRE, LHIS, LHUM, LPHI and LSPA prefixes
Literature	LENG2230, LENG2240, LENG2460, LENG2500, LENG2540, LENG2550, LENG2560, LENG2570
Mathematics	Courses with LMAT prefixes
Science	Courses with LSCI prefixes
Social Science	LHUM1310, LHUM1500, LHUM1510, LHUM2500, LHUM2520, and courses with LHIS, LPHI, LPOL, LPSY, and LSOC prefixes

Assignment of Credits

A credit hour shall be allocated based on the below:

Category	**Contact Hours per Week**	**Contact Hours per Semester (based on minimum 15 week 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.

Course Credit Hour Designation

One instructional hour is equal to fifty (50) minutes. Next to each course is the course credit breakdown, shown in three numbers. The first number represents the number of lecture hours per week. The second number represents the number of lab, clinical, co-op, internship, or practicum hours per week. The third number represents the total number of credits.

LSCI1450	Anatomy & Physiology	3-2-4
LPSY1250	Introduction to Psychology	3-0-3

The academic instructional semester consists of no less than 15 weeks and no longer than 16 weeks or their equivalent including final exams. Courses that are delivered in alternate time schedules including summer semester (8 weeks, 12 weeks, etc.) will be shown the same as above, but will be scheduled to reflect the equivalency of the total number of hours. For example, LPSY1250 offered on an 8 week schedule would meet 6 hours per week and earn the same 3 credits.

Course Credit for Unit Instruction
Students who complete the competencies of a unit of a course may receive credit for the portion(s) successfully completed. For information about this process contact the student advisor. Note: Students required to take a three-credit (unit) course may not split units between two or more courses to satisfy one course requirement.

Residence Credit
Students seeking a degree at the college must earn a minimum of 16 semester hours from Lakes Region Community College. At least eight semester hours of the courses taken to meet the minimum residency requirements shall be advanced courses in the student's major field of study or in appropriate advanced courses in related fields. Advanced courses are associate degree program courses listed in the first and second semesters of the second year, or in the second semester of the first year of one-year programs. Students seeking a professional certificate must complete a minimum of 9 credits or 25% of the credits, whichever is larger, from Lakes Region Community College. For a certificate, students must complete at least 6 credits or 25% of the credits, whichever is larger, from Lakes Region Community College.

Directed Study
Under certain circumstances a matriculated student may take a course in a semester when the course is not offered either during the day or evening. 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. *Students must be matriculated and 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 in the day or evening divisions.

Distance Learning
Distance Learning courses are offered via the Internet in a 100% online environment using the Blackboard platform. Students work from home or office to complete the course content. All competencies and knowledge presented is the same as the student would experience in a classroom based course. This mode of study is increasing in popularity and the College is expanding the course menu every semester. A student may add a 100% online course up to the official start date of the semester. Once the semester has started a student ay add a 100% online course only with the permission of the instructor.

Alternative Delivery
Alternative Delivery is anything other than the once or twice a week traditional classroom meeting. It includes 100% Online Learning or Distance Learning, hybrids, video conference, and other condensed formats. These methods offer flexibility in scheduling while placing more responsibility for learning on the student. Online Learning and hybrid courses are taught using the Blackboard web-based delivery system. Students are recommended to take an online self-assessment and have basic computer skills before registering for a hybrid or Distance Learning course.

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. Students must be matriculated and have a minimum cumulative GPA of 2.0 to be eligible for an Independent Study.*

The intent of Independent Study is to expand a student's learning experience beyond the normal program curriculum. Typically undertaken for 1-3 credits, Independent Study may not be done in lieu of any course existing in the college catalog.

Graduation Requirements
The college has established minimum competencies that must be attained in each program. Students will be awarded associate degrees upon completion of academic requirements and demonstration of the required competencies.

To be eligible for graduation, students must:
1. Satisfactorily complete each requirement in their academic program
2. Earn a cumulative grade point average of 2.0 or higher
3. Meet all obligations to the college, including payment of all fees
4. File the Intent to Graduate form with the Registrar's Office no later than November 1st for fall completion, or December 13th for May completion or March 7th for August completion of the academic year in which graduation is anticipated.

The student has the primary responsibility for ensuring that he/she meets degree/professional certificate/certificate requirements for graduation. The student should initiate at least one meeting with his/her faculty advisor each semester to insure that all the requirements of the transcript checklist have or will be met by the intended time of graduation.

Transcripts
A student may request an official transcript (record of a student's academic history) by submitting a Transcript Request Form to the Registrar's Office. All college obligations must be met, including student loan payments, outstanding tuition, payment of fines, and athletic uniforms and library materials turned in before a transcript can be released. Transcripts are released in accordance with the Family Education Rights and Privacy Act of 1974 (the Buckley Amendment) and will not be released to a third party, including parents and spouses, without written permission of the student. Release forms are available in the Registrar's Office or on the college website. There is no charge for an official or unofficial transcript.

Students may obtain an unofficial copy of their transcript at any time using the Student Information System link from the college website.

ACADEMIC POLICIES
Academic Honesty
Original thinking and intellectual honesty are central to a college education. Research projects require the ongoing use of existing works, but students must conduct themselves with proper regard for the rights of others and of the college, in a context of mutual respect, integrity and reason. Activities such as plagiarism and cheating are not acceptable and will not be condoned by the college. Students involved in such activities are subject to serious disciplinary action.

The following are presented as examples of academic dishonesty:
1. Misrepresenting academic work done by someone else as one's own efforts, with or without permission of the person.
2. Providing or using prohibited assistance in assignments and examinations.
3. Unauthorized communication in any manner with other students during an examination; collaboration in the preparation of reports or take-home examinations; copying, giving aid or failing to follow the faculty member's instructions.
4. Tampering with or falsifying official college records.
5. Infringing upon the right of other students to fair and equal access to college library materials and comparable academic resources.
6. Falsification of data collected for and presented as part of course requirements.
7. Presenting as one's own ideas, another person's work or words without proper acknowledgement.

There may be other instances of academic dishonesty, which will be identified by a faculty member.

Academic dishonesty is not tolerated at Lakes Region Community College. There is the expectation that coursework will be done honestly, whether in lab projects, on examinations, or for term papers. The individual faculty member will make the initial response to an occurrence of academic dishonesty. The instructor should discuss the matter with the student, and should include what happened to cause the instructor to think cheating had taken place. The instructor should be specific: cheating was seen first-hand, cheating was reported by another student, work handed in was of much higher quality than usual, etc. Please refer to the College Judicial System on the College website as well as in the Student Affairs Office for consequences and procedures.

Academic Honors
Students whose academic performance warrants recommendation and recognition will receive academic honors.

The President's List recognizes students enrolled in a degree or professional certificate program carrying a minimum of 12 semester hours and earning a grade point average of 3.75 or higher.

The Vice President's List recognizes students enrolled in a degree or professional certificate program carrying a minimum of 12 semester hours and earning a grade point average of 3.3 to 3.74.

At the graduation ceremony, the student with the highest cumulative grade point average in an Associate Degree program receives recognition as the class valedictorian. The student must complete a minimum of 64 credits at this college, exclusive of transfer credits and waivers. Competition for this award has traditionally been very strong, with students winning by fractions of a point.

National Honor Society
The college is affiliated with Phi Theta Kappa, the National Honor Society for two-year colleges. Students with a cumulative grade point average of 3.5, degree matriculation status, and a minimum completion of 12 credits may be inducted into the honor society.

Determination of Grades
The college posts grades on our Student Information System (SIS) at the end of each semester/session for each course for students who have met all financial and other college responsibilities. Online grade reports include the semester grade point average, cumulative credits and the cumulative grade point average. Current semester and Cumulative Grade Point Averages are not re-calculated until at least one week after the end of each semester in August, December, and May once grades are received for all courses.

Grade Point Average
The grade point average determines academic standing and is computed as follows:
1. Multiply the grade points earned in each course by the number of credit hours associated with that course. For each course, this gives a value known as quality points.
2. Add the quality points from all the courses taken in the semester. Separately total the number of credits.
3. Divide the total quality points by the total number of credits. This gives the semester grade point average.

Example		Letter Grade	Semester Hours	Quality Points
LENG1200	College Composition	A (4)	3	4 x 3 = 12
LSCI1440	Human Biology with Lab	B+ (3.3)	4	3.3 x 4 = 13.2
LMAT1230	Introductory Algebra	C (2)	3	2 x 3 = 6
LPSY1250	Introduction to Psychology	D (1)	3	1 x 3 = 3
	TOTAL		13	34.2

A total of 34.2 quality points divided by 13 credits = 2.63 semester grade point average (GPA)

Grades are recorded as follows:

A .....4.0 Points	AF – Administrative Failure
A- .....3.7 Points	AU – Audit
B+ .....3.3 Points	CR – Credit by Exam
B .....3.0 Points	CS – Continuing Study
B- .....2.7 Points	I – Incomplete
C+ .....2.3 Points	NP – No Pass
C .....2.0 Points	P – Pass
C- .....1.7 Points	TR – Course Transfer
D+ .....1.3 Points	W – Withdrew
D .....1.0 Points	WF – Withdrawal Failing
D- .....7 Points	WP – Withdrawal Passing
F .....0 Points	* - Basic Skills

Explanation of Grades: AF, AU, CR, CS, I, NP, P, W, WF, WP, and Basic Skills.

AF: Instructor or administrator initiated withdrawal at any time for reasons other than poor grade performance, e.g., failure to meet attendance requirements, as published in the instructor's syllabus, violation of the Student Code of Conduct, disruptive behavior, etc. The grade may also be issued if a student registered in a clinic, practicum, internship or lab is deemed unsafe or performing in an unsatisfactory manner as determined by an evaluation by a faculty member/agency supervisor in accordance with department criteria and procedure. Calculated in GPA as an "F". The AF cannot be used for poor grade performance.

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

CR: Students who are matriculated and earning a C or better on a Credit by Examination receive a grade of CR. The credits earned count toward the degree and are not calculated in the GPA.

CS: Continuing Study allows students to re-register for a developmental course if competencies have not been met by the end of the course. Intended for students who have demonstrated progress and a commitment to succeeding in the

course but who need more time to achieve competencies. This grade applies to Basic Skills courses only and does not affect GPA.

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

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

P: Pass (not calculated into GPA).

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

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

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

*** Basic Skills:** Grades for Basic Skills courses have an asterisk following the course name and are computed in a GPA/CGPA, but cannot be used to satisfy degree requirements.

NOTE: When a student repeats a course (either voluntarily or because it is required to make up a failure), only the latest grade is computed in the GPA/CGPA, but both grades will appear on the academic transcript followed by an (I) – include and/or an (E) – exclude from CGPA.

Cumulative Grade Point Average
The cumulative grade point average (CGPA) reflects a student's academic standing through the most recent semester. To compute the cumulative grade point average, divide the total quality points earned in all semesters by the total credits attempted in all semesters. Calculation of Cumulative Grade Point Average (CGPA) will be based on all courses taken at the institution, including developmental or remedial courses.

Grade for a Repeated Course
All grades are entered on the grade report and academic record, and are used in figuring semester and cumulative grade point averages.

Students may retake a course, whether to replace an F or to improve their prior grade. The grade achieved in the most recent course will be the grade used in calculating a student's CGPA. When a student retakes a course at this college, the course and credit hours appear on the semester's grade report and academic record with the letter grade entered. The course grade and hours are included in the semester and the cumulative grade point average computation. The original grade and credit hours will not be figured in the cumulative grade point average, but will appear on the student's academic record followed by an (E)-exclude.

Third and subsequent attempts to repeat a course will require the approval of the student's advisor or Vice President of Academic Affairs.

Incomplete Course Grade
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. An Incomplete Contract must be completed by the instructor, signed by the student and filed with the Registrar's Office prior to the end of the term.*

The work must be completed by the student through 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 grade. The Vice President of Academic Affairs may make exceptions to the above deadlines.

Incomplete grades will not be included in the computation of Grade Point Average until a final grade is posted and/or the grade becomes an F. An "I" grade may affect a student's financial aid. Students should contact the Financial Aid office for further information.

Academic Standing Committee Review
Students must show orderly progress toward their degrees and continue to display an ability to benefit from their programs and courses.

Each semester the Vice President of Academic Affairs and the Academic Standing Committee review the academic performance of matriculated students whose: 1) cumulative grade point average (CGPA) is below 2.0; 2) semester grade point average (GPA) is below 1.0; or 3) semester grades include Incompletes and/or F grades. This review may result in a status of Warning, Probation, Mandatory Part-time or Suspension.

Academic Status Report: The instructor may issue status reports at any time during the semester/session when a student's academic performance is unsatisfactory. The status report identifies the problem and makes recommendations for corrective action. The advisor, counselor and instructor receive copies, and a copy goes in the student's file. A student may receive a failing grade without having received a course warning. The Academic Standing Committee may also issue warnings if a student's semester or cumulative grade point average falls below 2.0.

Warning: The Academic Standing Committee may warn students if they fall within one of the following categories:

0-13	Credits:	between 1.50 and 1.99 CGPA
14-27	Credits:	between 1.70 and 1.99 CGPA
28-40	Credits:	between 1.80 and 1.99 CGPA

Academic Probation: The Academic Standing Committee may assign students to probation if they fall within one of the following categories:

0-13	Credits:	between 1.25 and 1.49 CGPA
14-27	Credits:	between 1.51 and 1.69 CGPA
28-40	Credits:	between 1.25 and 1.79 CGPA
41+	Credits:	between 1.50 and 1.99 CGPA

Students placed on Academic Probation may not participate in any extracurricular activities. They are encouraged to focus on improving their academic performance and to take advantage of the college's student assistance program.

Mandatory Part-Time: The Academic Standing Committee may assign mandatory part-time status to students who fall within one of the following categories:

0-13	Credits:	between 0.00 and 1.24 CGPA
14-27	Credits:	between 1.10 and 1.50 CGPA

Students placed on mandatory part-time cannot take a full course load. After consultation with their advisor, they may register for a reduced load that allows them to continue to work toward completion of their program. If they demonstrate improved academic progress for that term, they may appeal the status and the committee may reinstate them to full-time.

Academic Suspension: The Academic Standing Committee may suspend students from the college for one or two semesters if their academic performance falls under one of the following categories:

0-13	Credits:	N/A
14-27	Credits:	between 0.00 and 1.09 GPA
28-40	Credits:	between 0.00 and 1.24 GPA
41+	Credits:	between 0.00 and 1.49 GPA

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

Under certain circumstances a student may also be suspended from the college for a designated period of time for failing to meet minimum academic standards.

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

Appeal of Academic Standing Committee Decisions
The student may appeal in writing all decisions of the Academic Standing Committee. The student must submit a letter clearly defining the basis for the appeal to the Vice President of Academic Affairs within seven (7) college days following the date of the Committee's letter to the student. The student may have a hearing before the Academic Standing Committee as soon as possible after receipt of the appeal letter. The student may have a representative at the meeting, and is encouraged to meet with the college counselor or the academic advisor for assistance in presenting his/her case.

If the student is not satisfied with the results of the appeal, he/she has the option to appeal directly to the President of the college within five (5) days of the outcome of the appeal. The appeal to the President must be in writing, and must clearly define the basis for appealing the Committee's decision.

Each student must have a cumulative grade point average of 2.0 to graduate. NOTE: Co-op students must have a 2.0 or permission of their advisor to be eligible to participate in a co-op work experience.

Academic Amnesty
In order to be eligible for Academic Amnesty, a student must meet all of the following conditions:
1. The student has not taken any courses at original college of enrollment for a period of at least 3 years from the last semester of attendance.
2. The student applies for Academic Amnesty at the time of admission.
3. The student has never before received Academic Amnesty
4. The student achieved a cumulative GPA below 1.7 during previous attendance.

All grades earned during a student's previous attendance at the college will no longer be used to calculate the student's new cumulative GPA. Grades of C- and above taken during that time will be used to meet course requirements, subject to the approval of the Vice President of Academic Affairs. All previous grades will remain on the student's transcript.

Academic Advising
All students have an academic advisor who serves as a critical contact/mentor for the students during their time at the college. The academic advisor helps students register for courses and must approve all registration decisions, including course add/drop changes and withdrawals. The advisor assists students in identifying academic and personal resources on campus, conducts graduation audits, and helps students select and choose various program options. Advisors help students with decisions about career goals or further education. The more clearly students define and communicate their own goals, the more productive the student/advisor relationship will be.

Each semester, the academic advisor will conduct degree audits with the students. The purpose of the audit is to identify student progress towards the completion of the program, and to offer early intervention in making necessary schedule changes when the student fails a course, or when the student takes a course out of the normal sequence. The student bears the ultimate responsibility for making sure that he/she completes the required coursework for his/her program.

Academic Environment
The learning environment at the college encourages free discussion, inquiry and expression. Student performance is evaluated only on the basis of performance in class or lab, not on the basis of their individual views.

Students are responsible for learning the content of any course of study, participate actively in the class and have the right to take exception to the views presented in class.

Students shall maintain academic standards and are accountable for the honest and timely completion of assigned work, consistent participation in all class, shop, laboratory or clinical activities, and for conducting themselves in an appropriate manner.

At the beginning of each semester the instructor shall provide students with a syllabus that contains a description of the course, its objectives, grading procedures, special academic requirements, prerequisites and specific class participation

and attendance standards. The syllabus will include a schedule indicating (on a weekly basis if possible) when various course topics will be covered. Copies of syllabi are also available from the Academic Affairs Office.

Ethical Guidelines
Policies on students' rights and responsibilities, including the Student Code of Conduct, Equity, and the Judicial Policies and Procedures, were developed based on national guidelines and standards. Student Services is guided by College, State and Federal ethical guidelines.

Student Code of Conduct
A student's continuance at Lakes Region Community College depends on his or her conduct, and the receipt of academic credit and the conferring of a degree, professional certificate, or certificate are subject to the academic and judicial policies of Lakes Region Community College. A student's registration may be canceled; he or she may, following due process, be dismissed from Lakes Region Community College at any time for conduct of a nature that would reflect discredit on the student and/or the colleges within the Community College System of New Hampshire. The student will not hurt, exploit, endanger, rape, oppress, cheat or corrupt others, or the academic integrity of the College.

Attendance
Successful college students attend class regularly. Most failures, dropped courses and poor grades result from poor attendance. The college has designed a schedule of classes for each course that meets the Carnegie unit definition of class time necessary for the average college student to complete the course. This time at the college, under the supervision of a professional educator, contributes to academic success. It is understood that students may miss class due to illness or emergency. When this happens, the student should make every attempt to contact the instructor as soon as possible to discuss assignments and makeup opportunities. Students should in all cases notify and consult with their instructor on all absences. Absence for any portion of scheduled class time may constitute an absence. In some cases students must keep their own attendance records because a financial sponsor requires this for use in advising and recommending students to employers. The instructors will make every effort to accept advance notices of absences due to college events and/or emergencies. It is, however, ultimately the student's responsibility to make arrangements for missed assignments, tests, lectures, deadlines and other academic activities associated with the lack of attendance.

The college encourages attendance in class for several reasons:
1. There is a strong correlation between attending classes and academic success.
2. Material may be available in class that is not in the textbook.
3. Class time has been assigned to each student and that is their time to receive instructor assistance, which is important to the successful completion of the course requirements.
4. Much learning takes place between faculty and students during class. This time is also a chance for students to think, question and clarify ideas and information.
5. Each individual is expected to make satisfactory progress in classes. Attendance is important so the faculty can assist the student in making satisfactory progress.
6. Students who are not making satisfactory progress should, with the consensus of instructor and advisor, drop the course during the drop period.

Registration for any course presupposes that the student will attend all scheduled classes, laboratories, and clinics. Any student who does not attend the first class of the semester and has not processed a course drop in writing with the registrar's office will be removed from the class roster; however, the student is still responsible for tuition and fees. Each student is responsible for meeting all class requirements. For an absence rate that reasonably precludes making up missed coursework, barring mitigating factors such as major illness, accident or family emergency, faculty may process an administrative failure form with the Registrar's Office or award a final grade of AF at the end of the term.

Course Failure
The student must make up a course for which a grade of F was received, either by retaking the course at Lakes Region Community College or by taking a comparable course at another institution. Courses transferred from other institutions count towards credits only; the F remains as part of the CGPA. Retaking a failed class will result in the F being replaced by the passing grade for the purpose of GPA calculation. The student should consult the advisor and department chairperson to determine if a course will transfer. Course failures cannot be made up by taking a credit by examination. See policy on Credit by Examination.

Appeal of a Grade
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 ground 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 work days.
2. Meet with the Program Coordinator/Department Chairperson
   If the issue was not resolved in Step 1 above, the student has three work days from the date of the faculty member's decision to file a written appeal with the faculty member's program coordinator or department chairperson, or with the Vice President of Academic Affairs if the faculty member is also the department chairperson or program director. Within three work days the department chairperson (VPAA) will mediate the dispute either through discussion with the instructor, or with the student in the company of the faculty member. If no resolution is reached, proceed to Step 3 below.
3. Meet with the Vice President of Academic Affairs (VPAA)
   If the issue is not resolved in Step 2 above, the student has three work days to file a written appeal with the Vice President of Academic Affairs. The VPAA will meet with all parties concerned within the next three work days to attempt to resolve the dispute. The VPAA will have three work days from the last meeting to render a decision on the grade appeal. The decision of the VPAA is final.

   Note: During the summer, when faculty is 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.

Registration

The Registrar's Office, the Financial Aid Office, the Bursar's Office and the academic department coordinate the registration process, which includes the selection of courses, completion of forms and payment of college fees. Advance registration takes place mid-semester for second and later term matriculated students. The advising process helps students decide which courses to take; accordingly, matriculated students must have advisor approval before registering for any course. Non-matriculated students may register during the open registration period before the start of each term, pending available space and the meeting of prerequisites or instructor approval.

Students should understand that by registering for courses at LRCC, they are financially obligated for **ALL** costs related to the registered course(s). Upon a drop or withdrawal, it is understood they will be responsible for all charges as noted in the student catalog and handbook. If they do not make payment in full, it is understood that their account may be reported to the credit bureau and/or turned over to an outside collection agency. It is also understood they will be responsible for the costs of the outside collection agency and/or any legal fees and bounced check fees under RSA 6:11 which may add a significant cost to their existing account balance.

Adding a Course

Students may add courses to their schedule up to and including the seventh (7th) calendar day of the semester, providing there is space in the class. Adding a course requires the signature/approval of the instructor, Department Chair, or the Registrar. A course may be added after the seventh (7th) calendar day of the semester only with the permission of the instructor. Add/Drop forms are available through the registrar's office and online at www.lrcc.edu.

Adding a Distance Learning 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.

Dropping a Course

The student should discuss the decision to drop a course(s) with his/her advisor. Add/Drop forms are available through the Registrar's Office and online at www.lrcc.edu. (Up to 10 days before the start of the semester)

Students may drop a course anytime during the first 60% of the semester. This may, however, result in a change in student status for financial aid, veteran's benefits, insurance discounts, etc.

Effective Fall Semester, 2011, students who officially withdraw from the college or an individual course by the end of the fourteenth (14th) calendar day of the semester will receive a 100% refund of tuition, less non-refundable fees. Students in classes that meet in a format shorter than the traditional semester (15-16 weeks) will have seven (7) calendar days from

the designated start of the term to withdraw for a full refund. If the seventh (7th) or fourteenth (14) calendar day of the term falls on a weekend or holiday, the drop refund date will be the first business day following the weekend or holiday. Exception: students in courses that meet for two weeks or fewer must drop by the end of the first day of the class in order to get a 100% refund. Students registered for workshops must withdraw in writing at least three (3) days prior to the first workshop session in order to receive a full refund of tuition and fees.

Students who formally drop a course by filing the drop form in a timely manner will have information entered on their academic record as follows:

1. No courses or grades are recorded for students who register but do not attend classes.
2. No courses or grades are recorded for students who withdraw from course(s) during the refund period.
3. A grade of W is awarded to students who drop a course(s) after the refund period but during the first 60% of the semester.

Students who fail to file an official drop form to drop a course for which they are not attending will receive an AF – Administrative Failure for such courses on their transcripts.

NOTE: Classes may be added or dropped online via the Student Information System (SIS) until 10 days before the start of the semester.

Audit Policy
Under the Audit Policy, students may enroll in courses which provide an opportunity to assess their ability to do college work, explore a discipline of interest, refresh prior learning, or supplement existing knowledge. Typically, a student attends lectures, seminars and/or labs but does not complete graded assignments (unless agreed upon with the instructor). 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 an AU for the course). *Student must pay the 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 after the designated add period; likewise, a student registered for credit may not change to audit status after the designated add period.

The Vice President of Academic Affairs may make exceptions to the above.

Prerequisite
Students must successfully complete a prerequisite course before enrolling in the next course. The course description section of the college catalog notes prerequisites. A failing grade in a prerequisite will prevent a student from taking the next course. Students may use courses from other colleges to meet prerequisites. The department chair or academic vice president determines transfer credit. See the section on Transfer Credit for further information.

Corequisite
Some courses have a corequisite course requirement, which means that the course must be taken simultaneously with another course. A corequisite may be satisfied if taken in a prior semester. Students should review all corequisite requirements with their advisor.

Withdrawing from the College
Withdrawing from the college is a serious step, and students should discuss this process with instructors, the academic advisor and the college counselor. To withdraw from the college, a student must complete the withdrawal form and an exit interview with the college counselor and financial aid director. Failure to attend classes does not constitute withdrawal from the college. However, students may be administratively failed (AF) due to excessive absences.

Students may withdraw from the college up to one week before the end of the semester. The date of withdrawal is noted on the students' academic college records, which also reflect the most recent date of class attendance, as needed, for students receiving scholarships, veteran's benefits, or for recipients of Title IV financial aid or other awards with special attendance requirements. Academic records will be treated in accordance with the standards used for dropping individual courses.

A student who has withdrawn from the college or who has been suspended may apply for readmission through the Admissions Office.

Student Status

A *matriculated* student is one who has been admitted to a program (degree, professional certificate or certificate) at the college. Matriculated students are entitled to participate in the Title IV Federal Financial Aid Program and have priority when registering for classes with limited enrollment. To remain matriculated, a student must register for, and enroll in, at least one course during the academic year (not to exceed a 12-month period). A student who does not register for at least one course per academic year will lose matriculated status. A student who chooses to re-matriculate must reapply for admission to a program. A student who begins a second program at the college may have to satisfy different program requirements.

A *non-matriculated* student is one who has not been admitted to a program at the college, and may register on a first-come, first-served basis for any course, providing the student has met prerequisites and that there is space available. *Non-matriculated* students should matriculate before the completion of 9 semester hours and begin pursuing graduation requirements. An advisor will help students make these decisions.

A *matriculated* student may request a *leave of absence* in writing through the Academic Affairs Office if the student will not be taking courses within one academic year (not to exceed a 12-month period) but wishes to remain on matriculated status. After a leave of one academic year, the student must either register for at least one course or lose matriculated status, thus requiring reapplication and admission.

Medical Leave Policy

A matriculated student who, due to a ***serious medical condition*** that requires extended in-patient treatment in a medical facility and/or ongoing outpatient medical treatment, becomes unable to complete his/her academic requirements and/or who becomes unable to meet the program's technical standards and/or the requirements of the Student Code of Conduct, may apply for a formal **Medical Leave of Absence** for up to two consecutive semesters.

Students considering a Medical Leave of Absence should be aware that ***granting of such leave does not relieve a student from financial responsibility to the college.*** A student who is seeking a Medical Leave of Absence who is also a financial aid recipient should contact the Financial Aid Office to discuss the leave and any potential implications for changes in financial aid eligibility. Students who have concerns about continuing health insurance coverage may also wish to consult http://www.michelleslaw.com for important information.

Students requesting Medical Leave of Absence must:

1. Provide a letter to the Vice President of Academic Affairs identifying their program of study, the medical reason for the request, the proposed date on which the leave would begin, and the proposed date of readmission, and;
2. Provide the Vice President of Academic Affairs documentation of the medical condition from a licensed health care professional *directly involved in the treatment* of the student's particular condition that is sufficiently comprehensive to facilitate the decision-making process.

The Vice President of Academic Affairs (or designee) will make a determination regarding the appropriateness of the leave request and notify the student in writing whether the request for Medical Leave of Absence was granted and what conditions for readmission may apply. Students whose Medical Leave requests are granted will not be required to re-apply for admission at the end of the leave period provided that all conditions for readmission have been met.

Conditions for readmission may include, but are not limited to, submission of documentation from a licensed heath care professional *directly involved in the treatment* of the student's particular condition that is sufficiently comprehensive to provide reasonable assurance that the returning student will be able to meet all college and program academic, technical, and behavioral requirements. Other conditions for readmission may include a required in-person meeting with the Vice President of Academic Affairs and/or the student's program Department Head; compliance with any new admission criteria implemented in the student's absence; following a new curriculum plan that may have been implemented in the student's absence; and/or repeating courses and/or clinical experiences to ensure clinical competence following an extended absence. (Please note that students wishing to return to a residence hall may be required to meet additional, separate criteria from those required for return to an academic program. Students should directly negotiate any return to residence life with the college's Student Affairs Office.)

Students who choose to seek Medical Leave under the provisions of this policy should be aware that information they voluntarily disclose during the application and readmission processes will be handled under the confidentiality guidelines of the Family Educational Rights and Privacy Act (FERPA) and disclosed only to those persons with a direct academic need to know.

Enrollment status is defined according to the number of credits a student takes during a semester and is used to determine financial aid awards. Credits awarded for transfer, work experience, audits and challenge exams do not count toward determination of full-time status. It is important to know that full-time status is the equivalent of 12 or more credit hours.

Full-time ..... 12 or more credits, or registered for co-op
Three-quarter time ..... 9-11 credits
One-half time..... 6-8 credits

A student must register for 12 or more credit hours to qualify for *full-time status* for financial aid, veteran's benefits, insurance discounts, etc.

Disclosure of Directory Information
Lakes Region Community College defines "directory information" as name, address, e-mail address, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, enrollment status (may include number of credits and/or full/part-time status), anticipated graduation date, degrees and awards.

Students may refuse designation of personally identifiable information as directory information provided that a written request is received by the Registrar.

Privacy of Records
The college maintains an academic folder for all matriculated students. The folder includes permanent academic records, application for admission, correspondence to and from the college, transcripts of all previous academic records, recommendations, standardized test results, armed forces papers, social security papers, medical records and miscellaneous information.

The college does not provide access to, or release of, any personally identifiable records or files to any individual, agency or organization without prior written consent of the student except as follows. The President, Vice Presidents and Registrar shall have unlimited access, without permission, to all student records. They may release information without prior written authorization of the student in the following circumstances:

1. To officials and teachers within the college who are directly involved in a legitimate, educational matter with the student.
2. To authorized Federal and State offices as identified in Section 438(b)(3) of Public Law 93-380.
3. To appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of any person. If students wish their parent(s) or anyone else to be given information about any aspects of their progress at the college, they must sign a Waiver of Confidentiality form, which can be obtained from the registrar's office.

Students may request release of college records by completing the Authorization for Release of Records form with the Registrar's Office prior to the release of student information or documents to individuals other than those listed above.

Social Security Number
Federal law requires that Lakes Region Community College collect names and corresponding social security numbers for all students attending the college. The college is required by the Internal Revenue Code to produce a 1098-T tax form (Federal Register, Vol. 67, No. 2244, page 777686 (ii)) which requires the college to report the names and social security numbers of all students taking credit-bearing courses. Please note, however, that the college will ensure the security of the student's social security number and will not disclose it to anyone outside the college, except as mandated by federal or state laws.

Cooperative Education
A co-op is an educational program that combines classroom studies with paid, productive work experience in a field related to the student's major or career. The student is a full-time employee of the site and is not required to take classes during the duration of the co-op. Depending on the length of the co-op and criteria established by the sponsoring academic department, 1 – 4 credits may be awarded.

Each college department will set standards for eligibility to participate in a co-op. Individual departments must approve co-op sites and will determine requirements (papers, journals, etc.) that must be met during the co-op. The co-op will be graded using the college's grading system and credit will be awarded accordingly. Cooperative education is optional for all programs except the GM ASEP Program and Restaurant Management. Faculty monitors each placement to ensure that it meets academic requirements and that the work experience is relevant to the student's area of study.

Exceptions to the above may be made with the approval of the Department Head and Vice-President of Academic Affairs.

Cooperative education allows a student to:

- Apply classroom knowledge to an employment situation
- Gain confidence for future employment
- Earn money to defray college expenses
- Earn credit for graduation
- Add solid experience to his/her resume

While the college makes every effort to place each eligible student, THERE IS NO GUARANTEE that placement will occur. Students who cannot obtain placement for any reason, including ineligibility due to a low grade point average or who decline to participate, are required to register for an alternative co-op experience or an elective. Students should see their faculty advisor for specific details. The college charges tuition and fees for co-op, alternative co-op experience or elective credits on a per-credit basis.

The student's co-op faculty advisor assists students in preparation for their co-op experience. During this process, usually two to four weeks prior to the co-op session, employers submit position descriptions to the co-op office. Students who meet individual department co-op requirements should review the position descriptions, consult with the department and faculty, and apply for those positions for which they are qualified and interested. The company will screen the resumes and interview candidates. The employer and the successful candidate negotiate final decisions concerning placement. Although the college will assist in finding suitable co-op placements for students, there is no guarantee of placement or choice of locations. Students are expected to assist in placement inquiries as required. The faculty reviews the academic standing of each student prior to placement. If at any time the student's grade point average is below the necessary requirement of 2.0, the student may be ineligible for a cooperative education experience. Credit for the co-op experience may be awarded on a pass/no pass basis, which will not be calculated into the student's grade point average, or it may be awarded on an A-F basis, which will be calculated into the student's GPA. Students must complete co-op credits prior to graduation through the co-op placement, alternative co-op education or electives, depending on the program. Successful completion of the course includes preparation and submission of a journal and report. In the event of a no-pass or no-credit grade, the student may appeal through the appropriate channels.

The college retains its right to remove a student from a co-op position if the situation warrants doing so. Obviously, as with most work situations, the employer can terminate the relationship resulting in loss of credit, if the employer has just cause and has documented the situation. Each department's criteria pertaining to cooperative education may differ. The student should consult with his/her advisor for additional information.

CREDIT OPTIONS FOR ADVANCED STANDING

Credit options are opportunities for adult learners to earn credit toward a degree through alternatives other than coursework. Credit options include: transfer credit, CLEP examinations, credit by examination, advanced credit, DANTES and experiential learning.

The college encourages students to apply the wealth of knowledge and experience they possess to take advantage of all the credit options available to them. It is possible for students to earn significant credit based on previous educational and professional experiences. The only restriction is that students seeking a degree/professional certificate/certificate at the college must complete residency requirements. (See residence credit for specific requirements.)

Please note that credit earned through any of these options counts toward degree/professional certificate/certificate requirements, but is not included in computing grade point averages. Upon matriculation, student request for recognition of technical courses more than seven years old is subject to review. Course content may be outdated and therefore not acceptable for transfer or other credit. Computer Technologies courses more than three years old will not be accepted.

Transfer Credit

Students may transfer credits from other accredited colleges, including the colleges within the Community College System of New Hampshire provided they earned a grade of C or better, and those credits are equivalent to the courses in their

program. To apply, students must contact other college(s) they have attended and arrange for official transcripts and course descriptions to be sent to the Lakes Region Community College Registrar.

The Vice President of Academic Affairs must review course credit awarded through another institution's credit by examination policy. The academic office coordinates transfer credit. The appropriate department chairperson(s) and the Vice President of Academic Affairs determine acceptability of transfer credit. Students should consider that transfer credits may lessen their financial aid eligibility by reducing the course load from full-time to part-time status.

Lakes Region Community College does not use grades received in courses taken at any other institution in computing semester or cumulative grade point averages.

Credit by Examination
Credit by examination provides matriculated students with the opportunity to challenge technical and other courses for which they feel qualified. Examinations are prepared and administered by the college faculty. If students obtain a grade of C or better, the credits earned count toward their degree and the academic record will reflect a grade of CR. The academic officer and the instructor coordinate the credit by examination process. The exam must be taken and graded within the first seven days of the semester. The student, the advisor and the registrar receive notification of the course exam results, a copy of which is placed in the student's permanent file.

Students who apply for Credit by Exam must be matriculated and may apply for credit by examination only for those courses for which they are not currently registered. The fee for credit by examination is $25 per credit, plus all direct costs associated with providing the laboratory exam. Students cannot use credit by examination to make up a previously failed course. If a student earns credit by examination, the enrollment status could change, an action which could affect financial aid status.

DANTES (Defense Activity for Non-Traditional Education Support)
The DANTES College Credit Examination program provides National Guard members and servicemen and women with three different exam programs to earn college credit. The exams are CLEP, ACT/PEP and the DANTES Subject Standardized Tests (DSSTS). To apply, students must arrange to have credits earned through DANTES sent to the college registrar.

Continuing Education Credits
In students' working or professional lives, they may have taken work-related courses that have provided them with certificates or Continuing Education Units (CEUs). Students may earn credit(s) toward their degree through these efforts.

To apply, students need to assemble all certificates and CEUs into a package. Students must develop a narrative statement (for each certificate or CEU) that outlines the purpose of the course or workshop, the sponsor and instructor of the activity, and the total number of hours for each activity. In addition, students must arrange for their employer to send a letter to the Vice President of Academic Affairs, confirming their narrative statements and highlighting the competencies gained through participation in the activities.

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

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

Students will be assessed a fee based on 50% of the current tuition rate on the total credits awarded (e.g., for 12 credits awarded: 0.50 x current tuition rate x 12 credits).

Running Start
High school students have the opportunity to earn college credit through the Running Start program. This unique partnership between the college and local area high schools offers the high school student selected college-level coursework and college credit for successful completion of coursework. Running Start courses are taught at the high school by high school faculty members during the regular school day.

The cost of a three-credit course is $150 per course, plus books and supplies. This represents a significant savings associated with college tuition. Local high schools and students interested in a Running Start course may call the Running Start Coordinator at the college for more information.

High School Articulation
Some high schools are developing written agreements with the college to ensure guaranteed acceptance for motivated students. These agreements specify the competencies needed for acceptance, and they show the student how to meet them. They also spell out how a student can earn college credit while in high school. (See Articulation Agreements for a listing of the participating high schools).

ARTICULATION AGREEMENTS

High School Areas	Lakes Region Community College Curriculum
Barre Technical Center	Automotive Service Education Program Automotive Technology Program
Berlin High School, Berlin, NH	Automotive Service Education Program Automotive Technology Program
Burlington Technical Center	Automotive Service Education Program
Center for Career/Tech Education Salem	Automotive Service Education Program Automotive Technology
Center for Technology, Essex, Essex Junction, VT	Automotive Service Education Program
Cheshire Career Center	Automotive Service Education Program Automotive Technology Program
Cold Hollow Career Center, Enosburg, VT (waiting)	Automotive Service Education Program
Concord Regional Technical Center, Concord, NH	Automotive Service Education Program Automotive Technology Program
Dover Regional Career Technical Center, Dover, NH	Automotive Service Education Program Automotive Technology Program
Green Mountain Technology and Career Center Hyde Park, VT	Automotive Service Education Program
Hancock County Technical Center	Automotive Service Education Program
Hartford Area Career and Technology Center, White River Junction, VT	Automotive Service Education Program
J. Oliva Huot Technical Center, Laconia, NH	Automotive Service Education Program Automotive Technology Program Early Childhood Education Office Technology
Hugh J. Gallen Career and Technical Center	Automotive Service Education Program
Mascenic Regional High School	Automotive Service Education Program Automotive Technology Program
Mount Washington Valley Career and Technical Center, Conway, NH	Automotive Service Education Program Automotive Technology Program
North Country Career Center	Automotive Service Education Program
Patricia A. Hannaford Career Center	Automotive Service Education Program
Pinkerton Academy, Derry, NH	Automotive Service Education Program Automotive Technology Program

Plymouth Regional Technical Center	Automotive Service Education Program Automotive Technology Program
Portland Area Arts & Technology	Automotive Service Education Program
Portsmouth Senior High School, Portsmouth, NH	Automotive Service Education Program Automotive Technology Program
Randolph Technical Career Center	Automotive Service Education Program
Region 9 Vocational – Technical Education Center	Automotive Service Education Program Automotive Technology Program
Richard Creteau Technical Center	Automotive Service Education Program Automotive Technology Program
River Bend Career & Technology Center	Automotive Service Education Program
Salem Center for Career and Technical Education	Automotive Service Education Program Automotive Technology Program
Sanford Regional Vocational Center Sanford, ME	Automotive Service Education Program
Seacoast School of Technology	Automotive Service Education Program Automotive Technology Program
Somerset Career Center	Automotive Service Education Program
St. Johnsbury Academy	Automotive Service Education Program
Southwest VT Career Development Center Bennington, VT	Automotive Service Education Program
Stafford Technical Center	Automotive Service Education Program
Sugar River Valley Regional Technical Center	Automotive Service Education Program
Tri-County Technical Center	Automotive Service Education Program
United Technologies Center	Automotive Service Education Program Marine Technology Program
Waldo County Technical Center, Waldo, ME	Automotive Service Education Program Automotive Technlology
Westbrook Regional Vocational Center	Automotive Service Education Program

College Articulation Agreements

Franklin University

Granite State College

Hesser College

Keene State College

New Hampshire Institute of Art

Plymouth State University

Rivier College

Rochester Institute of Technology

Southern New Hampshire University

Springfield College

University of New Hampshire

PRE-ADMISSION RECOMMENDATIONS

Program	Recommendations
Accounting	Strong basic math skills; strong English skills
Business Management	High school math; strong English skills; ability to communicate; ability to think in a positive manner; willingness to learn
Computer Technologies	High School Algebra highly recommended, strong reading and writing skills, strong problem-solving skills, good interpersonal skills
Early Childhood Education	First Aid and CPR; strong English skills; High School Algebra; willingness to develop positive human relations and problem-solving skills.
Electrical Systems Installation and Maintenance	High school Algebra highly recommended, strong reading and writing skills, strong problem solving skills, good interpersonal skills.
Energy Services and Technologies	High school math, strong reading and writing skills, strong problem solving skills, good interpersonal skills.
Fine Arts	At least one year of high school art instruction, or equivalent (e.g., private instruction, community programs, etc.)
Fire Technology	A strong background in English, algebra, and chemistry
Human Services	English; psychology; strong communication skills in reading and writing
Office Technology Management	Typing or keyboarding, accounting & computer applications; strong English skills; willingness to develop positive human relations and problem-solving skills

ACCOUNTING

The Accounting Department provides educational opportunities leading to an associate degree, or certificate. All are designed to provide individuals with competencies in accounting for an array of employment opportunities in this field, as well as transfer options to four-year institutions. Certificate programs may be expanded through additional coursework to meet degree requirements.

The degree program provides a well-rounded education for those seeking employment in entry-level positions in accounting. Employment opportunities in accounting can be found in businesses of all sizes, including; public accounting firms, corporations, individually owned businesses, and government organizations. Recent graduates have successfully transferred their Associate Degree credits to Plymouth State University and Southern New Hampshire University.

Technical Requirements

Students who enroll in the program must comprehend the English language, both written and spoken. They must have sufficient manual dexterity to produce legible written documents in a timely manner and use a keyboard and calculator. They must be able to sit or stand at a desk or workstation and stay on task for extended periods of time. They must be able read small print. They must be able to perform basic arithmetic operations.

The Accounting student may choose one of two areas of concentration:

- Accounting with a Concentration in Business
- Accounting with a Concentration in Computer Applications

ACCOUNTING
With a Concentration in Business

This program allows students to integrate the study of business practices into their study of accounting. The students who pursue this course will supplement their accounting skills with knowledge of the business environment, management practices, and legal issues surrounding the business world. Successful completion of this program will enable the student to pursue a variety of accounting and business related opportunities.

The student who successfully completes this program will:

- be well versed in manual and computerized financial accounting procedures;
- be proficient in managerial accounting practices;
- have an understanding of basic federal tax regulations;
- gain a background in domestic and international business principles;
- be exposed to a variety of studies in liberal arts and the humanities.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LBUS1300	Introduction to Business	3	0	3
LENG1200	College Composition	3	0	3
LSOC2310	Microeconomics			
	OR			
LSOC2320	Macroeconomics	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**15/16**	**0**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LACC1320	Accounting II	3	0	3
LCIS1320	Software Applications	3	2	4
LENG1230	Business Communications	3	0	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	LIBERAL ARTS	3	0	3
	Totals	**15**	**2**	**16**

Total Credits for Year = 31/32

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC2310	Cost Accounting	3	0	3
LACC2510	Federal Taxes	3	0	3
LACC2710	PC Accounting Applications I (Until Spring 2013)	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3
LBUS2310	Principles of Management	3	0	3
	SCIENCE	3	0	3
	Totals	**14**	**2**	**15**

Spring Semester		**CL**	**LAB**	**CR**
LACC2350	Managerial Accounting	3	0	3
LACC2720	PC Accounting Applications II (Until Spring 2013)	2	2	3
LCIS2350	Spreadsheets (Effective Spring 2013)	2	2	3
LBUS2380	Business Law I	3	0	3
LBUS2520	Introduction to International Business	3	0	3
	BUSINESS ELECTIVE	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**17**	**2**	**18**

Total Credits for Year = 33
Total for A.S. Degree = 64/65

ACCOUNTING
With a Concentration in Computer Applications

This program allows students to integrate the study of specific accounting related computer applications into his or her study of accounting. Upon successful completion of this course of study the student will be well positioned for employment in today's technology-based business environment. The demand for individuals skilled in accounting and computer related skills will increase as managers rely more on automated accounting systems for information.

The student who successfully completes this program will:

- be well versed in manual and computerized financial accounting procedures;
- be proficient in managerial accounting practices;
- have an understanding of basic federal tax regulations;
- be skilled in several computer applications that support the accounting process;
- be exposed to a variety of studies in liberal arts and the humanities.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LBUS1300	Introduction to Business	3	0	3
LCIS1320	Software Applications	3	2	4
LCIS1400	Introduction to Programming	2	2	3
LENG1200	College Composition	3	0	3
	Totals	**14**	**4**	**16**

Spring Semester		**CL**	**LAB**	**CR**
LACC1320	Accounting II	3	0	3
LCIS2350	Spreadsheets	2	2	3
LENG1230	Business Communications	3	0	3
LSOC2310	Microeconomics			
OR				
LSOC2320	Macroeconomics	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**14/15**	**2**	**15/16**

Total Credits for Year = 31/32

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC2310	Cost Accounting	3	0	3
LACC2510	Federal Taxes	3	0	3
LACC2710	PC Accounting Applications I (Until Spring 2013)	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3
LCIS2420	Database Management and Design	2	2	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Totals	**13**	**4**	**15**

Spring Semester		**CL**	**LAB**	**CR**
LACC2350	Managerial Accounting	3	0	3
LACC2720	PC Accounting Applications II (Until Spring 2013)	2	2	3
LCIS2270	IT Development Applications (Effective Spring 2013)	2	2	3
LCIS2400	Management with Computers	2	2	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	LIBERAL ARTS	3	0	3
	SCIENCE	3	0	3

Totals		**16**	**4**	**18**

Total Credits for Year = 33
Total for A.S. Degree = 64/65

ACCOUNTING CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LACC1320	Accounting II	3	0	3
LACC2310	Cost Accounting	3	0	3
LACC2350	Managerial Accounting	3	0	3
LACC2510	Federal Taxes	3	0	3
LACC2710	PC Accounting Applications I (Until Spring 2013)	2	2	3
LACC2720	PC Accounting Applications II (Until Spring 2013)	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3
LCIS2350	Spreadsheets (Effective Spring 2013)	2	2	3
LCIS1320	Software Applications	3	2	4
	Totals	20/**22**	**4/6**	**22/25**

COURSE DESCRIPTIONS

LACC1310 Accounting I **CL3 L0 CR3**
An introduction to accounting as the language of business. The student will be introduced to the procedures necessary to record, classify, and summarize basic business transactions. The course will cover the accounting cycle for service and merchandising sole proprietorships, including: journalizing transactions in general and special journals, recording adjusting and closing entries, and preparing worksheets and financial statements. The course will also cover banking and payroll procedures.

LACC1320 Accounting II **CL3 L0 CR3**
A more in-depth study of accounting procedures and concepts. The course closely examines balance sheet accounts, such as accounts receivable, notes receivable and payable, inventory, property plant and equipment and long-term debt. Different structures of equity are examined through the study of partnership and corporate forms of business. Financial statement analysis and the statement of cash flows are introduced. General accounting principles are introduced and applications are discussed throughout the course. (Prerequisite: LACC1310)

LACC2310 Cost Accounting **CL3 L0 CR3**
Accounting for transactions and summarizing data particular to manufacturing and service environments. The course will examine in detail the three elements of cost: materials, labor and overhead, in both the job order and process cost systems. It will also cover standard cost systems, including variance analysis. The student will be introduced to cost behavior patterns and apply them to cost analysis for decision making. (Prerequisite: LACC1320)

LACC2350 Managerial Accounting **CL3 L0 CR3**
The study of the use of accounting information for management decision-making purposes in the manufacturing and service environments. Cost behavior and classification, as well as cost-volume-profit analysis, differential cost analysis and absorption vs. variable costing principles, will be applied to cost and volume control, pricing and other management decisions. The student will learn to develop budgets and evaluate performance internally. Special considerations of decentralized operations and capital investment decisions will be studied. The student will be exposed to current trends in the global business environment, including the principles of activity-based costing, Just-in-Time manufacturing, and the theory of constraints. (Prerequisite: LACC2310)

LACC2510 Federal Taxes **CL3 L0 CR3**
A study of Federal Income Tax regulations and reporting. The course will cover individual returns, including filing requirements and status, rules of dependency, income inclusions and exclusions, expenses, deductions and credits, capital gains and losses. Special attention will be paid to depreciation. The partnership and corporate returns will be introduced. Topics relating to tax administration and tax planning will also be covered. (Prerequisite: LACC1320)

LACC2710 PC Accounting Applications I (Until Spring 2013) **CL2 L2 CR3**
The student will work with an educational version of an integrated accounting system to set up the system and perform routine tasks such as recording business transactions, maintaining customer and vendor files, vouchering, controlling

inventory, processing sales, maintaining fixed asset and depreciation schedules, and preparing the payroll. The student will also work with partnerships, corporations and departmentalized firms. Other topics include preparation of budgets and performance of financial statement analysis. (Prerequisite: LACC1320)

LACC2720 PC Accounting Applications II (Until Spring 2013) CL2 L2 CR3
This is a capstone project course. The student will use a variety of computer applications, such as spreadsheet preparation, word processing, automated tax return preparation, commercial automated accounting systems and the Internet. The projects cover a range of accounting applications, including solving cost and managerial problems, preparing financial statements, preparing tax returns and analyzing financial reports. (Prerequisites: LACC2310, LACC2350 (may be taken concurrently), LACC2510, LACC2710, LCIS1320)

LACC2730 Introduction to Computerized Accounting (Effective Spring 2013) CL2 L2 CR3
This course will introduce students to computerized accounting systems using QuickBooks Pro and an educational version of an integrated accounting system. The accounting procedures done manually in Accounting I will now be performed on the computer using accounting software that is currently being used in business and industry. Students will set up and perform routine tasks such as recording business transactions, maintaining customer and vendor files, vouchering, controlling inventory, processing sales, maintaining fixed asset and depreciation schedules, and preparing the payroll. Additional procedures students will perform include setting up a chart of accounts, summarizing data, generating financial reports, and banking transactions. (Prerequisites: LACC1310)

Please refer to back of course catalogue for Liberal Arts selection

ADVANCED MANUFATURING (2013)

The Advanced Manufacturing Degree at Lakes Region Community College consists of 11 major core courses 5 of which are the core courses of our Advanced Manufacturing Certificate program. Successful students should have the necessary skills to enter the manufacturing workforce, or excel in current manufacturing employment, into positions a step higher than entry level. Students will have an understanding of manufacturing operations and processes. In addition students will have acquired skills for decision making in the manufacturing environment using quantitative and qualitative data. Students will have knowledge in materials, processes, quality control, machine operations, machine set-up and tool section, employee empowerment skills, critical thinking skill, oral and technical communication skills, and operation management skills.

Students successfully completing the Advanced Manufacturing Degree Program will have the following skills:

- Mathematic skills necessary to solve manufacturing problems through the understanding of fractions and decimals, algebra, geometry, trigonometry, linear equations, roots, geometric figures, usage of tolerances, interpretation and usage of formulas and proportions, and practical applications of geometry and trigonometry.
- The ability to read and interpret blueprints and engineering drawings.
- Understanding of machine tools and machine tool operations such as milling, turning, drilling, cutting, grinding, and chamfering.
- Advanced CNC machine operations skills including offsets, work offsets, G-code programming, machine zeroing, and circular interpolation, set-up, tool selection, material selection, and operator maintenance.
- Computer Aided Manufacturing (CAM) and CAM-Mill skills in processes such as contouring, cycle time estimating, tool selection, material specification, cutter compensation, parameter changes, contour applications, roughing, finishing, and tool paths.
- Operational Management skills in strategic decision making using tools such as forecasting, basic inventory models, aggregate planning, master scheduling, materials requirements, and scheduling of operations.
- Understanding of procurement, inventory movement, storage of materials, and production flows.
- Lean manufacturing principles such as line balancing, standard work, waste elimination, 5-S programs, employee empowerment, quality, lean production flow and inventory control, as well as facilitation techniques.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LMAT1370	Technical Algebra & Geometry	4	0	4
LMAN1400	Machine Processes	3	6	5
LMAN1450	Manufacturing Processes	3	0	3
	Totals	**13**	**6**	**15**

Spring Semester		**CL**	**LAB**	**CR**
ELECTIVE	Humanities Elective	3	0	3
LENG1220	Technical Communications	3	0	3
	OR			
LENG1230	Business Communications	3	0	3
LMAN1300	Blueprint Reading & Solid Modeling	2	3	3
LMAN1500	CNC Machines I	2	6	4
LSCI1250	Technical Physics	2	2	3
	Totals	**12**	**11**	**16**

Total Credits for Year = 31

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LSOC2250	Critical Thinking & Decision Making	3	0	3
LMAN2200	Properties of Materials	3	2	4
LMAN2100	CNC Machines II	2	6	4
LMAN2300	CAD/CAM	2	3	3
LMAN2400	Lean Manufacturing	3	0	3
	Totals	**13**	**11**	**17**

Spring Semester		**CL**	**LAB**	**CR**
ELECTIVE	Liberal Arts Elective	3	0	3
ELECTIVE	Liberal Arts Elective	3	0	3
LMAN2500	Advanced CNC Machine Processes	2	6	4
LMAN2600	Operations Management	3	0	3
LMAN2700	Capstone	3	0	3
	OR			
LMAN2800	Internship	0	9	3
	Totals	**11/14**	**6/15**	**16**

Total Credits for Year = 33
Total for A.S. Degree = 64

ADVANCED MANUFACTURING CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LMAN1200	Machine Tool Math	3	0	3
LMAN1300	Blueprint Reading & Solid Modeling	2	3	3
LMAN1400	Machine Processes	3	6	5
LMAN1500	CNC Machines I	2	6	4
LMAN2100	CNC Machines II	2	6	4
	Totals	**12**	**21**	**19**

COURSE DESCRIPTONS

LMAN1200 Machine Tool Math **CL3 L0 CR3**

This focused class develops the skills of students in areas of mathematics relevant to modern manufacturing. An emphasis will be placed on practical applications as found in machining. The topics include usage of fractions and

decimals, conversion between units, interpreting and using percentages, usage of tolerances, interpretation and usage of formulas and proportions, and the practical application of geometry and trigonometry in interpreting and using drawings. The usage of scientific calculators will be integrated into the course content.

LMAN1300 Blueprint Reading & Solid Modeling CL2 L3 CR3
Students will learn the fundamentals of blue print reading including multiview drawings, basic dimensioning, holes, fasteners, assemblies, and tolerancing. Solid modeling software will be introduced with training of sketch demands, extruded boss/base features, drawing planes, fillets, chamfers, multiview drawings, and dimensioning. Three dimensional assembly modeling will also be covered with emphasis on advanced mates, exploded views, and animation.

LMAN1400 Machine Processes CL3 L6 CR5
This course introduces students to manufacturing processes utilizing traditional machine tools such as band saws, drill presses, and lathes. Topics covered are selecting machine stock, basic layout, drilling, reaming, countersinking, counter boring, tapping, chamfering, machine setup, grooving, and threading. Also students will work with standard precision measuring tools such as but not limited to micrometers, dial calipers, and vernier scales with an introduction to gauging, tolerancing, and dimensioning. Machine tool and shop safety will be covered and stressed throughout the course. (9/2013)

LMAN1450 Manufacturing Processes CL3 L0 CR3
This course will cover a qualitative and quantitative study of manufacturing processes. Fundamental principles of value-added processing of materials into useable forms for the customer will be covered. Topics will include material properties and traditional and non-traditional manufacturing processes with an emphasis on process selection for optimum design with quality, strength and economic evaluations.

LMAN1500 CNC Machines I CL2 L6 CR4
Students will be introduced to the fundamentals of Computer Numerical Controlled (CNC) Milling machines and their programming. First covered in this course is the basic operation of CNC machines with topics such as safety, simulation, tooling with tool selection, and machine zeroing. Hands-on training via simulation will expose the student to absolute and incremental positioning, circular interpolation, program interpolation, and cycle pausing. CNC Machine safety will be stressed throughout this course. (Prerequisites: LMAN1200, LMAN1400*)*.

LMAN2100 CNC Machines II CL2 L6 CR4
In this course students will expand on knowledge gained from CNC Machines I as well as be introduced to Computer Aided Manufacturing. (CAM) CNC Machine Topics will include machine speeds and feeds, feed rate, and cycle time optimization. Students will also learn alternative drilling cycles, subprograms, cutter compensation, and scaling/mirroring. CNC Machine safety will be stressed throughout this course. Students will also be introduced to CAT/CAM with topics to include part geometry, CAM-Mill processes, contouring, cycle time estimation, tool selection, material selection, cutter compensation, parameter pages, contour applications, roughing, finishing, and tool paths. (Prerequisites: LMAN1500)

LMAN2200 Properties of Materials CL3 L2 CR4
This course introduces the student to the processes and materials used in modern manufacturing, with an emphasis on steels and nonferrous metallic alloys. After establishing the sources of stock materials and the means to modify them to adjust material properties, the selection of why certain materials are appropriate for different applications is covered. The understanding of manufacturing processes is central to the course, including machine tooling, hot working, cold working, casting, joining processes, and powder metallurgy. In addition, the processes required to manufacture plastics and composites will also be incorporated. (Prerequisites: A grade of C or better in LMAT1370 AND LSCI1250)

LMAN2300 CAD/CAM CL2 L3 CR3
This course covers Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM). The course includes demonstrations as well as hands-on of CAD/CAM software and hardware. An emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, speed and feed selection, and tool path generation along with post processing to CNC machines. Students need a basic knowledge in drafting/design, machine processes and procedures, and computer operating systems (MS Windows).

LMAN2400 Lean Manufacturing CR3 L0 CR3
This course will cover all of the aspects of Lean Manufacturing. Topics will include line balancing, batching versus single piece flow, standard work, inventory control models, value stream mapping, 5-S, and waste elimination. Students will learn tools for identifying and reducing waste such as fishbone modeling, brainstorming techniques, “spaghetti” mapping, and observation techniques. An emphasis on quality control and people empowerment will be stressed throughout the course.

LMAN2500 Advanced CNC Machine Processes CL2 L6 CR4
This course expands on the machining skills presented in the CNC I & II courses. This course will include 3-D and solid modeling, programming, machine setup, and operating procedures. Tool selection, quality measurement/control, and operator maintenance, are also topics covered..

LMAN2600 Operations Management CL3 L0 CR3
This course will cover how to manage activities involved in the process of transformation resources into products or services. Strategic decision making using tools such as forecasting, basic inventory models, aggregate planning, master scheduling, materials requirements, and scheduling of operations will be covered. Also procurement, movement, and storage of materials are covered. Inventory and production flows, line balancing, and lean principals will be discussed throughout the course

LMAN2700 Advanced Manufacturing Capstone CL3 L0 CR3
This course provides the vehicle for students to demonstrate overall competency in advanced manufacturing and in the specific operations in which they have chosen to concentrate. Under the supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project which pertains directly to advanced manufacturing.

LMAN2800 Advanced Manufacturing Internship CL0 L9 CR3
This course provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a manufacturing job related environment. Cumulative GPA 2.0 minimum required.

The college reserves the right to change without notice any academic or other requirements, course offerings and course contents contained in this profile

AUTOMOTIVE SERVICE EDUCATION PROGRAM (ASEP)

ASEP fulfills two very important goals in providing the best possible education for GM Technicians. First, it combines state-of-the-art technical training with appropriate academic coursework and dealership experience. Secondly, it fills an industry need for well-educated and motivated technicians capable of continued growth in a technologically dynamic field.

Graduates who successfully complete the 21-month cooperative education Automotive Service Education Program will receive an Associate in Applied Science Degree in Automotive Technology and credits toward GM Master Certification in all areas. The Co-op education program allows students to earn money while they work and learn in a General Motors dealership.

No college or educational program can guarantee its graduates a job in the future, but ASEP comes very close to doing just that. ASEP students are already working while in school. They receive training on specific products and dealership operations. ASEP graduates fulfill minimum training requirements that GM dealerships are obligated to meet. This makes them a valuable addition to the dealership.

The need for well-educated technicians to repair and service automobiles will be around for many years to come. Some ASEP graduates have gone on to become teachers, field service engineers, service managers or owners of their own dealerships. The potential for personal and financial growth in this industry is high.

The GM ASEP degree program has a limited number of spaces; therefore, students will be selected after careful consideration of their academic record, scores on the placement exam and an interview with the Automotive Department. The College's rolling admissions policy does not apply to the GM ASEP program. All candidates for this program must take the College's placement exam and must secure a GM dealer sponsor prior to an admissions decision.

Technical Requirements

A candidate for ASEP must:
- have a high school degree or equivalent;
- interview with one of the automotive faculty;

- be sponsored by a General Motors/AC Delco TSS dealership;
- have command of the English language
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- be able to understand and follow both written and oral instructions;
- be able to complete requirements for college level classes;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have the ability to stand for extended periods of time and the physical strength to lift automotive parts and equipment;
- have sufficient dexterity to perform manual skills related to automotive service;
- be able to work in an automotive service facility environment;
- maintain a valid drivers license;
- be able to purchase the minimum required tools.

The student who successfully completes this program will:

- have skills necessary to service and maintain GM vehicles and the integrated systems used on these vehicles;
- have the skills necessary to diagnose and repair GM vehicles and the integrated systems used on these vehicles;
- have the skills necessary to develop and maintain a training path for continued growth using GM Service Technology College (GMSTC).

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Session I		**CL**	**LAB**	**CR**
LAUT1210	Automotive Systems	2	9	5
LAUT1220	GM Automotive Electricity	2	8	4
LENG1200	College Composition	3	0	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Totals	**10**	**17**	**15**
Winter Session II		**CL**	**LAB**	**CR**
LAUT1750	Cooperative Education	0	12	4
	Totals	**0**	**12**	**4**
Spring Session III		**CL**	**LAB**	**CR**
LAUT1230	GM Fuel and Emissions	2	8	4
LAUT1240	GM Engine and Engine Related Electrical Systems	2	9	5
LENG1220	Technical Communications	3	0	3
LMAT1370	Technical Algebra & Geometry (fall 2010)	4	0	4
	Totals	**11**	**17**	**16**
Summer Session IV		**CL**	**LAB**	**CR**
LAUT2100	GM Heating, Ventilation & Air Conditioning	2	8	3
LAUT2110	GM Supplemental Inflatable Restraint & Accessories	2	8	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**7**	**16**	**9**
Summer Co-op Session V				
LAUT1760	Cooperative Education	0	6	2

Total Credits for Year = 45/46

SECOND YEAR

Fall Session VI		**CL**	**LAB**	**CR**
LAUT2750	Cooperative Education	0	12	4
	Totals	**0**	**12**	**4**

Winter Session VII		**CL**	**LAB**	**CR**
LAUT2220	GM Drive Trains	2	9	5
LAUT2250	GM Brakes, Steering and Suspension	2	8	4
LSCI1250	Technical Physics (9/2011)	2	2	3
	HUMANITIES	3	0	3
	Totals	**9**	**19**	**15**

Spring Session VIII		**CL**	**LAB**	**CR**
LAUT2900	Cooperative Education	0	12	4
	Totals	**0**	**12**	**4**

Total Credits for Year = 23
Total for A.A.S. Degree = 68/69

COURSE DESCRIPTIONS

LAUT1210 Automotive Systems **CL2 L9 CR5**
This course prepares the student for their first co-op experience by introducing the student to safe shop practices; General Motors products; maintenance requirements and procedures; periodic motor vehicle safety inspection and tire service. It consists of five units - Safety and Shop Practices, Maintenance of Automotive Systems, Tire Service, Vibration Correction, and Basic Steering and Brakes.

LAUT1220 GM Automotive Electricity **CL2 L8 CR4**
This course introduces the student to the theory and application of electricity, magnetism and electronics. This includes reading, understanding and applying the information from GM schematics and service literature to diagnose the integrated electronic control systems used on today's GM vehicles.

LAUT1220.1 GM Automotive Electricity **CL3 L0CR3**
This course introduces the student to the theory and application of electricity, magnetism, and electronics. This includes reading, understanding, and applying the information from GM schematics and service literature to diagnose the integrated electronic control systems used on today's GM vehicles. (This combination of this course plus the LAUT1220.2 is the equivalent of LAUT1220)

LAUT1220.2 GM Automotive Electricity II **CL0 L4 CR1**
In this lab only course, students put into practice the electrical and electronics theory studied in the GM Automotive Electricity I theory class. This includes the application of Ohms Law and Kirchhoff's Law to the solution of electrical and electronic concerns; wiring schematics and symbols, series and parallel circuits; the use of multimeters, logic probes, oscilloscopes and graphing multimeters; wiring repair; electronic component and devices; lighting, & signaling system circuits. (Prerequisite: LAUT1220.1 OR LAUT1320)

LAUT1230 GM Fuel and Emissions **CL2 L8 CR4**
This course prepares students to diagnose and repair engine fuel injection and electronic controls system concerns as they relate to driveability and emissions. It includes the study of fuel composition and quality, the use of specialized diagnostic tools including the Tech II diagnostic scan tool combined with General Motor's TIS2000 software, and extensive use of the digital multi-meter and lab scopes. (Prerequisites: LAUT1210, LAUT1220)

LAUT1240 GM Engine and Engine Related Electrical **CL2 L9 CR5**
This course provides the student with knowledge and skills necessary to diagnose, service, and repair the advanced engines used in GM vehicles today. The activities include engine disassembly, evaluation, repair, and reassembly of a variety of the latest world-class engines manufactured by General Motors and their industry partners. The student will also study GM ignition systems, starting and charging systems. (Prerequisites: LAUT1210, LAUT1220)

LAUT1750 Cooperative Education **CL0 L12 CR4**
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT1760 Cooperative Education-Summer Session CL0 L6 CR2
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT 2100 GM Heating, Ventilation & Air Conditioning CL2 L8 CR3
This course prepares students to safely diagnose and repair common performance concerns related to heating and AC systems. Emphasis is placed on electrical and electronic control of these systems. Electrical and Electronic theory studied previously is put to practical use in evaluating and diagnosing AC Control Systems and related Sub-Systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2110 GM Supplemental Inflatable Restraint & Accessories CL2 L8 CR3
Students study Supplemental Inflatable Restraint (SIR) Systems, Windshield Wiper Systems, Cruise Control, Body Controllers and Theft Deterrent Systems. This course builds on the electronic/electrical theory studied previously by applying that theory in evaluating and diagnosing these integrated systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2220 GM Drive Trains CL2 L9 CR5
In this course, the student studies GM automatic transmissions and transaxles, manual transmissions and transaxles, transfer cases and rear axles. The learning outcomes include the development of skills in the diagnosis, disassembly, evaluation and repair of these components and the related electronic control systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2250 GM Brakes, Steering and Suspension CL2 L8 CR4
This course prepares students to diagnose, repair and service GM antilock brakes, steering and suspension systems. Emphasis is placed on service of integrated systems and four-wheel alignment, as well as their related electrical and electronic sub-systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2750 Cooperative Education CL0 L12 CR4
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload, and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT2900 Cooperative Education CL0 L12 CR4
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload, and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

Please refer to back of course catalogue for Liberal Arts selections.

AUTOMOTIVE TECHNOLOGY

The constantly evolving automotive industry needs well-educated and motivated technicians capable of continued growth and lifelong learning skills as new advanced technologies find their way onto our roads. The Automotive Technology track at LRCC consist of a series of evening and Saturday courses that provide students a well rounded education with an emphasis on the service, diagnosis, and repair of today's complex automobiles and their integrated systems. Graduates who successfully complete the two-year Automotive Technology Program will receive an Associate in Applied Science Degree in Automotive Technology. Attaining this degree will open doors to numerous opportunities for higher skills jobs, income, and continued personal and professional growth. The range of career options include automotive technician in an independent shop or a franchise shop; parts person; service advisor; service management, ownership, and possible pathways to teaching.

The evening and Saturday hours make this program a convenient option for those individuals already working in the field, who want to improve their understanding and skills, or have the desire to prepare for ASE Certification testing. The

courses are a combination of classroom theory and invaluable hands-on lab experience. The classes are taught by Master Certified Technicians with many years of experience solving the technical concerns related to engine performance, emissions, drive train, steering, suspension and braking systems, audio systems and HVAC.

Technical Requirements

The Automotive Technology degree student must:

- have a high school degree or equivalent;
- interview with one of the automotive faculty;
- have command of the English language;
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- be able to understand and follow both written and oral instructions;
- be able to complete requirements for college level classes;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have the ability to stand for extended periods of time and the physical strength to lift automotive parts and equipment;
- have sufficient dexterity to perform manual skills related to automotive service;
- be able to work in an automotive service facility environment;
- maintain a valid driver's license;
- be able to purchase the minimum required tools.

The successful learner will:

- be able to identify learning needs and construct activities to attain continuous growth through self-directed life-long learning.
- be able to safely perform routine diagnostics, service and repair on today's modern cars and light trucks.
- be able to safely diagnose and repair the integrated systems used on today's advanced vehicles.

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LAUT1200	Introduction to Automotive Service	2	4	3
LAUT1300	Engine Mechanical	3	5	4
LAUT1320	Electrical/Electronics I	3	5	4
LENG1200	College Composition	3	0	3
	Totals	**11**	**14**	**14**

Spring Semester		CL	LAB	CR
LAUT1330	Electrical/Electronics II	3	5	4
LAUT1340	Braking Systems	3	4	4
LENG1220	Technical Communications	3	0	3
	MATH ELECTIVE	3/4	0	3/4
	Totals	**12/13**	**9**	**14/15**

Summer Semester		CL	LAB	CR
LAUT1350	HVAC	3	7	4
LAUT1360	Suspension and Steering	3	7	4
	SOCIAL SCIENCE ELECTIVE	3	0	3
	Totals	**9**	**14**	**11**

Total Credits for Year = 39/40

SECOND YEAR

Fall Semester		CL	LAB	CR
LAUT2400	Manual Drive Train	3	4	4
LAUT2450	Engine Performance I	3	5	4
	SCIENCE ELECTIVE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**12**	**9**	**14**

Spring Semester		CL	LAB	CR
LAUT2550	Engine Performance II	3	5	4
LAUT2650	Automatic Transmission and Transaxles	3	6	4
	HUMANITIES ELECTIVE	3	0	3
LAUT2700	Advanced Technology Systems	3	0	3
	Totals	**12**	**11**	**14**

Total Credits for Year = 28
Total for A.A.S. Degree = 67/68

COURSE DESCRIPTIONS

LAUT1200 Introduction to Automotive Service **CL2 L4 CR3**
This is the first of a series of courses that make up the Automotive Technology track. It provides instruction in career opportunities, safety, Oxy-Acetylene usage, measurement, proper tool usage, service operations, and basic maintenance including tire service, safety inspections, light engine repair, and brake work.

LAUT1300 Engine Mechanical **CL3 L5 CR4**
In this course, the student studies engine design and construction; engine mechanical diagnosis for performance, noise and leaks; engine disassembly procedures and best practices; engine evaluation and measurement; engine removal and installation techniques. (Prerequisite, may be taken concurrently: LAUT1200 with a grade of C- or better, or POI)

LAUT1320 Electrical/Electronics I **CL3 L5 CR4**
In this course, students study electrical and electronics theory including the application of Ohms Law and Kirchhoff's Law to the solution of electrical and electronic concerns; wiring schematics and symbols, series and parallel circuits; the use of multi-meters, logic probes, oscilloscopes and graphing multi-meters; wiring repair; electronic component and devices; battery, charging and starting systems. (Prerequisite, may be taken concurrently: LAUT1200 with a grade of C- or better or POI)

LAUT1330 Electrical/Electronics II **CL3 L5 CR4**
This course builds on the material covered in Electrical/Electronics I and includes communication and networking, body control systems, security systems, occupant safety systems, entertainment and audio systems and driver information and navigations systems. Students will practice diagnosis and repair using scan tools, oscilloscopes and multi-meters. (Prerequisites: LAUT1200 and LAUT1320 with grades of C- or better or POI)

LAUT1340 Braking Systems CL3 L4 CR4
This course prepares the students to diagnose, evaluate and service base brake systems, parking brake systems, antilock brake systems and traction control systems. Students will practice machining drums and rotors using both on-car and off-car lathes. Students will practice diagnosis, evaluation and repair using pressure gauges, measuring tools, scan tools, oscilloscopes and multi-meters. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1350 HVAC Systems CL3 L7 CR4
This course prepares the students to diagnose, evaluate and service heating ventilation and air conditioning systems using the latest equipment and technology. The course includes basic refrigeration theory and extensive study of the sub-systems that play a role in HVAC performance followed by hands-on practice evaluating and diagnosing HVAC issues. Students must pass the ASE EPA 609 test as part of completion of this course. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1351 HVAC Systems CL3 L0 CR3
This course prepares the students to diagnose, evaluate and service heating ventilation and air conditioning systems using the latest equipment and technology. The course includes basic refrigeration theory and extensive study of the sub-systems that play a role in the HVAC performance. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1360 Steering and Suspension Systems CL3 L7 CR4
This course prepares the students to diagnose, evaluate and service base steering and suspension systems and electronically controlled steering and suspension systems. Students will practice replacing steering and suspension components. Students will practice 2 wheel and 4 wheel alignment. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2300 Auto Service Management CL3 L0 CR3
This course is instructor led with classroom meeting that will use Andrew A. Rezin's text Automotive Service Management-Principles into Practice. The course will address such subjects as Service Operations; Management Styles and Strategies; Financial Management; Organization; Customer Relations; Marketing; Legal Issues and Responsibilities.

LAUT2400 Manual Drive Train CL3 L4 CR4
In this course, students study manual transmissions, transaxles, transfer cases and rear axle theory of operation, disassembly and reassembly procedures including set-up and endplay measurements. Students will also practice removal and replacement procedures for clutches, transmissions, transaxles, transfer cases and rear axle assemblies. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2450 Engine Performance I CL3 L5 CR4
This course prepares the student with the skills they need to service, diagnose and repair fuel delivery, ignition and emission systems used on today's vehicles. Students will study four stroke theory and combustion theory for both spark ignited and compression ignited engines. Students will study the emission concerns related to internal combustion engines and the systems and strategies used to control these emissions. Students will practice testing and diagnostic routines on vehicles with faults using scan tools, multi-meters, signal generators, pressure gauges and oscilloscopes. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2550 Engine Performance II CL3 L5CR4
This course builds on Engine Performance I with more emphasis on performance systems such as turbo charging, super charging, variable cam timing, variable valve lift and drivability diagnostics related to these systems. Extensive use of the scan tool, multi-meters and oscilloscope are employed in the diagnosis and evaluation of these systems as students determine the root cause of failures following a logical diagnostic process. There is more emphasis on the application of theory to solving drivability and performance concerns on vehicles with failures built into the systems. (Prerequisites: LAUT1200 and LAUT2450 with grades of C- or better or POI)

LAUT2650 Automatic Transmissions and Transaxles CL3 L6 CR4
This course introduces students to automatic transmissions and transaxles with emphasis on identification of transmission type, mechanical components and power flow, hydraulic systems and operation and electronic controls. Lab activities will include on-car diagnostic procedures; removal and installation of a transaxle; disassembly, evaluation and inspection and reassembly procedures. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2700 Advanced Technology Systems **CL3 L0 CR3**

This course introduces students to the latest technology in transportation including hybrid, electric and fuel cell vehicles. Students will learn about the different design hybrid systems and the components used in these systems. Students will learn about the personal protection equipment used and safe practices that are followed to service and repair the systems used on these vehicles. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

Please refer to back of course catalogue for Liberal Arts selections.

BUSINESS MANAGEMENT

The Business Management department curriculum offers educational programs leading to an associate degree, or certificates. Students acquire the knowledge, technical skills, and interpersonal expertise to function optimally in the business world; in a variety of settings and opportunities. Certificate programs may be expanded through additional coursework to meet associate degree requirements.

Societies cannot function without business and organizations. Opportunities exist everywhere from small, individually-owned enterprises to large corporations and government agencies. Virtually every occupation utilizes organizational and business skills. Graduates have successfully transferred their associate degree credits to Plymouth State College, Southern New Hampshire University and Franklin Pierce College. See the business department chair or advisor for transfer information.

Technical Requirements

A candidate for the Business Management Program must:

- have command of the English language;
- have arithmetic and computation skills;
- have mental and physical ability to work in groups and to give oral presentations;
- have aptitude for proficiency with learning new software programs – Word, Excel, Access, PowerPoint, as examples;

The students who successfully complete this program will:

- understand the dynamics of business in both domestic and international economies;
- define the role of management in different organizational structures;
- demonstrate verbal and written communication skills including critical and analytical thinking;
- demonstrate basic MS Office skills in Word, Excel, Outlook, and PowerPoint;
- demonstrate presentation techniques.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LBUS1300	Introduction to Business	3	0	3
LCIS1320	Software Applications	3	2	4
LENG1200	College Composition	3	0	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Totals	**15**	**2**	**16**

Spring Semester		**CL**	**LAB**	**CR**
LACC1320	Accounting II	3	0	3
LBUS2600	Principles of Marketing	3	0	3
LENG1230	Business Communications	3	0	3
LSOC2310	Microeconomics			
	OR			
LSOC2320	Macroeconomics	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**15/16**	**0**	**15/16**

Total Credits for Year = 31/32

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LBUS2310	Principles of Management	3	0	3
LBUS1350	Small Business Management	3	0	3
LBUS2400	Introduction to Project Management	3	0	3
	BUSINESS ELECTIVES	3	0	3
	LIBERAL ARTS	3	0	3
	SCIENCE	3	0	3
	Totals	**18**	**0**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LBUS2380	Business Law I	3	0	3
LBUS2520	Introduction to International Business	3	0	3
	BUSINESS ELECTIVES*	6	0	6
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**15**	**0**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 64/65

BUSINESS MANAGEMENT CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LACC1320	Accounting II	3	0	3
LBUS1300	Introduction to Business	3	0	3
LBUS1350	Small Business Management	3	0	3
LBUS2310	Principles of Management	3	0	3
LBUS2600	Principles of Marketing	3	0	3
LCIS1320	Software Applications	3	2	4
LENG1230	Business Communications	3	0	3
Select 3 credits:				
LBUS2330	Supervision	3	0	3
LBUS2410	Human Resource Management	3	0	3
	Total for Certificate	**27**	**2**	**28**

***Business Electives**		**CL**	**LAB**	**CR**
LACC2510	Federal Taxes	3	0	3
LACC2710	PC Accounting Applications I (Until Spring 2013)	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3
LBUS1752	Cooperative Education/Internship	0	9	3
LBUS2330	Supervision	3	0	3
LBUS2390	Business Law II	3	0	3
LBUS2410	Human Resource Management	3	0	3
LCIS2320	Website Development	2	2	3
LCIS2350	Spreadsheets	2	2	3
LCIS2390	E-Commerce	2	2	3
LCIS2420	Database Management and Design	2	2	3
LFIN1800	Personal Financial Management	3	0	3
LHOS1230	Food & Beverage Management	3	0	3
LOTM1210	Business Documentation I	2	2	3
LOTM1250	Administrative Office Management	3	0	3
LOTM2210	Business Documentation II	2	2	3
LOTM2250	Administrative Office Procedures	2	2	3
LOTM2550	Comp. Accounting Apps. (QuickBooks Pro)** (Until Spring 2013)	2	2	3

** Non Accounting majors only.
Some electives may be offered only in the Evening Division or Summer Semester

COURSE DESCRIPTIONS

LBUS1150 Professional Development **CL1 L0 CR1**
This course is designed to improve professional growth in individuals. Topics include business etiquette, appearance, attitude, networking, decision-making, personal and professional growth plans.

LBUS1300 Introduction to Business **CL3 L0 CR3**
The study of business world operations including the wide range of occupational functions and the American economic system.

LBUS1350 Small Business Management **CL3 L0 CR3**
Problems of a small business operation: going into business, financing a business, the feasibility study, marketing, and management of business phases are covered.

LBUS1752 Cooperative Education **CL0 L9 CR3**
Provides the opportunity for the student to utilize learned course competencies in a real-life setting. Provides supplemental laboratory experience on an extensive array of equipment and processes. (Prerequisite: Approval of advisor and department chair)

LBUS2310 Principles of Management **CL3 L0 CR3**
A comprehensive survey of the principles and practices of management as they are currently being applied in the United States and abroad. The two continuing themes throughout the course are: (1) the never-ending effort by managers and organizations to meet or exceed customer needs and (2) the need for effective leadership in organizations. Emphasis is placed on determining the role of a manager through the leadership process. Individual and group-work dynamics are explored through case studies, research, and experiential exercises. (Prerequisite: LBUS1300 or permission of instructor)

LBUS2330 Supervision **CL3 L0 CR3**
Studies techniques and responsibilities involved in the supervision of employees in business management. Examines human behavior which encourages productive business relationships at all levels. Management of projects and customer service functions are studied. Students learn to work with minimal supervision and to effectively supervise the work of others.

LBUS2380 Business Law I **CL3 L0 CR3**
Origins of law, federal and state court systems, classification of criminal and tort law; a working knowledge of the law of contracts, and sales and consumer protection as applied to everyday usage.

LBUS2390 Business Law II **CL3 L0 CR3**
A study of the law of personal property and bailment; real property, wills, intestacy and trusts; commercial paper; insurance, secured transactions and bankruptcy; agency and employment; business organization and regulation and emerging trends and issues. In addition, the course is designed to enable students to better comprehend the rules of conduct they can reasonably expect from others, as well as the conduct others may expect from them in various business situations. (Prerequisite: LBUS2380)

LBUS2400 Introduction to Project Management **CL3 L0 CR3**
This course will provide students with basic skills to define, analyze and manage projects. By using a variety of automated tools and working with a hands-on case study, students will become familiar with project feasibility, cost benefit analysis, and the development of a project plan. Students will also become familiar with a systems development methodology (SDM) and structured business systems analysis. (Prerequisite: LCIS1320 or permission of instructor)

LBUS2410 Human Resource Management **CL3 L0 CR3**
The study of human resource issues affecting employees in present and future organizations.

LBUS2520 Introduction to International Business CL3 L0 CR3
Study of today's globalization process, international environment and management operations for a multilateral corporation. Particular focus on the organizational, marketing and production strategies employed by companies in a world market. (Prerequisites: LBUS1300, LSOC2310 or LSOC2320)

LBUS2600 Principles of Marketing CL3 L0 CR3
Product, pricing, promotion and channels of distribution. Marketing in retail, wholesale, service and manufacturing companies.

LBUS2650 Independent Study CL3 L0 CR3
Students in an independent study option will engage in learning about topics of special interest and/or need. Written reports on the topics of the independent study are required.

Please refer to back of course catalogue for Liberal Arts selections

CAREER AND TECHNICAL EDUCATION

This program is designed to offer students the knowledge and skills required by the New Hampshire Department of Education standards for career and technical educator certification. This certificate program has been constructed according to the competencies required for Ed 610.01 Professional Education and Ed 507.02 Teachers of Career and Technical Education.

The program is comprised of eight courses, for a total of twenty-four or twenty-five college credits. The program is designed to allow students to utilize these credits toward the Associate in Arts in Teacher Preparation, the Associate Degree in a general studies, or a career and technical program at any one of the Community Colleges in the system. Additionally, students will have an opportunity to use the credits toward the pursuit of a Bachelor degree program, or a graduate program in education through Plymouth State University.

Upon completion of the program, students will be able to identify, evaluate and assess students' career and technical skills. Students will demonstrate proficiency in teaching strategies and techniques for teaching diverse populations.

CERTIFICATE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LEDU1200	Foundations of Education	3	0	3
LEDU1300	Introduction to Exceptionalities	3	0	3
LEDU2000	Teaching and Learning	3	0	3
LENG1200	College Composition	3	0	3
	Totals	**12**	**0**	**12**

Spring Semester		**CL**	**LAB**	**CR**
LEDU2100	Instructional Technology	3	0	3
LEDU2300	Essentials of Career and Technical Curriculum and Instruction	3	0	3
LPSY1260	Human Growth and Development	3	0	3
LPSY2000	Educational Psychology	3	0	3
	Totals	**12**	**0**	**12**

Total for Certificate = 24

COURSE DESCRIPTIONS

LEDU1200 Foundations of Education CL3 L0 CR3
This course investigates the philosophical, historical, and social/cultural character of education in the United States. It examines how schools function organizationally and the motivation for selecting teaching as a profession. Students will complete 20 hours of observation/participation in a public school.

LEDU1300 Introduction to Exceptionalities CL3 L0 CR3

This course will introduce the federal laws that regulate special education, the basic values that underlie supporting students who experience disabilities, and the roles of teacher assistants in supporting those individuals including: the value of inclusion in home, education, work and community life; respect for the inherent worth and dignity of each person. Through readings, in-class discussions, lectures, presentations and classroom discussions, teachers and teacher assistants will develop strategies on how to facilitate students' independence, learning, social connections and self-advocacy skills. Curriculum will emphasize the philosophical and practical applications of valuing students' abilities and diversity, collaborating with educators and families, supporting classroom teachers and curriculum modifications. Topical issues to be explored include: A History of Disability Law; Implementing IDEA's (IDEIA's) Principles in public education; the practical application of these laws in an inclusive instructional setting; effective instructional strategies for curriculum adaptation and delivery within the context planning under IDEA (IDEIA) and Section 504 of the 1973 Rehabilitation Act; rights of teachers, parents and students; inclusion and collaboration. Emphasis will be placed upon the most prevalent disabilities, such as learning disabilities, emotional disorders, cognitive impairment, and physical disabilities.

LEDU2000 Teaching and Learning CL3 L0 CR3

This course studies principles of curriculum, organizations, and teaching methods through supervised observation and participation in a public school. This course introduces the student to rubric evaluation and learning styles, lesson planning, and curriculum delivery. (Prerequisite: LEDU1200)

LEDU2100 Instructional Technology CL3 L0 CR3

This course presents theory and strategies for effective integration of technology resources and technology-based methods of instruction to enhance and extend student learning. The role of technology in the classroom with regard to student use, teacher productivity, and communication will be explored, including assistive technology designed for students with disabilities, to discover ways in which technology supports differentiated instruction. State and National technology standards will be addressed with respect to planning curricula and technology-based activities. (Prerequisite: LEDU 1200) (9/2012)

LEDU2300 Essentials of Career and Technical Curriculum and Instruction CL3 L0 CR3

This course will explore the history, philosophy, principles, organization and operation of career and technical education in the United States. Students will develop a functional understanding of the role and responsibilities of a professional career and technical educator. This course will provide the participant with the foundation and skills needed 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 learning outcomes, and the selection and development of activities and evaluation methods will be explored.

Please refer to back of course catalogue for Liberal Arts selections

COMPUTER TECHNOLOGIES

Students taking the Associate in Science Degree in Computer Technologies select one track from the three tracks offered: Network Administrator (Cisco Certified Network Associate [CCNA]/Microsoft Certified Solutions Associate [MCSA] - Windows Server), Application Developer/Gaming and Animation(MCSA Track), Database Administrator/Web Developer (MCSA Track). Students in the Network Administrator track can take electives that will prepare them for the CompTIA A+, Security+ or Linux+ certifications. Students should declare their focus by the second semester to ensure completion of curriculum requirements. In addition, a Technologies for Education Certificate is available for educators who either wish to update their technology skills or become certified to teach computer classes at the middle and high school levels.

The rapidly changing world of computer technology has created a growing demand for persons trained in hardware and software. This degree program prepares students for a broad range of employment opportunities in the field; including positions in networking, software development, database administration, gaming and animation development and help desk administration. All courses are designed with the potential for transfer to a four-year institution.

Laconia is a MSDNAA, Oracle and Cisco Academy. While earning an associate degree or a certificate, students can become certified in an industry standard by passing a series of tests. Certification gives industry recognition of proficiency in technical areas in demand by businesses. Certain certifications may also give access to technical and product

information not available to the general public, including access to secure websites, as well as invitations to conferences, technical training and special events. Students can pursue most of the computer courses by means of distance learning. Blackboard is used as the platform for on-line classes.

Technical Requirements - Computer Technology Program candidate must:

- have command of the English language;
- have normal vision for reading instructions and course materials and for performing manipulative tasks;
- be able to complete requirements for college level classes;
- be able to understand and follow both written and oral instructions;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have reading comprehensive skills sufficient to read and comprehend technical literature;
- have communication skills sufficient to prepare required reports;
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have sufficient dexterity to perform manual skills related to computer operation.

It is also recommended that all candidates interview with one of the Computer Technology faculty.

At the completion of the program, each student will have:

- skills necessary to be a self-directed and continuous learner;
- knowledge of operating systems, applications, database systems, hardware, programming concepts, networks, and online resources;
- knowledge of security issues, risks, tools, and policies;
- ability to apply a systematic and methodical approach to solve problems;
- strong documentation skills and knowledge of general business principles and project management;
- obtain specific technical skills to enter the workplace;

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

NOTE: One track must be selected.

Fall Semester		**CL**	**LAB**	**CR**
LCIS1320	Software Applications	3	2	4
OR LCIS2260	Advanced Office Applications (if placement test allows)	2	2	3
LCIS1360	Introduction to Computers	2	2	3
LCIS1400	Introduction to Programming	2	2	3
LENG1200	College Composition	3	0	3
	MATHEMATICS (LMAT1230 minimum; except for Gaming option)	3/4	0	3/4
	Gaming students must take a minimum of LMAT2100			
	Totals	**12/13/14**	**6**	**15/16/17**

Spring Semester		**CL**	**LAB**	**CR**
LCIS2270	IT Developmental Applications	2	2	3
	COMPUTER TECHNOLOGIES ELECTIVES*	4	4	6
	COMPUTER, ACCOUNTING OR BUSINESS ELECTIVE	3	0	3
	LIBERAL ARTS	3	0	3
	MATHEMATICS (LMAT2100 minimum; except for Gaming option)	3/4	0	3/4
	Gaming students must take LMAT2350			
	Totals	**15/16**	**6**	**18/19**

Total Credits for Year = 33/34/35

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
	COMPUTER TECHNOLOGIES ELECTIVES*	6	6	9
LSOC2250	Critical Thinking and Decision Making	3	0	3

	ENGLISH	3	0	3
	SCIENCE	3	0	3
	Totals	**15**	**6**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LCIS2800	Capstone Project	3	0	3
	COMPUTER TECHNOLOGIES ELECTIVES*	6	6	9
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**12**	**6**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 66/67/68

TRACKS:

Network Administrator (CCNA/MCSA Track)

Semester	**Course**		**Credits**	**Certification Test**
Spring 1	LCIS2510	Small Business Networking	3	CCNA
Spring 1	LCIS2610	Configuring Windows Servers	3	70-410
Fall 2	LCIS2530	Routing & Switching in the Enterprise	3	CCNA
Fall 2	LCIS2670	Administering Windows Servers	3	70-411
Fall 2		Computer Technologies elective	3	
Spring 2		Computer Technologies elective	3	
Spring 2	LCIS2590	Designing & Supporting Networks	3	CCNA
Spring 2	LCIS2680	Advanced Windows Server Configuration	3	70-412

Network Administrator Elective tracks:

CompTIA A+ certification:	LCIS2520 CompTIA A+ Essentials
	LCIS2570 CompTIA A+ Practical Applications
CompTIA Security+ certification:	LCIS2490 Network Security
CompTIA Linux+ certification:	LCIS2620 Intro to Linux

Software Developer/Gaming and Animation (MCSA Track)

Semester	**Course**		**Credits**	**Certification Test**
Spring 1	LCIS2750	Object-Oriented Programming-C++	3	98-362; 98-372
Spring 1	LCIS2770	Programming for Games	3	98-374; 98-483
Fall 2	LCIS2710	Analyzing Software Requirements	3	98-361, 98-362; 98-372
Fall 2	LCIS2720	Object-Oriented Programming-Java	3	
Fall 2	LCIS2920	Mobile Application Development	3	98-373
Spring 2	LCIS2760	Developing Web Applications	3	98-363
Spring 2	LCIS2440	SQL Server	3	98-461, 98-462
Spring 2	LCIS2730	Distributed Applications with Visual Basic and XML	3	98-361'98-362; 98-372

Database Administrator/Website Developer (MCSA Track)

Semester	**Course**		**Credits**	**Certification Test**
Spring 1	LCIS2440	SQL Server	3	98-461, 98-462
Spring 1	LCIS2620	Intro to Linux	3	Linux+
Fall 2	LCIS2420	Database Management and Design	3	98-364
Fall 2	LCIS2720	Object-Oriented Programming-Java	3	
Fall 2	LCIS2320	Website Development	3	98-375, 98-480
Spring 2	LCIS2430	Database Application Development	3	
Spring 2	LCIS2760	Developing Web Applications	3	98-363
Spring 2	LCIS2730	Distributed Applications with Visual Basic and XML	3	98-361, 98-362; 98-372

Database Administrator Elective tracks:

MCSA Windows Server certification: LCIS2610 Configuring Windows Servers
LCIS2670 Administering Windows Servers
LCIS2680 Advanced Windows Server Configuration

NETWORK ADMINISTRATOR CERTIFICATE

Courses		CL	LAB	CR
LCIS1360	Introduction to Computers	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS2510	Small Business Networking	2	2	3
LCIS2530	Routing & Switching in the Enterprise	2	2	3
LCIS2590	Designing & Supporting Networks	2	2	3
LCIS2610	Configuring Windows Servers	2	2	3
LCIS2670	Administering Windows Servers	2	2	3
LCIS2680	Advanced Windows Server Configuration	2	2	3
	Computer Technology Elective	2	2	3
	Computer Technology Elective	2	2	3
	Totals	**20**	**20**	**30**

APPLICATION DEVELOPER CERTIFICATE

Courses		CL	LAB	CR
LCIS1360	Introduction to Computers	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS1400	Introduction to Programming	2	2	3
LCIS2920	Mobile Application Development	2	2	3
LCIS2440	SQL Server	2	2	3
LCIS2710	Analyzing Software Requirements	2	2	3
LCIS2720	Object-Oriented Programming-Java	2	2	3
LCIS2730	Distributed Applications with Visual Basic & XML	2	2	3
LCIS2760	Developing Web Applications	2	2	3
LCIS2770	Programming for Games	2	2	3
	Totals	**20**	**20**	**30**

DATABASE ADMINISTRATOR CERTIFICATE

Courses		CL	LAB	CR
LCIS1360	Introduction to Computers	2	2	3
LCIS1400	Introduction to Programming	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS2420	Database Management and Design	2	2	3
LCIS2430	Database Application Development	2	2	3
LCIS2440	SQL Server	2	2	3
LCIS2620	Introduction to Linux	2	2	3
LCIS2730	Distributed Applications with Visual Basic & XML	2	2	3
LCIS2760	Developing Web Applications	2	2	3
	Computer Technology Elective	2	2	3
	Totals	**20**	**20**	**30**

GAMING AND ANIMATION DEVELOPER CERTIFICATE

Courses		CL	LAB	CR
LCIS1360	Introduction to Computers	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS1400	Introduction to Programming	2	2	3
LCIS2750	Object-Oriented Programming-C++	2	3	3
LCIS2770	Programming for Games	2	2	3
LCIS2710	Analyzing Software Requirements	2	2	3

LCIS2720	Object-Oriented Programming-Java	2	2	3
LCIS2730	Distributed Applications with Visual Basic and XML	2	2	3
LCIS2760	Developing Web Applications	2	2	3
LCIS2920	Mobile Application Development	2	2	3
	Totals	**20**	**20**	**30**

TECHNOLOGIES FOR EDUCATION CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LCIS1320	Software Applications	3	2	4
LCIS1360	Introduction to Computers	2	2	3
LCIS2260	Advanced Office Applications	2	2	3
LCIS1350	Word Processing	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS2320	Website Development	2	2	3
LCIS2350	Spreadsheets	2	2	3
LCIS2420	Database Management and Design	2	2	3
	Totals	**17**	**16**	**25**

WEBSITE DEVELOPER CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LCIS1360	Introduction to Computers	2	2	3
LCIS2270	IT Developmental Applications	2	2	3
LCIS1400	Introduction to Programming	2	2	3
LCIS2720	Object-Oriented Programming-Java	2	2	3
LCIS2750	Object-Oriented Programming-C++	2	2	3
LCIS2440	SQL Server	2	2	3
LCIS2920	Mobile Application Developer	2	2	3
LCIS2730	Distributed Applications with Visual Basic & XML	2	2	3
LCIS2760	Developing Web Applications	2	2	3
LCIS2320	Website Development	2	2	3
	Totals	**20**	**20**	**30**

COURSE DESCRIPTIONS

LCIS0950 Computer Essential * **CL1 L2 CR1**

This course is designed to give students the skills required for basic computer use. Students are given a brief overview of basic computer concepts and are provided basic information on hardware, memory, multimedia, storage, networks and application software. **Credits do not apply to degree requirement.**

LCIS1320 Software Applications **CL3 L2 CR4**

The emphasis of this course is hands-on applications of computer software including Windows, database, spreadsheets and word processing. Students will be exposed in-depth to business uses through simulated projects. Students are also introduced to PowerPoint and other business applications. An analysis of the impact of these programs on the business environment will also be studied. The fourth credit is an independent study/distance-learning format utilizing the Internet. Computer labs will be open for student use. (Prerequisite: competence demonstrated on computer placement exam)

LCIS1350 Word Processing **CL2 L2 CR3**

This course is designed to take the user beyond the basics of word processing. Topics such as edit tracking, forms, merges, macros and tables are just a few of the topics covered.

LCIS1360 Introduction to Computers **CL2 L2 CR3**

This course provides an introduction to computers and computer networking. The introduction to computers portion of the courses covers computer hardware, principles of computer operations, operating systems, representing data digitally, computer algorithms, the World Wide Web and digital security. The introduction to computer networking portion of the course is based on the Cisco Networking for Home and Small Business course. The focus is on network terminology and

protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing and network standards.

LCIS1400 Introduction to Programming CL2 L2 CR3
This course provides an introduction to the process of problem solving as it relates to program design and development using Visual Basic.NET. The student will learn to use the top down approach to programming as well as learning to use the various techniques and tools which have been developed to aid in the process. The basic programming statement types (sequential, conditional, and iterative) will be covered as the student learns to use them in algorithms.

LCIS1770 Cooperative Education CL0 L9 CR3
Provides the opportunity for the student to utilize learned course competencies in a real life setting. Provides supplemental laboratory experience on an extensive array of equipment and processes. (Prerequisites: Approval of advisor and department chair)

LCIS2260 Advanced Office Applications CL2 L2 CR3
This course introduces the student to the Office Applications of OneNote, Publisher, and Expression Web. OneNote is an application that allows the user to organize, save and search notes. Publisher is a desktop publishing system that allows the user to work with text and graphics beyond the capabilities of word processors. Expression Web allows the user to create web pages easily and quickly.. This course is an alternative to LCIS1320 Software Applications for students who already have some familiarity with MS Office and wish to develop additional marketable skills. It is assumed that students already have basic software application and file manipulation skills. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2270 IT Developmental Applications CL2 L2 CR3
This course introduces the student to MS Visio and MS Project. Students will learn to work with various types of diagrams in Visio, as well as how to work with Project to plan and track projects using a variety of resources. This is a hands-on course where students will work extensively with the software to develop projects based on individual interests and course of study. It is designed for the IT industry, but the skills learned can translate to any industry. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2320 Website Development CL2 L2 CR3
This course offers an introduction to Website Development using tools such as Expression Web and various other software products available. The basics of good page and form design, graphics, mapping, lists and tables will be discussed. An overview of integrating text, video, data, audio, graphics and animation will also be covered. (Prerequisite: LCIS1360 or equivalent)

LCIS2330 Introduction to Multimedia CL2 L2 CR3
This course offers an introduction to multimedia concepts with emphasis on web-based multimedia. Students will study the different multimedia elements to include text, images, video, sound and interactive content. Additionally, students will learn about the hardware and software used to produce multimedia, to include such applications as Maya, Macromedia Director and Flash. A number of projects will give students the opportunity to reinforce their learning by building computer applications that incorporate graphics, animation, audio and video. (Prerequisites: LCIS1360)

LCIS2350 Spreadsheets CL2 L2 CR3
This course provides extensive “hands-on” exposure to MS Excel, an industry-standard program. Topics covered include constructing a worksheet, entering and manipulating data, and extracting useful information from the worksheet. Graphs and charts of data will be constructed, and “what-if” projections will be developed. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2370 Web Programming I CL2 L2 CR3
This course teaches web site programmers how to use component object model (COM) components on both the client and the server. Other topics include XML, ASP, CSS, ActiveX controls, data objects, simple SQL statements and queries. (Prerequisites: LCIS1360, LCIS1400, and LCIS2320 which may be taken concurrently)

LCIS2380 Web Programming II CL2 L2 CR3
This course is a companion to Web Programming I. Topics include PERL, CGI, Java and scripting in Visual Basic and Java. (Prerequisites: LCIS1360, LCIS1400, and LCIS2320 which may be taken concurrently)

LCIS2390 E-Commerce CL2 L2 CR3
This course provides students with an introduction to the technologies required for on-line business activities. Technologies will include security, databases, XML, shopping carts, as well as other current topics. This course also covers the issues concerning international trade, ethics, legal issues and taxes. ((Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2400 Management with Computers CL2 L2 CR3
This is a project-based course where students are expected to utilize several software packages including MS Project. Students will study in depth how businesses use computers and software in day-to-day business. Make or buy decisions, artificial intelligence, decision support systems, the software development life cycle, data flow diagrams and CASE tools will also be studied. (Prerequisite: Senior status)

LCIS2420 Database Management and Design CL2 L2 CR3
This lab course introduces modern techniques of data management, especially with personal computers using MS Access. Students will learn the concepts of data normalization elements and their organization into proper schemata. Screen design and report generation will also be covered. Working with database management systems necessarily involves programming and sequential thinking skills, whereby students create and manipulate databases. (Prerequisite: LCIS1320 or equivalent)

LCIS2430 Database Application Development CL2 L2 CR3
This lab course is a continuation of Data Management and Design (LCIS2420), with emphasis placed on database application development using tools such as Oracle or SQL Server. Students will be exposed to the more advanced feature aspects of report, form and query design. Students will be introduced to macros, menu design, SQL and modules to automate many aspects of a database application. This course requires familiarity with database design and normalization. (Prerequisites: LCIS1400, LCIS2420) (9/2013)

LCIS2440 SQL Server LC2 L2 CR3
This course provides students with the knowledge and skills required to install, configure, administer and troubleshoot MS SQL Server. Students will learn to write queries and perform a wide variety of tasks using both GUI and SQL code.
(Prerequisites: LCIS1320, LCIS1360) (9/2013)

LCIS2450 Information Storage and Management CL2 L2 CR3
This course teaches students how to manage and secure information. This includes instruction and hands-on exercises in the installation, configuration and management of a variety of technologies like RAID, SAN and NAS used for storing, accessing, securing, sharing and optimizing information. (Prerequisite:LCIS1360)

LCIS2490 Network Security CL2 L2 CR3
This course covers basic security principles, cryptography, security baselines and current attack and defense techniques and technologies. It also covers the development of security policies and procedures and the management of security efforts. The course prepares students for the CompTIA Security+ certification exam. (Prerequisite: LCIS1360 or equivalent)

LCIS2500 Networking Fundamentals (CCNA 1 Cert Test) CL2 L2 CR3
This course is an introduction to networking. It is based on the Cisco CCNA 1 course – Networking for Home and Small Businesses. The focus is on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing and network standards. (Prerequisite: LCIS1360 or equivalent)

LCIS2510 Small Business Networking CL2 L2 CR3
This course is the second in a series of four courses designed to prepare students to earn the Cisco Certifed Newt work Associate (CCNA) certification. It is based on the Cisco CCNA 2 course-Working at a Small-to-Medium Business or ISP. This course focused on initial router configuration, Cisco IOS software management, routing protocol configuration, TCP/IP, and subnetting. (Prerequisites:LCIS21360) (9/2013)

LCIS2520 CompTIA A+ Essentials CL2 L2 CR3
This course is designed to prepare the student to pass the CompTIA A+ Essentials exam, the primary certification for IT Technicians. Students will gain an understanding of terminology and technology, as well as learn fundamental installation and upgrade tasks. Students will also learn basic Windows operating system support. (Prerequisite: LCIS1360 or equivalent)

LCIS2570 CompTIA A+Support Technician CL2 L2 CR3
This course is designed to prepare the student to pass CompTIA's secondary exams of IT Technician, Help Desk Technician and Depot Technician. The student will learn advanced configuration and troubleshooting skills, including using the command line to accomplish technical tasks. Network and internet configuration is also covered. (Prerequisite: LCIS1360 or equivalent, LCIS2520) (Until Fall 2013)

LCIS2570 CompTIA Practical Applications CL2 L2 CR3
This course prepares students to pass CompTIA's A+ Practical Applications exam. The student will learn advanced configuration and troubleshooting skills, to include the use of the command line interface. Help desk concepts will also be covered to provide students with the technical and professional skills required to work at a help desk or technical support work environment. (Effective Fall 2013)

LCIS2590 Designing and Supporting Networks CL2 L2 CR3
This course is the last in a series of four courses designed to prepare students to earn the Cisco Certifed Network Associates (CCNA) certification. It is based on Cisco CCNA 4 course-Designing and Supporting Computer Networks. This course focuses on network design methodologies, network characterization and prototyping tools, IPv4 and IPv6 addressing and WAN technologies to include Frame Relay (Prerequisites:LCIS2530) (9/2013)

LCIS2610 Installing and Configuring Windows Servers CL2 L2 CR3
This course covers installing and configuring Microsoft Servers; managing directory services; implementing networking, file and print services; and server virtualization. (Prerequisites:LCIS1360) (9/2013)

LCIS2620 Intro to Linux CL2 L2 CR3
This course provides the introduction to UNIX operating system. Concepts such as file system, editors, program development, shell environment/programming, communication, data management, security and remote computing will be covered. In addition to laboratory exercises to enforce the concepts, students will also engage in a course project. Computer labs will be open for student use. (Prerequisite: LCIS1360, LCIS2500) (9/2013)

LCIS2650 Independent Study CL2 L2 CR3
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LCIS2670 Administering Windows Servers CL2 L2 CR3
This course covers implementing Group Policy; managing user and service accounts, maintaining directory services, configuring DNS and remote access; and optimizing file services and security. (Prerequisites: LCIS2610)) (9/2013)

LCIS2680 Advanced Windows Server Configuration CL2 L2 CR3
This course covers advanced network services, file services, dynamic access control, network load balancing, failover clustering and disaster recovery. (Prerequisites: LCIS2610) (9/2013)

LCIS2690 Designing Network Services Infrastructure CL2 L2 CR3
This course prepares the student for designing a networking infrastructure based on an organization's needs. Topics include DHCP, IP address configuration, DNS, WINS, as well as current technologies. (Prerequisite: LCIS2600)

LCIS2710 Analyzing Software Requirements CL2 L2 CR3
This course teaches students to develop conceptual, logical and physical designs for a business software solution using modern software techniques and tools such as UML, SCRUM, etc. This course prepares the student for the Microsoft Certified Exam. (Prerequisites: LCIS1320, LCIS1360, LCIS1400) (9/2013)

LCIS2720 Object-Oriented Programming – Java CL2 L2 CR3
This course offers a study of the features of Java. Focus will be on the principles of software design and development specific to the object-oriented approach, including classes, objects, inheritance and error handling. (Prerequisite: LCIS1400 or equivalent) (9/2013)

LCIS2730 Distributed Applications with Visual Basic & XML CL2 L2 CR3
This course will teach students the skills necessary to build distributed applications in an n-tier client server environment using Visual Basic & XML. Additional topics include DLL's, COM, ADO and database access in a multi-tier environment. (Prerequisite: LCIS1400 or permission of department chair)

LCIS2750 Object-Oriented Programming – C++ CL2 L2 CR3
This course offers a study of the features of C++. Focus will be on the principles of software design and development specific to the object-oriented approach including classes, objects, inheritance and error handling. (Prerequisite: LCIS1400 or equivalent) (9/2013)

LCIS2760 Developing Web Applications CL2 L2 CR3
This course will teach students the skills necessary to develop and implement web applications using technologies such as PHP and MySQL or NET and IIS. Topics include creating user services, creating and managing components, data manipulation, debugging and security issues. (Prerequisite: LCIS1400 or permission of department chair) (9/2013)

LCIS2770 Programming for Games CL2 L2 CR3
This in an introductory computer-games programming class, which teaches the programming techniques needed to produce interactive graphical applications like computer games. The topics covered include: game design, storyboarding, animation techniques, game construction tools, artificial intelligence, input devices, sound and real time graphics. During the course, students produce a simple interactive graphical project. (Prerequisite: LCIS1400)

LCIS2780 Programming with DirectX CL2 L2 CR3
This course is designed to teach the student techniques needed to create games using DirectX technology. This is a hands-on course where students will be expected to complete several games. Topics include: sprites, bitmaps, DirectX game libraries, windows sockets, as well as game design. (Prerequisite: LCIS1400 or permission of instructor)

LCIS2800 Capstone Project CL2 L2 CR3
This course is intended to provide the vehicle for students to show overall competency in Computer Technologies and the specialties that have been a part of their particular degree program. Under supervision of a faculty advisor, the student will select an appropriate subject, perform the research and present results. Project will include the following components: project proposal, research and definition, and the project presentation. This course should be taken the semester prior to graduation.

LCIS2810 Enterprise Networking CL2 L2 CR3
This course is the third in a series of four courses designed to prepare students to earn the Cisco Certified Network Associate (CCNA) certification. It is based on the Cisco CCNA 3 course – Introducing Routing and Switching in the Enterprise. This course focuses on advanced IP addressing techniques (Variable Length Subnet Masking [VLSM]), intermediate routing protocols (RIP v2, single area OSPF, EIGRP), command line interface configuration of switches, Ethernet switching, Virtual LANSs (VLANs), Spanning Tree Protocol (STP) and VLAN Trunking Protocol (VTP) and Access Control Lists (ACLs). (Prerequisite: C- or better in LCIS2510) (9/2013)

LCIS2920 Mobile Application Development CL2 L2 CR3
This is an introductory course developing mobile applications for various platforms, including smart phones, Android devices and Apple IOS. Topics include device convergence, platform architecture, app life-cycles, design patterns, and cross-platform development, as well as the challenges of developing for mobile devices. Students will be exposed to different API and languages such as Objective C, Xcode and Java. (Effective Fall 2013)

Please refer to back of course catalogue for Liberal Arts selections

CULINARY ARTS

This two-year program prepares students for entry to mid-level employment in a variety of culinary venues. It combines a foundation of culinary and management skills the industry demands. The curriculum incorporates opportunities to learn and work in a student-operated restaurant. Summer employment in culinary complements the learning experience. These workplace opportunities provide the student with hands-on knowledge and the benefit of work experience.

Technical Requirements

Culinary Arts candidates must:

- have written and verbal command of the English language;
- be capable of lifting or carrying at least twenty five pounds;
- comprehend new terminology;
- understand the importance of personal hygiene, appearance, and etiquette for interaction with the public;
- have the physical and mental ability to satisfy long hours, demands, and stress that the restaurant industry cultivates.

Culinary Arts is a fast growing field with tremendous job potential. Quality employees are always in high demand. The Culinary Arts program provides opportunities for fulfilling jobs in all aspects of an exciting and growing industry.

Students who successfully complete this program will be able to:

- demonstrate basic knife skills as well as describe the French terminology of each knife cut;
- prepare stocks, sauces, soups from fundamental ingredients following industry practice;
- demonstrate using procedures and terminology in creating recipes from basic ingredients;
- produce several regional ethnic dishes from within the United States and internationally;
- demonstrate the use of the different pieces of equipment in the kitchen;
- demonstrate different cooking techniques such as sautéing, roasting, grilling, boiling, steaming, braising;
- be hired from entry-level to sous-chef positions in larger restaurants;
- be able to manage a fully functioning kitchen as a culinary cook in smaller establishments;
- establish cost and purchasing controls in food management;
- apply hospitality laws to any kitchen/dining service venue

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCUL1460	Bakery Production	1	4	3
LCUL1510	Culinary Fundamentals	1	6	3
LCUL1520	Sanitation & Safety	3	0	3
LENG1200	College Composition	3	0	3
LHOS1140	Dining Room Management I	0	6	3
	Totals	**8**	**16**	**15**

Spring Semester		**CL**	**LAB**	**CR**
LCUL1580	Restaurant Facility & Menu Design	3	0	3
LCUL1590	Cost Control	3	0	3
LHOS1130	Introduction to Worldwide Cuisine	1	6	3
	HOSPITALITY	1	0	1
	LIBERAL ARTS	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**14/15**	**6**	**16/17**

Summer Semester		**CL**	**LAB**	**CR**
LCUL2320	Culinary Co-operative Education (300 hours required)	0	9	3
	LIBERAL ARTS	3	0	3
	Totals	**3**	**9**	**6**

Total Credits for Year = 37/38

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCUL2530	Introduction to Garde Manger	1	6	3
LCUL2540	Classical Cuisine…….	1	6	3
LHOS2220	Quantity Food Purchasing	3	0	3
LSCI1290	Nutrition for Health and Fitness	3	0	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Totals	**11**	**12**	**15**

Spring Semester		**CL**	**LAB**	**CR**
LCUL1470	Hot and Cold Plated Desserts	1	4	3
LCUL2550	Italian Cuisine	1	6	3
LCUL2560	U.S. Regional & Infusion Cuisine	1	6	3
	ENGLISH	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**9**	**16**	**15**

Total Credits for Year = 30
Total for A.S. Degree = 67/68

COURSE DESCRIPTIONS

LCUL1450 Breads and Rolls **CL1 L4 CR3**

Students will be introduced to the bakers scale and taught how to properly measure ingredients. Reading a formula and recipe conversions will also be covered. The history of bread making will be explored as well as the creating of many classical items from several cultures around the world. The milling process of flour will be discussed as well as the function of important ingredients in the dough. The class will largely focus on the organized process of preparing dough. Mixing, shaping, proofing, baking, and storing are critical steps that will be explored. The bread and roll productions that will be created in each class will be used in our dining room bakery case.

LCUL1460 Bakery Production **CL1 L4 CR3**

This course will focus on the common items found in any bakery/pastry shop. Muffins, quick breads, coffee cakes, and donuts will be explored. Pie dough, puff pastry, pâte à choux, short dough and Danish dough will be taught, and several items will be created from each. Classical European pastry will be touched upon and the "classics" of pastry will be introduced. Pies, tarts, cookies, and common bakery items will also be created. Students will be introduced to various ingredients such as nuts, chocolates, and fruits; they will be taught how, when, and why to use them.

LCUL1470 Hot and Cold Plated Desserts **CL1 L4 CR3**

The focus of this course is plated desserts that would be found in a restaurant setting. The critical components of a plated dessert will be explored along with detailed instructions of each. Various sauces and garnishes will be introduced, as well as various plate presentations. This course will include the production of slow-bake desserts (custards, cheesecakes), frozen desserts, traditional desserts (Baked Alaska, Bananas Foster, Cherries Jubilee), and creative ways to present simple desserts. Students will be required to use their creativity and create a plated dessert of their own for a project grade.

LCUL1480 Cake Decorating **CL1 L4 CR3**

This course will be concerned with creating various cakes, icings, fillings, frostings, and butter creams. Each student will learn the proper techniques for covering a cake, as well as ways to enhance the decoration on it. Making paper cones, writing on cakes, and making several types of butter cream flowers is covered. Classical cakes will also be covered (Dobos, Sacher) along with their history. There will be a large concentration on using a piping bag, the function of various tips, and proper piping techniques. This course will also introduce the use of marzipan, fondant, airbrushing, and wedding cakes.

LCUL1490 Baking and Pastry Technologies **CL1 L4 CR3**

Baking & Pastry Technologies is a look into the scientific side of baking. Baking & Pastry Technologies is dedicated to teaching different scenarios, and reactions of ingredients, while baking. The lab element gives the experience of seeing different reactions of ingredients in baking; knowing, by looking at finished products, what works best and what may ruin the project. At the completion of this course, the student will have basic knowledge of the scientific breakdown that goes

into the formulas of baking. This course will enable graduates to better be prepared to gain positions as a pastry chef or patissiere. (Updated 6/2011)

LCUL1510 Culinary Fundamentals CL1 L6 CR3
This course encompasses the basic fundamental principles for a career in Culinary Arts. Each subject will be discussed and practiced in detail. This class will emphasize the importance of such terms and procedures as “mise en place”, knife skills, proper use of tools and several other basic principals that are important to the culinary industry. This course will also emphasize the appropriate standard of behavior and uniform that is set by culinary professionals. At the end of this course, students will have a core knowledge and insight into the essential aspects of Culinary Arts.

LCUL1520 Sanitation & Safety CL3 L0 CR3
This course offers a look into the fundamentals of food service sanitation and safety. Students will demonstrate knowledge of proper hot and cold food handling procedures, cross contamination of ready-to-eat foods, proper receiving practices, proper storage guidelines, who is affected by improper food handling, and federal/state food service sanitation requirements. When this course is completed, the student will test for the ServSafe certification.

LCUL1580 Restaurant Facility & Menu Design CL3 L0 CR3
Both menu and facility design are important aspects of the restaurant industry. This course gives students realistic practice at mastering both. Students will practice proper menu layout as well as its design. Students will learn the importance of cross-utilization and how to optimize it. This course will give students the opportunity to see different writing styles of menus including a la carte, rotating, and institutional menus. Different types of culinary establishments will be discussed as well as the equipment needed for them. Students will be designing menus to match kitchen layouts through projects conducted one-on-one with the instructor.

LCUL1590 Cost Control CL3 L0 CR3
This course covers such subjects as pricing menus, food costing equations, weights and measurements, scaling, yield testing, food cost percentages, inventories, and recipe conversions. The student will be expected to cost out recipes to find per portion costs as well as multi-portion costs. This course discusses money saving techniques, waste control, and the importance of portion size as it relates to menu prices. Beverage costing, as well as alcohol procurement, will also be examined. The Food for Thought Café’s menus, inventories, and recipes will be exposed for practical use through projects or discussion conducted by the instructor.

LCUL2100 Nutritional & Alternative Baking CL1 L4 CR3
This course introduces students into not only the nutritional aspects of baking, but the alternative baking world. Alternative baking, meaning such subjects as gluten free, sugar free, dairy free, and other allergy sensitive baking procedures. Nutritional aspects cover such subjects as low fat, low sodium, carbohydrate sensitive, as well as diabetic responsive dessert composition. Focus will revolve around techniques and alternative methods of producing health conscious pastries, product substitutions, ideas and concepts of creative alternative and nutritional desserts. (Available Fall 2011)

LCUL2200 Advanced Cake Decorating CL1 L4 CR3
This course is a continuation of our cake decorating course. Advanced cake decorating takes what has been learned in cake decorating and introduces new ingredients, techniques, and skill sets. Intricate piping techniques are demonstrated and practiced. The uses of ingredients such as rolled fondant, gum paste, royal icing and molding chocolate will be established. Advanced cake styles and wedding cakes will be practiced. This is a fifteen week course that will provide students with the enhanced knowledge, techniques and proficiency of cake decorating. (Prerequisites: LCUL1480). (Available Fall 2011)

LCUL2250 Advanced Pastry and Confections CL1 L4 CR3
In this course the student will learn an array of international pastries and advanced pastry methods, techniques and showpieces. The student will be introduced to chocolate tempering, shaping, basic show piece construction and candy making. Subjects such as pastiage, pouring sugar and confection artistry will also be covered, researched and practiced. Students will fine tune their skills and challenge themselves both technically and artistically. (Prerequisites: LCUL1460). (Available Fall 2011)

LCUL2300 Pastry Arts Co-op C0 L9 CR3
This course provides the opportunity for the student to utilize baking and pastry course competencies in a real-life setting along with supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LCUL2310 Pastry Arts Capstone C1 L0 CR1
This course provides the vehicle for students to demonstrate overall competency in baking and pastry and in the specific operations in which they have chosen to concentrate. Under the supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project which pertains directly to baking and pastry operations.

LCUL2320 Culinary Co-operative Education CL0 L9 CR3
Co-operative education provides the opportunity for students to utilize learned culinary course competencies in a real-life setting. This course provides supplemental laboratory experience on the extensive array of equipment, ingredients and processes. Students will gain valuable experience and first-hand knowledge as to what a career in the Culinary Arts field outside the classroom entails. Students are expected to complete 300 hours of co-op experience. Instructor's approval of workplace site required. (Prerequisites: LCUL1460, LCUL1510, LCUL1520, LCUL1580, LCUL1590, LHOS1130, LHOS1140)

LCUL2530 Introduction to Garde Manger CL1 L6 CR3
This course offers an insight into the "cold side" of the restaurant industry. The student during this course will be responsible for researching Garde Manger techniques as well as practicing those techniques. The student will be inspired to practice classic Garde Manger skills through a series of projects created by the instructor. Such skills and techniques include preparation of: Cured meats, aspic and chaud froid, terrines and pates, crudités platters, cheese displays, smoked foods, cold sauces and dressings, salads, hors d'oeuvres, and buffet design/layout. Presentations by guest speakers and visiting chefs as well as off-site demonstrations/applications will enhance student skill sets.

LCUL2540 Classical Cuisine CL1 L6 CR3
This course will explore the history of classical cuisine and its origins. The accomplishments of our forefathers will be explored and their impact on cooking discussed. Students will absorb these concepts and hone their techniques in order to apply them to modern day cooking. Historical chefs like Escoffier and Careme will be introduced and explored. Classical cuisine will be an overview of how cooking has evolved throughout time and will conclude with modern technology, equipment development, and the evolution of food products.

LCUL2550 Italian Cuisine CL1 L6 CR3
Students will enhance their cooking skills by studying cooking techniques and cultural aspects that deal in-depth with Italian cookery. Students will rotate through each station in preparing new menu items. Students will be expected to follow recipes in preparing dishes from each of the regions in Italy. This course will reinforce both classical and modern cooking techniques.

LCUL2560 U.S. Regional & Infusion Cuisine CL1 L6 CR3
This course will give an overview of food origins and how they have shaped our modern day cuisine. Students will focus on a variety of cultural and regional cuisines throughout the United States. The trend towards cross-cultural cuisines, and the eclectic foods they produce, will be discussed in depth. Students will learn how to create dishes using various cultural ingredients. Preparation, plating, and garnishing techniques will be addressed.

Please refer to back of course catalogue for Liberal Arts selections

EARLY CHILDHOOD EDUCATION

Employment opportunities in New Hampshire in early childhood education and childcare remain excellent and will continue to grow. Sixty-seven percent of children under the age of six in New Hampshire receive some form of childcare provided by persons other than their parents. Many of these young children spend eight to eleven hours each day in childcare. Because of a shortage of trained directors, teachers, and workers, many childcare programs strive but are unable to fully meet the developmental needs of children in their care.

The Early Childhood Education Associate in Science Degree program provides theoretical and practical experiences for preparation to work as an Early Childhood Education Director, responsible for the care and education of young children, management of personnel, finances, and facilities of an early childhood education program. The certificate prepares graduates to become childcare teachers.

The Early Childhood Education program seeks students who have a strong desire to nurture and care. To ensure that the Early Childhood Education Associate in Science applicant chooses the appropriate career, candidates are encouraged to meet with the program coordinator and the college counselor.

Successful completion of this program satisfies New Hampshire Childcare Bureau of Licensing requirements for certification as a childcare director or teacher. This program also provides an ideal preparation for those students wishing to continue their education on the baccalaureate level.

The New Hampshire Bureau of Childcare Standards and Licensing may restrict certification of candidates who have been involved in civil or criminal action. Questions about certification restrictions should be addressed to the New Hampshire Bureau of Childcare Standards and Licensing.

Technical Requirements

Early Childhood Education Program candidates must:

- before taking any EDU or ECE course, students must have Accuplacer scores high enough to qualify for College Composition; OR have taken College Composition with a passing grade; OR have met with and obtained permission of the ECE Lead Instructor. (9/2014)
- have command of the English language;
- have the ability to stand for sustained periods of time, walking, running, bending, sitting on the floor and on child-size furniture to meet the child's needs and accomplish tasks;
- have sufficient strength, stamina and motor coordination to perform frequent lifting, moving and transferring children, especially infants and toddlers;
- have sufficient visual and hearing acuity to ensure a safe environment and the ability to respond quickly in the event of an emergency;
- have sufficient verbal ability to express and exchange information and ideas as well as to interpret important instructions to children, fellow students, and supervising teachers;
- have the ability to work with frequent interruptions, to respond appropriately to unexpected situations, and to cope with extreme variations in workload and stress levels;
- have the ability to secure transportation to Practicum and field observation sites;
- uphold the ethical codes relevant to his or her discipline (National Association for the Education of Young Children);
- have the ability to demonstrate and maintain organizational skills, time management and professional respect and conduct as an early childhood education student, either at a practicum site, or in the community;

Upon completion of this program the successful student will be able to:

- communicate skillfully, both orally and in writing;
- demonstrate empathy with children and their families;
- perform accurate development assessments;
- devise imaginative developmentally appropriate learning experiences.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCIS1320	Software Applications	3	2	4
LECE1210	Growth and Development of the Young Child	3	0	3
LECE1230	Foundations of Early Childhood Education	3	0	3
LENG1200	College Composition	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**15/16**	**2**	**16/17**

Spring Semester		**CL**	**LAB**	**CR**
LECE1220	Curriculum Development in Early Childhood	3	0	3
LECE1240	Health, Nutrition and Safety in Child Care	3	0	3
LHUS1260	Learning and Behavior	3	0	3
LPSY1250	Introduction to Psychology	3	0	3

LSCI1440	Human Biology with Lab	3	2	4
	Totals	**15**	**2**	**16**

Total Credits for Year = 32/33

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LECE1260	Infant/Toddler Development	3	0	3
LECE1610	Early Childhood Education Practicum I	2	9	5
LECE2160	Young Children's Special Needs	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
LSOC2350	Children, Youth and Families	3	0	3
	Totals	**14**	**9**	**17**

Spring Semester		**CL**	**LAB**	**CR**
	Early Childhood Elective*	3	0	3
	Early Childhood Elective*	3	0	3
LECE2610	Early Childhood Education Practicum II	2	9	5
	LITERATURE ELECTIVE	3	0	3
LPHI2270	Ethical Issues	3	0	3
	Totals	**14**	**9**	**17**

*****Options include: LECE2240, LECE2310, LECE2250 and LECE2300

Total Credits for Year = 34
Total for A.S. Degree = 66/67

ASSOCIATE TEACHER CERTIFICATE

This certificate program satisfies New Hampshire Childcare Bureau of Licensing requirements for childcare worker certification.

Courses		**CL**	**LAB**	**CR**
LECE1210	Growth and Development of the Young Child	3	0	3
LECE1240	Health, Nutrition and Safety in Child Care	3	0	3
LECE1260	Infant/Toddler Development	3	0	3
	Totals	**9**	**0**	**9**

LEAD TEACHER CERTIFICATE

This certificate program satisfies New Hampshire Childcare Bureau of Licensing requirements for teacher and childcare worker certification.

Courses		**CL**	**LAB**	**CR**
LECE1210	Growth and Development of the Young Child	3	0	3
LECE1220	Curriculum Development in Early Childhood	3	0	3
LECE1230	Foundations of Early Childhood Education	3	0	3
LECE1240	Health, Nutrition and Safety in Child Care	3	0	3
LECE1260	Infant/Toddler Development	3	0	3
LECE1610	Early Childhood Education Practicum I	2	9	5
	Totals	**17**	**9**	**20**

EARLY CHILDHOOD EDUCATION
ADVANCED CERTIFICATE

This certificate prepares students to independently implement program activities and supervise childcare teachers and workers.

Courses		**CL**	**LAB**	**CR**
LECE1210	Growth and Development of the Young Child	3	0	3
LECE1220	Curriculum Development in Early Childhood	3	0	3

LECE1230	Foundations of Early Childhood Education	3	0	3
LECE1240	Health, Nutrition and Safety in Child Care	3	0	3
LECE1260	Infant/Toddler Development	3	0	3
LECE1610	Early Childhood Education Practicum I	2	9	5
LECE2240	Math and Science in Early Childhood	3	0	3
LENG1200	College Composition	3	0	3
	LITERATURE ELECTIVE	3	0	3
	Totals	**26**	**9**	**29**

INTEGRATED ARTS CERTIFICATE (09/2009)

Early Childhood Education majors have the option of pursuing a certificate program in Integrated Arts. This certificate will provide a thorough introduction to the discipline of arts-based teaching, emphasizing an approach that integrates arts learning with other disciplines. Integrated Arts provides learning "in and through" the arts, which are an integral and important part of a young child's development and communication skill set. Early Childhood Education students who obtain the Integrated Arts Certificate will, in effect, have a "specialization" in the arts, enhancing both their teaching skills and employment possibilities.

Courses		**CL**	**LAB**	**CR**
LART1400	Exploration of the Visual Arts	3	0	3
LART 1500	Introduction to Art Education	3	0	3
LECE 2250	Art, Music, Drama & Movement	3	0	3
LEDU 2090	Integrated Arts	3	0	3
LEDU 2200	Integrated Arts Service Learning Project	1	2	3
	Totals	**13**	**2**	**15**

COURSE DESCRIPTIONS

LECE1210 Growth and Development of the Young Child CL3 L0 CR3
An introduction to the child, from birth to age eight, as a learner and family member with needs to explore and communicate, as well as to develop social competence. Explanation of current themes of child development is provided with special emphasis on understanding children's developmental levels through childhood. Topics covered include: conception, heredity and prenatal development, infant development, the child in the family, toddlerhood and early childhood. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1220 Curriculum Development in Early Childhood CL3 L0 CR3
The design, implementation and evaluation of appropriate programs for young children through age six. Focuses on the concrete, practical application of various theories, philosophies and current research data in the field. Other topics include: the young child as explorer and learner, language, numbers, art and the world, and the effective teacher of young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1230 Foundations of Early Childhood Education CL3 L0 CR3
The history of early childhood education and child care, including the contributions of Froebel, Montessori and Wheelock. The course concentrates on a diversity of programs including childcare, Head Start, kindergarten and nursery. Profit and non-profit programs will be examined. Discussion includes historical perspectives, current trends, theories and approaches to the care, development and education of young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1240 Health, Nutrition and Safety in Child Care CL3 L0 CR3
Utilizing National Association for the Education of Young Children guidelines and all applicable local and state standards, this course provides the student with comprehensive concepts, guidelines, and practices needed to implement appropriate policies and procedures to insure proper nutrition and sanitary, healthy, and safe child care environments. It should be noted that CPR and First Aid training are NOT part of the course. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1260 Infant/Toddler Development CL3 L0 CR3
Focuses on developmentally appropriate practices for infant/toddler caregivers. Students will explore various theoretical perspectives on infant/toddler development and the pragmatics of caring for young children in early childhood settings. A study of important influences on infant and toddler development, with emphasis on the role and responsibilities of parents and caregivers in creating high quality, supportive environments with sensitivity to attachment and the importance of communication skills in nurturing positive parent/teacher/child relationships. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1610 Early Childhood Education Practicum I CL2 L9 CR5
In order to develop appropriate attitudes and skills and to effectively apply knowledge to the care and education of young children, the student works in a licensed and approved setting under the supervision of a qualified professional. Periodic conferences between the supervisor and the practicum instructor evaluate the student's progress. At the close of the semester, the student submits documentation relating theory, practice and the student's practicum learning experiences. Work at the practicum site along with peer review, self-reflection and disclosure combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LENG 1200, LECE 1210 or LECE 1260, and LECE 1220) **Student Personal Professional Liability Insurance is mandatory for Practicum students.**

LECE2160 Young Children's Special Needs CL3 L0 CR3
This course will broaden the student's awareness of the theoretical and legal foundations for programs serving young children from infancy through age eight with a wide range of special education needs. Students will examine the causes, symptoms, social consequences and behavior characteristics of children with special needs. Emphasis will be on education for children and their families. Disabilities and special needs, theoretical foundations and practical implications, legal requirements, rights and procedures are discussed. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2240 Math and Science in Early Childhood CL3 L0 CR3
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 which 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. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2250 Art, Music, Drama and Movement CL3 L0 CR3
This course focuses on nurturing creativity in young children through developmentally appropriate activities in the areas of art, music, drama, and movement. The various methods and materials used to stimulate a young child's creative impulses will be explored, as well as the developmental stages of artistic growth. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2300 Developing and Administering a Child Care and Education Program CL3 L0 CR3
This course will provide a comprehensive study of the operation of an early childhood education child care facility. Staffing and supervision, including orientation, training, and motivation and evaluating staff are explores as they relate to the business of child care. Students develop business and marketing plans according to accepted business standards. New Hampshire Child Care Standards and licensing requirements, Child Care Development Block Grant, and funding sources are included. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2310 Early Literacy Development CL3 L0 CR3
Early Literacy Development involves listening, speaking, drawing, singing and acting, as well as reading. It includes all the ways children communicate ideas and receive those of others. This course will focus on concepts underlying early literacy development and using children's literature and creative activities to enable students to develop a repertoire of experiences and a portfolio of resources to enhance emergent literacy in young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2610 Early Childhood Education Practicum II CL2 L9 CR5
The student works in a licensed and approved setting under the supervision of a qualified professional to acquire the advanced skills required for greater autonomy in the planning and implementation of activities for young children. Periodic conferences between the student, supervisor and the practicum instructor are held to evaluate the student's progress. At the close of the semester, the student submits detailed documentation relating theory, practice, and the student's learning

experiences at the practicum site. Work at the practicum site along with peer review, self-reflection and disclosure combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LECE1610) **Student Personal Professional Liability Insurance is mandatory for Practicum students.**

Please refer to back of course catalogue for Liberal Arts selections

ELECTRICAL POWER AND CONTROL TECHNOLOGIES

The electrical industry offers an ever-increasing number and variety of employment opportunities to qualified industrial electricians. Along with these opportunities come the responsibilities associated with one of today's most sophisticated technologies. A well-grounded individual can expect entry-level employment with rapid upward mobility in construction, industrial electricity, electrical design, or electrical inspection.
Successful completion of this curriculum satisfies all the related education requirements for electrical licensing within the State of New Hampshire. New Hampshire license holders receive reciprocity with the states of Massachusetts, Vermont and Maine.

Technical Requirements

In order to be successful in the EPCT Program a student must:

- have command of the English language;
- have the ability to stand for extended periods of time;
- have a normal vision for reading instructions and course materials and for performing manipulative task;
- have a high school degree or equivalent;
- be able to complete requirements for college level classes;
- must be able to understand and follow both written and oral instructions;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have the physical strength to lift 50lbs;
- have sufficient dexterity to perform manual skills related to electricity.

As a result of completing the Electrical Program, the student will:

- be able to demonstrate an understanding of the theory and skills associated with the electrical profession;
- understand and use appropriately the technical vocabulary associated with the electrical profession;
- attain and demonstrate a high level of professional integrity in the implementation of his/her technical skills;
- possess the skills and attitudes to enable successful employment and upward mobility within the electrical profession.

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LELC1260	Residential Wiring and Electrical Blueprint Reading	3	0	3
LELC1270	Residential Wiring and Electrical Blueprint Reading Lab	0	6	2
LELC1240	AC/DC Theory	4	3	5
LELC1410	NEC-Residential	2	0	2
LMAT1310	Boolean Algebra	1	0	1
LMAT1370	Technical Algebra & Geometry	4	0	4
	Totals	**14**	**9**	**17**

Spring Semester		**CL**	**LAB**	**CR**
LELC1280	Fundamentals of Electrical Control	2	6	4
LELC1300	Rotating Machinery	2	6	4
LELC1420	NEC-Multi-Family Unit	2	0	2
LENG1200	College Composition	3	0	3
	Liberal Arts Elective	3/4	0	3/4

	Totals	**12/13**	**12**	**16/17**

Total Credits for Year = 33/34

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LELC1430	NEC-Commercial/Industrial Applications	2	0	2
LELC2150	Photovoltaics (9/2011)	2	3	3
LELC2400	Stationary Machinery	2	6	4
LSCI1250	Technical Physics	2	2	3
	SOCIAL SCIENCE	3	0	3
	ENGLISH ELECTIVE	3	0	3
	Totals	**14**	**11**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LELC2100	Introduction to Electrical Estimating and Design	2	2	3
LELC2340	Construction Site Safety	3	0	3
LELC2350	Programmable Controllers	2	4	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**13**	**6**	**15**

Total Credits for Year = 33
Total for A.A.S. Degree = 66/67

ELECTRICAL POWER AND CONTROL TECHNOLOGIES CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LELC1260	Residential Wiring and Electrical Blueprint Reading	3	0	3
LELC1270	Residential Wiring and Electrical Blueprint Reading Lab	0	6	2
LELC1240	AC/DC Theory	4	3	5
LELC1280	Fundamentals of Electrical Control	2	6	4
LELC1300	Rotating Machinery	2	6	4
LELC1410	NEC-Residential	2	0	2
LELC1420	NEC-Multi-Family Unit	2	0	2
LMAT1370	Technical Algebra & Geometry	4	0	4
	Totals	**19**	**21**	**26**

NATIONAL ELECTRICAL CODE INTERPRETATION CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LELC1410	NEC-Residential	2	0	2
LELC1420	NEC-Multi-Family Unit	2	0	2
LELC1430	NEC-Commercial/Industrial Applications	2	0	2
	Totals	**6**	**0**	**6**

RESIDENTIAL CONSTRUCTION WIRING CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LELC1260	Residential Wiring and Electrical Blueprint Reading	3	0	3
LELC1270	Residential Wiring and Electrical Blueprint Reading Lab	0	6	2
LMAT1370	Technical Algebra & Geometry	4	0	4
	Totals	**7**	**6**	**9**

COMMERCIAL CONSTRUCTION WIRING CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LELC1230	Wiring Theory and Techniques (Commercial)	4	6	6
LELC1240	AC/DC Theory	4	3	5

LELC1410	NEC-Residential	2	0	2
LMAT1370	Technical Algebra & Geometry	4	0	4
	Totals	**14**	**9**	**17**

INDUSTRIAL CONSTRUCTION WIRING CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LELC1420	NEC-Multi-Family Unit	2	0	2
LELC2240	Wiring Theory and Techniques (Industrial) until spring 2013	4	6	6
LELC2240	Wiring Theory and Techniques (Industrial) effective spring 2013	3	3	4
LMAT1370	Technical Algebra & Geometry	4	0	4
	Totals	**9/10**	**3**	**10/12**

COURSE DESCRIPTIONS

ELC1230 Wiring Theory and Techniques (Commercial) CL4 L6 CR6
This course covers commercial building wiring, blueprint reading, branch circuit installations, and service entrance installations based on the National Electrical Code. The following topics will be covered: interpretation of plans, branch circuit installations, feeder installations and calculations, service entrance calculations and installations, and low-voltage installations. (Prerequisite: LELC1260 or permission of instructor)

LELC1240 AC/DC Theory (9/2011) CL4 L3 CR5
This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits.

LELC1260 Residential Wiring and Electrical Blueprint Reading CL3 L0 CR3
This course covers electrical theory circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: electrical safety, tools of the trade, blueprint reading, branch circuit calculations, load calculations, wiring devices, GFCI and AFCI, lighting circuits, types of luminaire, installation of ranges and dryers, hot water tanks, and residential services.

LELC1270 Residential Wiring and Electrical Blueprint Reading Lab CL0 L6 CR2
This course covers the lab portion of electrical circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: safety in the lab, proper use of tools, soldering and splicing techniques, single pole switching, duplex receptacle wiring, 3-way switching, 4-way switching, GFCI and AFCI wiring, BX, AC, and MC installations, low voltage switching, range and dryer wiring, and hot water tank wiring, and residential services (main panel) and (subpanels).

LELC1280 Fundamentals of Electrical Controls CL2 L6 CR4
Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery (1/2012) CL2 L6 CR4
This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection. Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LELC1410 NEC-Residential CL2 L0 CR2
A study of NEC requirements as it applies to residential applications.

LELC1420 NEC-Multi-Family Unit CL2 L0 CR2
A study of NEC requirements as it applies to Multi-Family Units.

LELC1430 NEC-Commercial/Industrial Applications CL2 L0 CR2
A study of NEC requirements as it applies to commercial and industrial applications.

LELC2100 Introduction to Electrical Estimating and Design CL2 L2 CR3
This course uses computer-aided programs. The following topics will be covered: introduction to estimating concepts, computer-aided electrical estimating, and developing an estimate using an electrical blueprint.

LELC2150 Photovoltaics (9/2011) CL2 L3 CR3
This course introduces the principles of photovoltaics; including the basics of safety, the electrical basics of solar PV systems, and how modules are designed and combined with other system components. Participants will learn how to decide upon the size, electrical and mechanical design of a PV system, as well as how to analyze and troubleshoot problems. The lab portion of the course will include hands-on installation of PV systems on mock roofs and ground mounts. This PV Entry Level course ***will not earn students an installer-in-training credential***, but will serve as an important first step in preparing individuals to become highly skilled, qualified and experienced trades people in the PV industry. At the conclusion of the course, students will be eligible to take the examination for the NABCEP PV Entry Level Certificate of Knowledge. Students should have a basic understanding of electricity fundamentals before enrolling in this course. Credit will not be given for more than one of the following courses: LELC2150; LEST1500.
(Prerequisite: LELC1240)

LELC2240 Wiring Theory and Techniques (Industrial) until spring 2013 CL4 L6 CR6

LELC2240 Wiring Theory and Techniques (Industrial) effective spring 2013 CL3 L3 CR4
Industrial building wiring, blueprint reading, transformer connections, "high-voltage" installations, motor circuit theory and lighting designs are covered, as well as interpretations of plans, transformer connections, "high-voltage" installations, motor circuit theory, and lighting designs and applications. (Prerequisites: LELC1260, LELC1230 or permission of instructor) (9/2011)

LELC2280 AC Rotating Machinery (not available after spring 2012) CL2 L6 CR4
Covered in this course are the design and operational characteristics of single- and three-phase alternators, principles of operation for, and loading characteristics of, single- and poly-phase AC motors. (Prerequisites: LELC1240, LELC1300, LELC2400)

LELC2300 Electrical Motor Controls (9/2012) CL2 L3 CR3
The course covers control fundamentals incorporating control relays, contactors and motor starters, as well as an introduction to solid state motor controls. (Prerequisite: LELC1240 or permission of instructor)

LELC2340 Construction Site Safety (9/2011) CL3 L0 CR3
This course provides students with training in OSHA regulations for safety and health in the construction industry, as well as safe working practices for electricians servicing electrically live installations mandated by NFPA 70E.

LELC2350 Programmable Controllers CL2 L4 CR3
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)
(Updated 6/2011)

LELC2400 Stationary Machinery CL2 L6 CR4
A review of magnetism and electromagnetism and the design and operational characteristics of single-phase, three-phase and specialty transformer connections are covered in this course. (Prerequisites: LELC1240, LELC1300)

Please refer to back of course catalogue for Liberal Arts selections

ELECTRICAL SYSTEMS INSTALLATION AND MAINTENANCE

The Electrical Technology programs provide the knowledge needed for employment as an electrical construction electrician, industrial electrical technician, electrical estimator, or electrical inspector. The electrical programs meet the education requirements of the New Hampshire Electrical Licensing Board.

Opportunities for electrical construction electricians are available in nearly all geographic locations. Employment opportunities exist in residential construction, industrial construction, and commercial construction as an electrician or as a maintenance electrician. Graduates may find employment as industrial electricians, maintenance electricians, electrical inspectors, electrical estimators, or in any of the high-tech electrical fields.

Technical Requirements

In order to be successful in the ESIM Program a student must:

- have command of the English language;
- have the ability to stand for extended periods of time;
- have a normal vision for reading instructions and course materials and for performing manipulative task;
- have a high school degree or equivalent;
- be able to complete requirements for college level classes;
- must be able to understand and follow both written and oral instructions;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have the physical strength to lift 50lbs;
- have sufficient dexterity to perform manual skills related to electricity.

As a result of completing the Electrical Program, the student will:

- Be able to demonstrate an understanding of the theory and skills associated with the electrical profession;
- understand and use appropriately the technical vocabulary associated with the electrical profession;
- attain and demonstrate a high level of professional integrity in the implementation of his/her technical skills;
- possess the skills and attitudes to enable successful employment and upward mobility within the electrical profession.

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LELC1260	Residential Wiring and Electrical Blueprint Reading	3	0	3
LELC1270	Residential Wiring and Electrical Blueprint Reading Lab	0	6	2
LELC1240	AC/DC Theory	4	3	5
LELC1410	NEC-Residential	2	0	2
LMAT1310	Boolean Algebra	1	0	1
LMAT1370	Technical Algebra and Geometry	4	0	4
	Totals	**14**	**9**	**17**

Spring Semester		**CL**	**LAB**	**CR**
LELC1230	Wiring Theory and Techniques (Commercial)	4	6	6
LELC1420	NEC-Multi-Family Unit	2	0	2
LENG1200	College Composition	3	0	3
	SOCIAL SCIENCE	3	0	3
	Totals	12	**6**	**14**

Total Credits for Year = 31

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LELC1430	NEC-Commercial/Industrial Applications	2	0	2
LELC2150	Photovoltaics (9/11)	2	3	3
LELC2300	Electrical Motor Control	2	3	3
LSCI1250	Technical Physics	2	2	3
	ENGLISH ELECTIVE	3	0	3
	ELECTIVE	3	0	3
	Totals	**14**	**8**	**17**

Spring Semester		CL	LAB	CR
LELC2100	Introduction to Electrical Estimating and Design	2	2	3
LELC2240	Wiring Theory and Techniques (Industrial) until spring 2013	4	6	6
LELC2240	Wiring Theory and Techniques (Industrial) effective spring 2013	3	3	4
LELC2340	Construction Site Safety (9/11)	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**14**	**5**	**16/18**

Total Credits for Year = 33/35
Total for A.A.S. Degree = 64

ELECTRICAL SYSTEMS INSTALLATION AND MAINTENANCE CERTIFICATE

Courses		CL	LAB	CR
LELC1260	Residential Wiring and Electrical Blueprint Reading	3	0	3
LELC1270	Residential Wiring and Electrical Blueprint Reading Lab	0	6	2
LELC1230	Wiring Theory and Techniques (Commercial)	4	6	6
LELC1240	AC/DC Theory	4	3	5
LELC1410	NEC-Residential	2	0	2
LELC1420	NEC-Multi-Family Unit	2	0	2
LELC1430	NEC-Commercial/Industrial Applications	2	0	2
LMAT1370	Technical Algebra and Geometry	4	0	4
	Totals	**21**	**15**	**26**

ELECTRICAL TECHNOLOGY COURSE DESCRIPTIONS

LELC1230 Wiring Theory and Techniques (Commercial) CL4 L6 CR6
This course covers commercial building wiring, blueprint reading, branch circuit installations, and service entrance installations based on the National Electrical Code. The following topics will be covered: interpretation of plans, branch circuit installations, feeder installations and calculations, service entrance calculations and installations, and low-voltage installations. (Prerequisite: LELC1260 or permission of instructor)

LELC1240 AC/DC Theory CL4 L3 CR5
This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits.

LELC1260 Residential Wiring and Electrical Blueprint Reading CL3 L0 CR3
This course covers electrical theory circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: electrical safety, tools of the trade, blueprint reading, branch circuit calculations, load calculations, wiring devices, GFCI and AFCI, lighting circuits, types of luminaire, installation of ranges and dryers, hot water tanks, and residential services.

LELC1270 Residential Wiring and Electrical Blueprint Reading Lab CL0 L6 CR2
This course covers the lab portion of electrical circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: safety in the lab, proper use of tools, soldering and splicing techniques, single pole switching, duplex receptacle wiring, 3-way switching, 4-way switching, GFCI and AFCI wiring, BX, AC, and MC installations, low voltage switching, range and dryer wiring, and hot water tank wiring, and residential services (main panel) and (subpanels).

LELC1280 Fundamentals of Electrical Controls CL2 L6 CR4
Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery (1/2012) CL2 L6 CR4
This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection.

Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LELC1410 NEC-Residential CL2 L0 CR2
A study of NEC requirements as it applies to residential applications.

LELC1420 NEC-Multi-Family Unit CL2 L0 CR2
A study of NEC requirements as it applies to Multi-Family Units.

LELC1430 NEC-Commercial/Industrial Applications CL2 L0 CR2
A study of NEC requirements as it applies to commercial and industrial applications.

LELC2050 Industrial Electronics (not available after Fall 2011) CL2 L3 CR3
This course provides the student with a solid grounding in the operation of solid state control devices including; but not limited to, diodes, rectifiers, silicon controlled rectifiers, phototransistors and LED's. (Prerequisite: LELC1240)

LELC2100 Introduction to Electrical Estimating and Design CL2 L2 CR3
This course uses computer-aided programs. The following topics will be covered: introduction to estimating concepts, computer-aided electrical estimating, and developing an estimate using an electrical blueprint.

LELC2150 Photovoltaics (9/2011) CL2 L3 CR3
This course introduces the principles of photovoltaics; including the basics of safety, the electrical basics of solar PV systems, and how modules are designed and combined with other system components. Participants will learn how to decide upon the size, electrical and mechanical design of a PV system, as well as how to analyze and troubleshoot problems. The lab portion of the course will include hands-on installation of PV systems on mock roofs and ground mounts. This PV Entry Level course ***will not earn students an installer-in-training credential***, but will serve as an important first step in preparing individuals to become highly skilled, qualified and experienced trades people in the PV industry. At the conclusion of the course, students will be eligible to take the examination for the NABCEP PV Entry Level Certificate of Knowledge. Students should have a basic understanding of electricity fundamentals before enrolling in this course. Credit will not be given for more than one of the following courses: LELC2150; LEST1500.
(Prerequisite: LELC1240)

LELC2240 Wiring Theory and Techniques (Industrial) until spring 2013 CL4 L6 CR6

LELC2240 Wiring Theory and Techniques (Industrial) effective spring 2013 CL3 L3 CR4
Industrial building wiring, blueprint reading, transformer connections, "high-voltage" installations, motor circuit theory and lighting designs are covered, as well as interpretations of plans, transformer connections, "high-voltage" installations, motor circuit theory, and lighting designs and applications. (Prerequisites: LELC1260, LELC1230 or permission of instructor) (9/2011)

LELC2280 AC Rotating Machinery (not available after spring 2012) CL2 L6 CR4
Covered in this course are the design and operational characteristics of single- and three-phase alternators, principles of operation for, and loading characteristics of, single- and poly-phase AC motors. (Prerequisites: LELC1240, LELC1300, LELC2400)

LELC2300 Electrical Motor Controls (9/2012) CL2 L3 CR3
The course covers control fundamentals incorporating control relays, contactors and motor starters, as well as an introduction to solid state motor controls. (Prerequisite: LELC1240 or permission of instructor)

LELC2340 Construction Site Safety (9/2011) CL3 L0 CR3
This course provides students with training in OSHA regulations for safety and health in the construction industry, as well as safe working practices for electricians servicing electrically live installations mandated by NFPA 70E.

LELC2350 Programmable Controllers CL2 L4 CR3
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)
(Updated 6/2011)

LELC2400 Stationary Machinery CL2 L6 CR4
A review of magnetism and electromagnetism and the design and operational characteristics of single-phase, three-phase and specialty transformer connections are covered in this course. (Prerequisites: LELC1240, LELC1300)

Please refer to back of course catalogue for Liberal Arts selections

ELECTRO-MECHANICAL TECHNOLOGIES

The Electro-Mechanical Technologies Degree at Lakes Region Community College consists of 11 core courses. Three of the core courses are part of the Advanced Manufacturing Degree and four of the core courses are part of the Electrical Power and Controls Technologies Degree. Successful students should have the necessary skills to enter the manufacturing work force, or excel in current employment, into machine technician positions. Students will have an understanding of electrical and mechanical theory and principals. Students will have acquired shills in troubleshooting electrical, hydraulic, and pneumatic control systems. Students will also have acquired skills in Computer Numeric Controlled (CNC) machine operations, electrical controls programmable controllers, principles of electrical motors, critical thinking skills, oral and technical communication skills.

Students successfully completing the Electro-Mechanical Technologies Degree Program will have the following skills:

- Mathematic skills necessary to solve manufacturing problems through the understanding of fractions and decimals, algebra, geometry, trigonometry, linear equations, roots, geometric figures, usage of tolerances, interpretation and usage of formulas and proportions, and practical applications of geometry and trigonometry.
- Understanding of machine tools and machine tool operations such as milling, turning, drilling, cutting, grinding, and chamfering.
- Advanced CNC machine operations skills including offsets, work offsets, G-code programming, machine zeroing, and circular interpolation, set-up, tool selection, material selection, and operator maintenance.
- Computer Aided Manufacturing (CAM) and CAM-Mill skills in processes such as contouring, cycle time estimating, tool selection, material specification, cutter compensation, parameter changes, contour applications, roughing, finishing, and tool paths.
- Understanding of AC/DC Electrical Theory and how it applies to CNC Machine diagnostics.
- Ability to interpret electrical control diagram, prints, and logic.
- Ability to understand electrical controls and programmable controllers.
- Understanding of motors including drive motors and drive systems.
- Troubleshooting skills for programmable controllers, motor drive units, and electrical controls.
- Mechanical CNC machine repairs and troubleshooting techniques.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LMAT1370	Technical Algebra & Geometry	4	0	4
LELC1240	AC/DC Theory	4	3	5
LELM1200	Fluid Power Systems	2	6	4
	Totals	**13**	**9**	**16**

Spring Semester		CL	LAB	CR
Elective	Humanities Elective	3	0	3
LENG1220	Technical Communications	3	0	3
Or	Or			
LENG1230	Business Communications			
LELC1280	Fundamentals of Electrical Controls	2	6	4
LELC1300	Rotating Machinery	2	6	4
LMAN1500	CNC Machines I	2	6	4
	Totals	**12**	**18**	**18**

Total Credits for Year = 34

SECOND YEAR

Fall Semester		CL	LAB	CR
LSOC2250	Critical Thinking & Decision Making	3	0	3
LSCI1250	Technical Physics	2	2	3
LELM2100	Mechanical Drive Systems	2	4	4
LMAN2300	CAD/CAM	3	0	3
LMAN2100	CNC Machines II	2	6	4
	Totals	**12**	**12**	**17**

Spring Semester		CL	LAB	CR
Elective	Liberal Arts Elective	3	0	3
Elective	Liberal Arts Elective	3	0	3
LELC2350	Programmable Logic Controllers	2	3	3
LELM2700	Electro-Mechanical Capstone	3	0	3
	OR			
LELM2800	Electro-Mechanical Internship	0	9	3
OPEN	OPEN ELECTIVE	3	0	3
	Totals	**14**	**3/9**	**15**

Total Credits for Year = 32
Total for A.S. Degree = 66

LELC1240 AC/DC Theory **CL4 L3 CR5**

This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits

LELM1200 Fluid Power Systems **CL2 L6 CR4**

Students will be introduced to the fundamentals of hydraulic and pneumatic power system safety, operation, basic circuit connections, and 3, 4, and 5-way cylinder circuit function. Hydraulic power system topics include basic hydraulic circuits, pumps, principles of pressure and flow, speed control, pressure control, sequence and reducing valves. Pneumatic power system coverage includes single acting cylinders, motor circuits, leverage, volume, pressure and flow, air flow resistance, flow control, and flow measurement.

LELC1280 Fundamentals of Electrical Controls **CL2 L6 CR4**

Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery **CL2 L6 CR4**

This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection. Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LMAN1500 CNC Machines I CL2 L6 CR4
Students will be introduced to the fundamentals of Computer Numerical Controlled (CNC) Milling machines and their programming. First covered in this course is the basic operation of CNC machines with topics such as safety, simulation, tooling with tool selection, and machine zeroing. Hands-on training via simulation will expose the student to absolute and incremental positioning, circular interpolation, program interpolation, and cycle pausing. CNC Machine safety will be stressed throughout this course. (Prerequisites: LMAN1200, LMAN1400).

LELM 2100 Mechanical Drive Systems CL2 L4 CR4
In this course, students will learn the concepts of mechanical power transmission through the many types of mechanical drive systems in modern machinery. Mechanical power system safety is focused on throughout this course. Topics include machine and electric motor mounting, motor shaft and keyway features, measuring speed, torque, power, and efficiency, mechanical shaft bearing, coupling, and alignment, as well as v-belt, chain, spur gear, and multiple shaft drives.

LMAN2300 CAD/CAM CL3 L0 CR3
This course covers Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM). The course includes demonstrations as well as hands-on of CAD/CAM software and hardware. An emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, speed and feed selection, and tool path generation along with post processing to CNC machines. Students need a basic knowledge in drafting/design, machine processes and procedures, and computer operating systems (MS Windows).

LMAN2100 CNC Machines II CL2 L6 CR4
In this course students will expand on knowledge gained from CNC Machines I as well as be introduced to Computer Aided Manufacturing. (CAM) CNC Machine Topics will include machine speeds and feeds, feed rate, and cycle time optimization. Students will also learn alternative drilling cycles, subprograms, cutter compensation, and scaling/mirroring. CNC Machine safety will be stressed throughout this course. Students will also be introduced to CAT/CAM with topics to include part geometry, CAM-Mill processes, contouring, cycle time estimation, tool selection, material selection, cutter compensation, parameter pages, contour applications, roughing, finishing, and tool paths. (Prerequisites: LMAN1500)

LELC2350 Programmable Logic Controllers CL2 L3 CR3
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)
(Updated 6/2011)

LELM2700 Electro-Mechanical Capstone CL3 L0 CR3
This course provides the vehicle for students to demonstrate overall competency in advanced manufacturing and in the specific operations in which they have chosen to concentrate Under the supervision of a faculty advisor, working individually or as part of a team, the students will select and successfully carry out a major project which pertains directly to electro-mechanical technologies.

LELM2800 Electro-Mechanical Internship CL0 L9 CR3
This course provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a manufacturing job related environment. Cumulative GPA 2.0 minimum required.

ENERGY SERVICES AND TECHNOLOGY

The Energy Services and Technology Program (ESTP) will provide students with the knowledge and skills to enter the rapidly expanding field of energy services and technologies. Students will be prepared to utilize knowledge and skills gained in the areas of energy fuels and consumption, energy efficiency, energy economics, electricity, HVAC, technical communications and computer sciences, to optimize the production, delivery, and use of energy resources.
Graduates of the program will be prepared to enter into a variety of energy management and technological fields such as Energy Auditor, Energy Analyst, Building Operator, Resource Conservation Manager, Measurement and Verification Technician, Technical Service Representative, and many other related professions.

Technical Requirements

In order to be successful in the Energy Services Program a student must:

- have written and verbal command of the English Language;
- be able to complete requirements of college level courses;
- be able to understand and follow both verbal and written directions;
- have hand/eye coordination for the manipulation and operation of handheld diagnostic tools and computer keyboard and mouse;
- have the ability to stand and walk for extended periods of time;
- be well versed in word processing, spreadsheet, and presentation software.

As a result of completing the Energy Services and Technology Program, the student will be able to:

- demonstrate an understanding of the theory and skill sets associated with the energy services profession;
- communicate and understand the technical vocabulary and jargon associated with the energy profession;
- attain and demonstrate a high level of professional integrity in the implementation of his/her technical skills;
- possess the skills and attitudes to enable successful employment and upward mobility within the energy management profession.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LEST1150	Renewable Energy Sources	2	2	3
LEST1600	Building Materials Overview	3	0	3
	MATH ELECTIVE	3/4	0	3/4
	SOCIAL SCIENCE ELECTIVE	3	0	3
	Totals	**14/15**	**2**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LEST1250	Energy Efficiency and Conservation Methods	3	0	3
LEST1300	Spreadsheets, Reading Drawings and Blueprints	3	0	3
LEST1400	Basic Electricity	3	0	3
LEST1175	Introduction to Residential Energy	2	2	3
LSCI1210	Chemistry	2	2	3
	OR			
LSCI2200	College Physics I	3	2	4
	OR			
LSCI1500	Environmental Science	3	2	4
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**16/17**	**4**	**18/19**

Total Credits for Year = 33/35

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LENG1220	Technical Communications	3	0	3
LEST2100	Heating Systems	2	2	3
LEST2200	Cooling Systems	2	2	3
LEST2250	Indoor Air Quality	3	0	3
LEST2350	Lighting and Energy Economics	3	0	3
	HUMANITIES ELECTIVE	3	0	3
	Totals	**16**	**4**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LEST2400	Water Conservation and Hot Water	3	0	3

LEST2550	Electric Motors and Control Strategies	3	0	3
LEST2600	Overview of NH Utilities and Energy	3	0	3
LEST2750	Energy Analysis Capstone (2013)	3	0	3
	OR			
LEST2800	Internship	0	9	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**14**	**2/11**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 66/68

ENERGY SERVICES AND TECHNOLOGY CERTIFICATE

Courses		CL	CEU
LEST1010	Building Operations & Systems	11	1
LEST1020	Building Energy Conservation	11	1
LEST1030	HVAC Controls & Operations	20	2
LEST1040	Lighting Theory & Efficiency	11	1
LEST1050	Indoor Air Quality Theory & Techniques	7	1
LEST1060	Electrical Systems & Distribution	11	1
LEST1070	Energy Management Planning	12	1
	Totals 838		

LEST1010 Building Operations & Systems CL11 CEU1
This course covers the operations of building systems in respect to the overall building performance and interaction of all systems that service a building. Each building system will be covered individually as well as a whole. This course builds the foundation for subsequent courses.

LEST1020 Building Energy Conservation CL11 CEU1
In this course students will develop an understanding in how buildings consume energy, and how to compare building performance. Students will learn methods of collecting energy consumption data, analyzing energy data, and recognizing potential areas of conserving energy via data collection and building comparisons. Students will work with utility rate structures, utility billing practices, and understanding utility incentive programs.

LEST1030 HVAC Controls & Operations CL20 CEU2
In this course students will be introduced to the operation of heating, ventilation and air conditioning (HVAC) systems in commercial buildings. Boilers, chillers, air handling systems, pumps, fuel characteristics and control systems will be covered. Operational improvements and preventative maintenance techniques are emphasized throughout the course as well as an introduction to building automated control systems.

LEST1040 Lighting Theory & Efficiency CL11 CEU 1
The theory of lighting and techniques to achieve efficient lighting are covered in this course. The principles of lighting designs are introduced as well as preventative maintenance techniques to maintain energy efficient lighting.

LEST1050 Indoor Air Quality Theory & Techniques CL7 CEU 1
This course outlines preventative strategies for Indoor Air Quality (IAQ) in commercial and institutional buildings. Students will learn the different techniques and equipment used to measure for IAQ as well as how building systems interact with IAQ. Students will discuss control strategies for a preventative IAQ program.

LEST1060 Electrical Systems & Distribution CL11 CEU 1
In this course the student will learn the different electrical systems found in commercial and institutional buildings as well as various distribution methods. The course will consist of a hands-on electrical mapping project. Successful students will be able to understand and map electrical systems in existing buildings.

LEST1070 Energy Management Planning CL12 CEU 1
This course will be a culmination of the previous courses in the certificate program. Sustainable building operations, maintenance and planning will be reviewed. As a capstone course, students will prepare a cost-effective operations and maintenance energy management plan for a sample facility.

LEST1100 Introduction to Energy Management Principles CL3 L0 CR3
This course introduces the principles of energy management and provides an overview of the energy industry. Students will learn about the history of energy production and costs, the dynamics of worldwide energy consumption and growth, the principle methods by which energy is used, and its environmental and financial impacts and consequences. Objectives and components of an effective energy management program are discussed. The concepts presented in this course will serve as the foundation for the core courses in the Energy Services & Technology model curriculum. The course is designed for students already working in or training for a variety of occupations such as facility managers, technicians, engineers, contractors, suppliers, and consultants, as well as students who are not vocationally oriented but are interested in energy usage.

LEST1150 Renewable Energy Sources CL2 L2 CR3
This course provides a comprehensive overview of renewable energies, including solar energy, wind power, hydropower, fuel cells, biomass, and alternative transportation options. Students will be taught the principles of solar home design, solar hot water, pool and space heating, and solar cooling for both new and existing construction. Students will learn how to assess the viability of wind power, hydropower or biomass systems for a given site. Students will also learn about the impact of government regulations on the use of renewable energies. Students will analyze these renewable energy systems and will calculate savings, backup energy needs, financing options, and economic analyses. The student will investigate the potentials of renewable energy technologies to help solve environmental and economic problems within society.

LEST1175 Introduction to Residential Energy CL2 L2 CR3
This course examines basic energy principles from a residential perspective. The course is designed to teach students a theoretical and practical approach to understanding residential energy problems and their solutions. Residential buildings are fairly complex systems. Students will get an introductory look at these systems and the way they interact. Effective energy conservation requires an integrated approach that identifies the biggest sources of energy waste and mitigates them in order of severity. Students will evaluate priorities for energy conservation, analyzing cost-effectiveness and practical feasibility without creating unfavorable effects on the home's safety, health, and comfort of visual appeal. Students will be introduced to a residential building's parts, functions and flaws as well as possibilities for energy conservation.

LEST1250 Energy Efficiency and Conservation Methods CL3 L0 CR3
The student will identify and explain all of the energy efficiency/conservation methods available for energy use reduction. Energy-consuming facilities, both domestic and commercial, will be analyzed by the students for energy efficiency opportunities. The student will calculate energy savings and environmental impacts for most energy efficiency methods in order to identify and assess energy conservation opportunities. In addition, the student will demonstrate the appropriate usage of energy monitoring and measuring equipment commonly used by energy specialists and energy auditors

LEST1300 Spreadsheets, Reading Drawings and Blueprints CL3 L0 CR3
This course examines the power of computerized spreadsheets and uses MS Excel as the instructional tool. Much of the coursework will be the construction and utilization of energy related spreadsheets and graphs. The second part of this course introduces the students to blueprints, technical drawings, one-line diagrams, and technical flow charts. It also provides instruction and guidance to the student in their efforts to communicate with a basic drawing or technical sketch. The course is designed for students who may enter into management positions wherein reading a drawing is a key requirement for employment.

LEST1400 Basic Electricity CL3 L0 CR3
This course provides an overview of electricity, circuits, wiring, and grounding. It approaches the subject from a facility operator's point of view. Modeled after BOC 107 Facility Electrical Systems, participants develop an understanding of how electricity is distributed in a facility and common electrical distribution problems.

LEST1500 Introduction to Photovoltaics CL3 L0 CR3
This course introduces the principles of photovoltaics; including the basics of safety, the electrical basics of solar PV systems, how modules are designed and combined with other system components. Participants will learn how to decide upon the size, electrical and mechanical design of a PV system, as well as how to analyze and troubleshoot problems. At the conclusion of this course, students will be eligible to take the examination for the NABCEP PV Entry Level Certificate of Knowledge. Students should have a basic understanding of electricity fundamentals before enrolling in this class. (Prerequisites: LELC1240 or POI)

LEST1600 Building Materials Overview **CL3 L0 CR3**

Building Materials Overview provides an overview of the common and traditional materials used in construction and renovation of homes, buildings, and industrial sites. It examines the background of building construction practices, serving as a foundation for subsequent topics. It examines the environmental and health impact of the usage of various materials utilized in construction and renovation.

LEST2100 Heating Systems **CL2 L2 CR3**

This course covers gas, fuel oil, and electric furnaces, as well as heat pumps. Temperature, humidity, air filtering, air movement, and energy efficiency for a complete home conditioning system is also covered. Steam and hot water systems for residential and commercial applications will also be described, including energy conservation and efficiency options, potential savings for new and existing systems, and environmental impacts.

LEST2200 Cooling Systems **CL2 L2 CR3**

This course covers residential and commercial cooling systems, including temperature, humidity, air filtering, and air movement. Descriptions of new products, and maintenance and operations for residential and commercial cooling systems are also covered, emphasizing energy conservation and efficiency options for new and existing equipment.

LEST2250 Indoor Air Quality **CL3 L0 CR3**

Introduces the basic causes of indoor air quality (IAQ) in commercial and institutional buildings and outlines prevention strategies. Emphasis is placed on IAQ dynamics, building system interactions, and the importance of education and communications with building occupants. Practical and effective control strategies will be discussed along with basic IAQ equipment and measurement demonstrations. Discussion and case studies provide the learner with an essential understanding of the key elements of a preventive IAQ program.

LEST2350 Lighting and Energy Economics **CL3 L0 CR3**

This course covers the components of lighting systems. The students will be exposed to current lighting systems found in existing residential, commercial, and industrial application. Energy efficiency opportunities will be discussed with the newest advances in lighting technologies, such as LED lighting for buildings and occupancies, and controls such as "Smart Home" controlling technology. This course will also give students the tools to prioritize potential energy efficiency measures based on cost effectiveness and impact on environment. Topics include: utility rate analysis, simple payback analysis, compound interest, time value of money, return on investment, life cycle cost analysis, cost estimating, validity and reliability of energy efficiency measures' costs and savings, environmental and pollutant analysis, financing options and effects and simulation tolls and associated software. Also discussed are presentation techniques for energy savings proposals to business leaders and residential customers. (Prerequisites: LEST1400)

LEST2400 Water Conservation and Hot Water **CL3 L0 CR3**

The course covers the components of water conservation and domestic hot water. It identifies, examines and analyzes energy efficiency opportunities and environmental impacts in these areas.

LEST2550 Electric Motors and Control Strategies **L3 L0 CR3**

This course covers motor theory and operation and how motors convert electrical energy into mechanical energy. DC and AC motors will be discussed along with single and three phase AC motors. Motor efficiencies and the effects of motors on the overall electrical system will be discussed to understand energy efficiency opportunities relative to motor electrical loads. Also covered are all devices used to regulate and control energy used in a building including motor loads. Topics include pneumatic, electric, and electronic controls; from simple switching to microprocessors. An emphasis is placed on identifying and solving control/calibration problems and improving energy efficiency through redesign and energy control strategies. (Prerequisites: LEST1400)

LEST2600 Overview of NH Utilities and Energy **CL3 L0 CR3**

This course will familiarize the student with regional utilities and the programs they offer. It will be a series of guest speakers and field trips. The second part of this course explores energy production and consumption in New Hampshire from the early beginnings to, as best we can predict, into next century. It will discuss electric, natural gas, fuel oil, propane, nuclear, wind, hydroelectric, solar and all other feasible energy sources. This will be an open forum with hopefully, numerous guest speakers. (Prerequisites: LEST1250)

LEST2750 Energy Analysis Capstone (2013) **CL3 L0 CR3**

The student will perform critical examinations of energy consuming facilities, both domestic and commercial, for the purpose of identifying energy conservation opportunities. In addition, the student will identify various energy conservation measures, including equipment that can be installed to further conserve energy. Energy audits will be performed at various commercial facilities, selected by the student and approved by the instructor. The student will create a final

energy audit report and energy management plan, and will present the plan to both the class and to the energy management team at the facility. (Prerequisites: LEST1250)

LEST2800 Internship **CL0 L9 CR3**

Students will work in the field with a job related to some segment of the Energy Industry. The internship may be substituted for LEST2750 Energy Analysis Capstone.(Prerequisites: LEST1250, LEST1175)

Please refer to back of course catalogue for Liberal Arts selections

FINE ARTS

The Associate in Arts in Fine Arts provides students with an introduction to the discipline of the visual arts as a means of self-expression and communication. The curriculum provides a solid foundation in a wide range of media, methods, and materials. These develop the skills and experiences that lead to transfer to a four-year institution, and eventually to a career in the visual arts. The educated artist balances artistic and practical training with a liberalizing background of general studies, art history, and cultural trends. The graduate with an A.A. in Fine Arts is at the beginning of an exciting and dynamic career in the visual arts.

The curriculum presents students with a thorough exploration of a variety of art fundamentals, beginning with first year courses in Drawing, Design, and the History of Art. Building on these foundation experiences, the second year of the program continues these studies and extends them into the disciplines of Painting and Printmaking. In addition, a number of courses are available as art electives. The Senior Portfolio Project gives the student the practical skills to develop a professional portfolio for eventual transfer to a four-year institution of higher education, or for pursuit of a career in the visual arts, such as a studio apprentice, assistant to an artist or craftsperson, art gallery associate, or creating their own fine art business.

Students intending to transfer to a four-year program of study work closely with their advisor to identify the programs of interest to them. Students may then develop a course of study and a focused portfolio for admissions review by the selected four-year programs. To become eligible for transfer to a variety of four-year programs, students must successfully complete all general education coursework in addition to their Fine Arts program of study. Poor academic performance will affect transferability whether it is after one semester or upon completion of all degree requirements.

Technical Requirements

Candidates for the Fine Arts program must:

- have command of the English language;
- have normal vision for reading instructions and course materials and for performing manipulative tasks;
- be able to complete requirements for college level classes;
- must be able to understand and follow both written and oral instructions;
- have sufficient vision to distinguish colors, read gauges, scoped, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have communication skills sufficient to prepare required reports;
- have sufficient dexterity to perform manual skills;
- have no strong tactile sensitivities (e.g., having hands covered in charcoal, paint, clay, etc.);
- have no life-threatening chemical sensitivities;
- be self-motivated and self-directed;
- be able to engage with open-ended pursuits, and have a high tolerance for ambiguity (e.g., comfortableness with many possible answers or solutions rather than “the” answer or solution, and with finding one’s own way through these);
- be able to easily make adaptations and adjustments, and to diagnose and solve problems, thereby minimizing frustrations levels;
- have no moral or other objections to studying human anatomy and form from live nude models.

Among expected outcomes to be mastered are:

- the ability to communicate effectively both verbally and non-verbally;
- to develop an awareness and appreciation for the development of western and other cultures through an examination of their artistic production;
- to practice and gain a functional familiarity with core foundations skills and techniques for making art objects;

- to develop a portfolio of work that reflects a serious and considered point of view as well as technical competence;
- to develop an awareness of the value of creative people and the role of Art and Artists in today's world.

ASSOCIATE IN ARTS DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LART1100	Drawing I	2	4	3
LART1200	2-D Design	2	4	3
LART1300	History of Art I	3	0	3
LENG1200	College Composition	3	0	3/4
	SCIENCE	3	2	4
	Totals	**13**	**10**	**16/17**

Spring Semester		**CL**	**LAB**	**CR**
LART1150	Drawing II	2	4	3
LART1250	3-D Design	2	4	3
LART1350	History of Art II	3	0	3
	ENGLISH	3	0	3
	MATHEMATICS	3/4	0	3/4
	SOCIAL SCIENCE	3	0	3
	Totals	**16/17**	**8**	**18/19**

Total Credits for Year = 34-36

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LART2150	Drawing III	2	4	3
LART2400	Painting I	2	4	3
	ART/GRAPHIC ARTS	3	0	3
	SCIENCE	3	2	4
	SOCIAL SCIENCE	3	0	3
	Totals	**13**	**10**	**16**

Spring Semester		**CL**	**LAB**	**CR**
LART2200	Drawing IV	2	4	3
LART2550	Printmaking	2	4	3
LART2510	Issues in Contemporary Art	1	0	1
LART2650	Senior Portfolio	0	4	1
	MATHEMATICS	3/4	0	3/4
	SOCIAL SCIENCE	3	0	3
	ART ELECTIVE	2	4	3
	Totals	**13/14**	**16**	**17/18**

Total Credits for Year = 33-34
Total for A.A. Degree = 67/70

INTEGRATED ARTS CERTIFICATE

Fine Arts majors who are interested in a teaching career have the option of pursuing a certificate program in Integrated Arts. This certificate will provide a thorough introduction to the discipline of teaching, emphasizing an approach to teaching art that integrates learning with other school disciplines. Integrated Arts is provides learning "in and through" the arts, providing a conceptual framework for meaningful learning across the K-12 curriculum.

Certified K-12 art teachers will find the Integrated Arts Certificate a valuable professional development addition to their skill and knowledge base. The certificate will enhance the scope of teachers' art curricula, develop skills in collaborating

with colleagues to create exciting and meaningful arts-based activities, and will prepare teachers to pursue graduate work in Integrated Arts.

The Program:		**CL**	**LAB**	**CR**
LART1400	Exploration in the Visual Arts	3	0	3
LART1500	Introduction to Art Education	3	0	3
LECE 2250	Art, Music, Drama & Dance in Early Childhood Education	3	0	3
LEDU 2090	Integrated Arts	3	0	3
LEDU 2200	Integrated Arts Service Learning Project	1	2	3
	Totals	**13**	**2**	**15**

COURSE DESCRIPTIONS

LART1100 Drawing I **CL2 L4 CR3**
An introduction to the materials, techniques and subject matter of observational drawing in pencil, pen and ink, charcoal, conte and brush, as well as using experimental tools and techniques. Subject matter includes the still life and landscape. One and two point perspective is introduced. The student will gain mastery of the fundamental techniques of drawing as the primary means of documentation, communication and self-expression.

LART1150 Drawing II **CL2 L4 CR3**
A continuation of the principles, media and techniques of drawing established in Drawing I. Emphasis is placed on the exploration of creative visual expression through observational and imaginary drawing from the human figure, still life and landscape. Concepts and media of drawing in color are introduced and emphasis is placed on the use of drawing as a means of personal self-expression. (Prerequisite: LART1100)

LART1200 2-D Design **CL2 L4 CR3**
An introduction to the basic two-dimensional design concepts of color, composition and the organization of pictorial space. A variety of design media will be explored which includes drawing, painting and collage.

LART1250 3-D Design **CL2 L4 CR3**
An introduction to three-dimensional concepts and sculptural materials that are involved in the creation and appreciation of functional and non-functional sculptural form. A variety of sculptural media, materials and techniques will be explored including clay, plaster, wire, cardboard and mixed media.

LART1300 History of Art I **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the pre-historic period through the Middle Ages. Lectures will be supplemented by slides, film, video, and/or computer presentations.

LART1350 History of Art II **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the Renaissance through the 19th Century. Lectures will be supplemented by slides, film, video, and/or computer presentations. (Prerequisite: LART1300)

LART1400 Exploration in the Visual Arts **CL3 L0 CR3**
This course is designed to provide an overview of the visual arts, its traditions, history and techniques as part of our general education offerings. This course will fulfill a Liberal Arts elective requirement, but will not be appropriate for students pursuing the Associate Degree in Fine Arts.

LART1450 The Clay Experience I **CL2 L4 CR3**
An overview of the basic techniques and processes of working with clay. Topics include hand-building and wheel-throwing methods, glazes and firing. This course will fulfill a humanities or liberal arts requirement for all majors.

LART1500 Introduction to Art Education **CL3 L0 CR3**
An introduction to the art teaching profession. Provides an overview of issues concerning the theory and practice of art education, as well as possible career paths in art education. Topics include, but are not limited to: history of art education in American schools; theory and practice in art education; child development in art; life in the art classroom; and career paths in art education. Twenty hours of classroom observation in an art(s) program is required.

LART1630 Screen Printing **CL2 L2 CR3**
This course introduces the student to screen printing techniques. Areas of emphasis include: types of frames; terminology; fabric selection; stencil preparation; fabric stretching techniques; screen printing inks; and squeegee selection. Projects are selected and designed by each student. Classroom theory will be supported by lab demonstrations. Credit will not be given for more than one of the following courses: LART1630, LGRA2710

LART2100 Introduction to 35mm Photography **CL2 L2 CR3**
This course will provide the inexperienced photographer with instruction in basic 35mm camera techniques, types of cameras, lens and exposure controls. Particular attention will be given to various types of films, their exposure and development, followed by print development and darkroom techniques. Understanding technical terminology as it applies to photography will be stressed. Each student must provide film, print paper and his/her own 35mm manual camera.

LART2120 Digital Photography **CL2 L2 CR3**
This course is the digital complement to Introduction to 35mm Photography (LART2100). It covers differences between film and digital cameras, the benefits and pitfalls of taking digital photographs, how to move your images from camera to computer, to a printer, or the web. Students will also learn how to use photographic techniques such as lighting and composition, and how to use the cameras automatic and manual settings. Finally, the student will produce a PowerPoint presentation using all of the skills they have learned.

LART2150 Drawing III **CL2 L4 CR3**
This course introduces the student to drawing the human figure. Clothed and nude models will be the subjects of this course. Students will study the structure of the figure with an introduction to anatomy for artists, and will continue their exploration of a variety of materials that began in Drawing I and II. Gesture and pose, spatial constructions and the foreshortening of the figure will be discussed. (Prerequisites: LART1100 & LART1150 or permission of instructor)

LART2200 Drawing IV **CL2 L4 CR3**
This course continues the inquiry from Drawing III into the representation of the human form. Students will be expected to expand upon and refine their observation skills and conceptual knowledge of the figure. The use of color will be introduced to the subject at this time. (Prerequisites: LART1100, LART1150 & LART2150 or permission of instructor)

LART2350 20th Century Art **CL3 L0 CR3**
This course provides an introductory survey of the styles and conventions of the principle artistic movements and trends of the late 19th through 20th century. (Prerequisite: LART1300 & LART1350)

LART2400 Painting I **CL2 L4 CR3**
An introduction to the basic principles, media and techniques of painting in oils and acrylics. The development of understanding color mixing, exploration of form, content and space is emphasized while working from abstract and realistic subject matters. The course synthesizes composition, creative thought and critical thinking. (Prerequisite: LART1100)

LART2450 The Clay Experience II **CL2 L4 CR3**
A continuation and expansion of concepts and skills established in LART1450. This course will explore both functional and non-functional forms in clay, introducing the students to more sculptural and conceptual methods of producing clay objects and to thinking of clay as a personally expressive medium. (Prerequisite: LART1450 or POI)

LART2510 Issues in Contemporary Art **CL1 L0 CR1**
An exploration of current topics, trends, issues, and artists in the contemporary art world. This course will be taught in a seminar format, supplemented with slides, film and video, computer presentations, and visiting artists. When possible, field trips to area galleries, museums, exhibitions, arts events, or studios may be taken. (Prerequisite: LART1300 & LART1350)

LART2550 Printmaking **CL2 L4 CR3**
An introductory studio course in the methods and materials of printmaking, building on principles and concepts of design established in 2-D Design (LART1200). A variety of printmaking techniques will be introduced including woodblock printing, etching, lino-printing, embossing and collograph. (Prerequisite: LART1200)

LART2600 Sculpture **CL2 L4 CR3**
Introduction to three-dimensional sculpture processes in a variety of media, which include clay, plaster, metals and wood. The course builds upon concepts and skills established in 3-D Design (LART1250), with emphasis on creative expression and critical thinking. Students will work from a variety of subject matter in both additive and subtractive sculptural methods. (Prerequisite: LART1250)

LART2650 Senior Portfolio **CL0 L4 CR1**
An introduction to portfolio presentation techniques to provide students with the skills and knowledge essential for the preparation for further education and a career in the visual arts. The course focuses on preparation of artwork, portfolio development, slide production, matting and the care of art works. Through the portfolio development process, students will gain an understanding of the skills essential to the effective transfer to a four-year institution for study of fine arts.

LART2700 Painting II **CL2 L4 CR3**
Further development of skills introduced in Painting I (LART2400). Primary focus on observational painting from landscape, still-life, and an introduction to painting the figure. The course will include analysis of the painting styles of the past and emphasis upon the role of the artist in contemporary society. (Prerequisite: LART2400)

LART2750 Independent Study in Fine Arts **CL0 L6 CR3**
The Independent Study in Fine Arts is designed for those students who either want to delve more deeply into a particular aspect of art, or who have a personal project they would like to explore. Students are expected to have enough art experience to formulate their own interests and goals, as well as work independently to completion. (Prerequisite: Permission of instructor)

Please refer to back of course catalogue for Liberal Arts selections

FIRE TECHNOLOGY

Fire Technology offers 2 degree programs: ***Fire Science and Fire Protection***. Fire Technology students acquire a broad range of knowledge that allows them to begin at entry level positions in different aspects of the fire service and other fire protection related occupations.

The ***Fire Science*** degree program is designed for students wishing to work in a municipal or federal government fire department. This degree includes courses designed to cover a wide range of subjects and is based on the Fire and Emergency Services Higher Education (FESHE) curriculum developed through the National Fire Academy. Students will complete Firefighter Level I certification, and Emergency Medical Technician-Basic certification through the State of New Hampshire as part of the degree program.

The ***Fire Protection*** degree program is designed for students wishing to work in the fields of fire prevention, fire inspection, insurance loss prevention, public fire education, installation and service of fire alarm, sprinkler and other fire suppression systems, fire extinguishers, fire investigation and other fire protection related careers.

Recent graduates have successfully transferred their Associate Degree credits to Keene State College, University of New Haven, Oklahoma State University, Granite State College, and other bachelor degree programs.

Technical Requirements

Fire Technology applicants must:

- have command of the English language;
- have a high school diploma or equivalent;
- not have a felony conviction
- be able to complete requirements for college level courses;
- be able to understand and follow both written and oral instructions;
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare and present required reports;

- have sufficient hearing to distinguish various sounds and noises;
- have sufficient dexterity to perform manual skills;
- have the ability to stand for extended periods of time;
- have normal vision for reading instructions and course materials and for performing manipulative tasks;
- be able to work in a fire, emergency medical or hazardous material environment;
- be able to wear fire protective clothing and a self contained breathing apparatus for an extended period of time;
- have sufficient writing ability to formulate written assessment, charting notes, and reports;
- have the ability to sustain cognitive integrity in areas of short and long term memory, areas of written documentation, and follow through of responsibilities;
- have the ability to concentrate on the execution of treatment plans, assigned skills, and tasks as well as the integration and communication of this work for both short and long term periods of time;
- have the ability to work in settings that may lend themselves to frequent interruptions and immediate crisis response;
- have the ability to cope with a variety of stressors, including people-place occurrences, and demonstrate safe and required care for individuals and the workplace as a whole;
- have the ability to secure transportation to the NH Fire Academy and to other sites;
- have the ability to consistently attend and participate in classes;
- have the physical strength necessary for maneuvering and/or lifting heavy objects;
- have the ability to climb and work on ladders, including heights above 100 feet;
- have the ability to work in confined spaces while using self contained breathing apparatus;
- have the ability to exercise initiative and judgment while dealing with changing situations.

FIRE SCIENCE

The student who successfully completes this program will:

- be prepared to be a lifelong learner;
- be prepared for employment in a fire department;
- understand policies and procedures involving firefighter and EMT safety;
- understand procedures used on and off an emergency scene;
- understand elements related to teamwork;
- understand psychological factors associated with firefighting and emergency medical services.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR-FIRE SCIENCE

Fall Semester		**CL**	**LAB**	**CR**
LFIR1240	Principles of Emergency Services	3	0	3
LFIR1270	Fire Behavior and Combustion	3	0	3
LFIR1310	Fire Protection Systems	3	0	3
LFIR2250	Emergency Medical Technician	1	6	3
	MATH ELECTIVE	3/4	0	3/4
	Totals	**13/14**	**0/6**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LFIR1400	Building Construction for Fire Protection	3	0	3
LFIR1600	Fire Prevention	3	0	3
LFIR1360	Fireground Procedures (Firefighter I)	2	12	6
LENG1200	College Composition	.3	0	3
	SOCIAL SCIENCE ELECTIVE	3	0	3
	Totals	**14**	**12**	**18**

Total Credits for Year = 33/34

SECOND YEAR-FIRE SCIENCE

Fall Semester		**CL**	**LAB**	**CR**
LFIR2500	Fire Protection Hydraulics and Water Supply	3	0	3
LFIR2240	Strategy and Tactics	3	0	3
	FIRE SCIENCE ELECTIVE	3	0	3
	FIRE SCIENCE ELECTIVE	3	0	3
LSCI1210	Chemistry I	2	2	3
	HUMANITIES ELECTIVE	3	0	3
	Totals	**17**	**2**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LFIR2340	Fire & Emergency Services Safety & Survival	3	0	3
	FIRE SCIENCE ELECTIVE	3	0	3
	ENGLISH ELECTIVE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**Varies**	**Varies**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 66/67

Fire Science Electives:		**CL**	**LAB**	**CR**
LFIR2270	Anatomy & Physiology for EMS	3	0	3
LFIR2290	Advanced Emergency Medical Technician	1	6	3
LFIR2000	Advanced Fireground Procedures (FF II)	1	6	3
LFIR2100	Fire Inspector I	3	0	3
LFIR2420	Fire Instructor I	3	0	3
LFIR2790	Fire Prevention/Training Internship	0	9	3
LFIR2810	Fire and Emergency Services Administration	3	0	3

FIRE PROTECTION

The student who successfully completes this program will:

- be prepared to be a lifelong learner;
- be prepared for employment in companies and organizations associated with fire protection;
- understand policies and procedures involving workplace safety;
- understand their role in the company that employs him/her and how it impacts overall fire protection.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR-FIRE PROTECTION

Fall Semester		**CL**	**LAB**	**CR**
LFIR1240	Principles of Emergency Services	3	0	3
LFIR1270	Fire Behavior and Combustion	3	0	3
LFIR1310	Fire Protection Systems	3	0	3
LFIR2450	Fire and Life Safety Education	3	0	3
	MATH ELECTIVE	3/4	0	3/4
LENG1200	College Composition	3	0	3

	Totals	**18/19**	**0**	**18/19**

Spring Semester		**CL**	**LAB**	**CR**
LFIR1400	Building Construction for Fire Protection	3	0	3
LFIR1600	Fire Prevention	3	0	3
LFIR2360	Fire Investigation I	3	0	3
	SOCIAL SCIENCE ELECTIVE	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**15**	**0**	**15**

Total Credits for Year = 33/34

SECOND YEAR-FIRE PROTECTION

Fall Semester		**CL**	**LAB**	**CR**
LFIR2500	Fire Protection Hydraulics and Water Supply	3	0	3
LFIR2365	Fire Investigation II	3	0	3
LFIR2100	Fire Inspector I	3	0	3
	FIRE PROTECTION ELECTIVE	3	0	3
LSC1210	Chemistry I	2	2	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**17**	**2**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LFIR2550	Occupational Health and Safety	3	0	3
	FIRE PROTECTION ELECTIVE	3	0	3
	FIRE PROTECTION ELECTIVE	3	0	3
	ENGLISH ELECTIVE	3	0	3
	LIBERAL ARTS ELECTIVE	3	0	3
	Totals	**15**	**0**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 66/67

Fire Protection Electives:		**CL**	**LAB**	**CR**
LFIR2560	Community Fire and Risk Analysis	3	0	3
LFIR2300	Advanced Fire Codes and Standards	3	0	3
LFIR2255	Hazardous Materials Chemistry	3	0	3
LFIR2690	Legal Aspects of Emergency Services	3	0	3
LFIR2790	Fire Prevention/Training Internship	0	9	3

FIRE PROTECTION CERTIFICATE

Fall Semester		**CL**	**LAB**	**CR**
LFIR1240	Principles of Emergency Services	3	0	3
LFIR1270	Fire Behavior and Combustion	3	0	3
LFIR1310	Fire Protection Systems	3	0	3
LFIR2450	Fire and Life Safety Education	3	0	3
LFIR2255	Hazardous Materials Chemistry	3	0	3
	Total	**15**	**0**	**15**

Spring Semester

LFIR1400	Building Construction and Blueprint Analysis	3	0	3
LFIR2360	Fire Investigation I	3	0	3
LFIR2550	Occupational Health and Safety	3	0	3
LFIR2560	Community Fire and Risk Analysis	3	0	3
LFIR2690	Legal Aspects of Emergency Services	3	0	3
	Total	**15**	**0**	**15**

Total for Certificate = 30

FIRE SCIENCE CERTIFICATE

Fall Semester		**CL**	**LAB**	**CR**
LFIR1240	Principles of Emergency Services	3	0	3
LFIR1270	Fire Behavior and Combustion	3	0	3
LFIR1310	Fire Protection Systems	3	0	3
LFIR2450	Fire and Life Safety Education	3	0	3
LFIR2250	Emergency Medical Technician	1	6	3
	Total	**13**	**6**	**15**

Spring Semester

LFIR1400	Building Construction & Blueprint Analysis	3	0	3
LFIR1600	Fire Prevention	3	0	3
LFIR2360	Fire Investigation I	3	0	3
LFIR1360	Fireground Procedures (FF I)	2	12	6
	Total	**13**	**6**	**15**

Total for Certificate = 30

COURSE DESCRIPTIONS

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LFIR1240 Principles of Emergency Services CL3 L0 CR3

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fore protection systems, introduction to fire strategy and tactics; life safety initiatives

LFIR1270 Fire Behavior and Combustion CL3 L0 CR3

This course explores the theories and fundamentals of how and why fires start, spread and are controlled.

LFIR1310 Fire Protection Systems CL3 L0 CR3

This course provide information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

LFIR1360 Fireground Procedures CL2 L12 CR6

This course teaches the student basic fireground procedures including fire department organization, forcible entry, fire behavior, personal protective equipment, and other related subjects necessary for entry-level firefighters. Successful completion of this course certifies the student in Firefighter I through the State of NH Fire Standards and Training)

LFIR1400 Building Construction for Fire Protection CL3 L0 CR3

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting building, preplanning fire operations, and operating at emergencies.

LFIR1600 Fire Prevention CL3 L0 CR3
This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; an fire investigation.

LFIR2000 Advanced Fireground Procedures CL1 L6 CR3
Teaches the student advanced fireground procedures, incident command system, vehicle rescue and extrication, water supply, foam streams, detection systems, and other related subjects necessary for entry-level firefighters. Successful completion of this course certifies the student in Firefighter II through the State of NH Fire Standards and Training. (Prerequisite: LFIR1360)

LFIR2100 Fire Inspector I CL3 L0 CR3
This course provides the student with an in-depth review of the skills attendant to the duties of a Fire Inspector. The student will learn the minimum tasks required of a Fire Inspector. Included in this course are research, interpretation of codes, implementing policy, testifying at legal proceedings, creating forms and job aids, code enforcement inspections and analysis of new and existing structures and properties for construction, occupancy, fire protection and exposures. Successful completion of this course certifies the student in Fire Inspector I through the State of NH Fire Standards and Training. (Prerequisite: LFIR1310, LFIR1400, and LFIR1600).

LFIR2240 Strategy and Tactics CL3 L0 CR3
This course provides the principles of fire ground control through utilization of personal, equipment, and extinguishing agents. (Prerequisite: LFIR1270 and LFIR1400).

L**FIR2250 Emergency Medical Technician CL1 L6 CR3**
This course covers all emergency medical techniques required of the Emergency Medical Technicians in the provision of emergency care with an ambulance/fire service. Successful completion of the course allows the student to sit for the National Registry of Emergency Technicians' written and practical examination. (Prerequisite: Approval of department chair for non-Fire Science students)

LFIR2255 Hazardous Materials Chemistry (9/2010) CL3 L0 CR3
This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.

LFIR2270 Anatomy & Physiology for Emergency Medical Services (A&P for EMS) CL3 L0 CR3
This course covers an introduction to Anatomy & Physiology geared specifically to set the foundation for advanced life support (ALS) certification within the EMS discipline of medicine. The course includes an introduction to medical terminology, the human body and explores each system within the body with a focus on relating each system to the EMS field. (Prerequisites: LFIR2250 with a C- or better; Approval of department chair for non-Fire Science Students; Criminal Record free of felony conviction (proof required); Current NREMT certification, or EMT certification with Instructor approval.) (Fall 2012)

LFIR2290 Advanced Emergency Medical Technician CL1 L6 CR3
This course covers the knowledge and skills required of the Advanced Emergency Medical Technician to prepare the student for a career in the field of Emergency Medical Services. Successful completion of this course and related clinical requirements enables the student to become eligible for the National Registry of Emergency Medical Technicians (NREMT) cognitive and psychomotor examinations. (Prerequisites: LFIR2250 AND LFIR2270 OR LSCI 1450, all with a C- or better; Nationally Registered EMT (NREMT), or EMT-Basic (NREMT-B), or State EMT with instructor approval; American Heart Association BLS for the Healthcare Provider Certification (or approved equivalent); Criminal record free of felony convictions; Department chair approval for non-Fire Science students) (Fall 2012)

LFIR2300 Advanced Fire Codes & Standards CL3 L0 CR3
This course prepares the student to use fire codes and standards at an advanced level. An in-depth study of common fire codes provides the student with the knowledge needed to perform fire inspections and fire investigations, review fire protection system designs, understand electrical installations and have the resources to answer code related questions pertaining to fire protection. (Prerequisite: LFIR2100)

LFIR2340 Fire & Emergency Services Safety & Survival CL3 L0 CR3
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. (Prerequisite: LFIR2240) (Fall 2012)

LFIR2360 Fire Investigation I CL3 L0 CR3
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. (Prerequisite: LIFR1270 and LFIR1400)

LFIR2365 Fire Investigation II CL3 L0 CR3
This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony. (Prerequisite: LFIR2360).

LFIR2420 Fire Instructor I CL3 L0 CR3
This course provides the fire, EMS or emergency services instructor with the basic knowledge to prepare and deliver modern training programs. Successful completion of this course certifies the student in Fire Instructor I through the State of NH Fire Standards and Training. (Prerequisite: LFIR1360)

LFIR2450 Fire & Life Safety Education CL3 L0 CR3
This course provides information relating to the field of fire and life safety education.

LFIR2500 Fire Protection Hydraulics and Water Supply CL3 L0 CR3
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection, and to apply hydraulic principles to analyze and to solve water supply problems. (Prerequisite: LMAT0931 or required math elective).

LFIR2502 Fire Protection Hydraulics and Water Supply Analysis Unit 2 CL2 L0 CR2
Study of fire protection hydraulics including fire flow and friction loss calculations for fire streams using mobile fire pumps. (Prerequisite: DC approval)

LFIR2503 Fire Protection Hydraulics and Water Supply Analysis Unit 3 CL1 L0 CR1
Study of fire protection hydraulics including fire flow and friction loss calculation for underground and above ground water distribution systems. (Prerequisite: LFIR2502)

LFIR2550 Occupational Health and Safety CL3 L0 CR3
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluations and control procedures for emergency service organizations.

LFIR2560 Community Fire and Risk Analysis CL3 L0 CR3
This course provides training in analyzing data, identifying problems, formulating objectives, analyzing causal factors, developing selection criteria, identifying alternative solutions, developing implementation strategies, and designing an evaluation plan. Upon completion, the student will be able to evaluate the community needs associated with all hazards, to select and evaluate the most efficient system in developing community fire protection programs, and to define and design a fire and life safety system for a jurisdiction.

LFIR2690 Legal Aspects of Emergency Services CL3 L0 CR3
This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.

LFIR2790 Fire Prevention/Training Internship CL0 L9 CR3
In a supervised internship with a fire department, the student will work directly with the office that provides fire prevention or fire training for its jurisdiction. (Prerequisites: Approval of department chair, Fire Department and 3.0 GPA or better)

LFIR2810 Fire and Emergency Services Administration CL3 L0 CR3
This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics and leadership from perspective of the company officer. (Prerequisite: LFIR1240).

Please refer to back of course catalogue for Liberal Arts selections

GENERAL STUDIES

The General Studies degree is an exciting, flexible program of study that allows students to develop a program that meets their individual professional and academic goals. This flexibility allows students to combine assessment of prior learning/work experience, with focused coursework in one or two major areas of study to build a pathway that meets their degree requirements. The General Studies degree is also perfect for the student that wants to build transfer credits for a degree major other than those offered at LRCC. With proper planning and course selection, the entire 64 credits in the General Studies program will transfer to the desired four year program.

Since the General Studies program is individually tailored and allows for exploration of options not provided within existing LRCC degree programs, it is imperative that the student formulate and identify his/her own career and/or transfer goals with the assistance of the General Studies Advisor. Once formulated, the final plan must be approved by the Vice President of Academic Affairs prior to the student matriculating into the program.

This self-designed degree requires a total of 64 credits, with a minimum of 32 credits in the major-related or core courses. All college policies, including residence credits, apply to this degree. It is recommended that the applicant begin the process by contacting the General Studies Advisor or the Vice President of Academic Affairs for specific information about the program.

Graduates of the LRCC program will meet expected outcomes including the ability to:

- demonstrate integrity, responsibility, perseverance and tolerance of ambiguity through the acquisition of knowledge and skills for leadership, further education and team work;
- communicate effectively both verbally and non-verbally;
- demonstrate a process for evaluating information rationally and consistently;
- demonstrate scientific thought both quantitatively and qualitatively by learning to recognize and formulate questions for analysis of human and technical problems.

Students may start this degree program in the fall, spring or summer semester.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester	**CL**	**LAB**	**CR**
LENG1200 College Composition	3	0	3
COMPUTER ELECTIVE	2	2	3
MAJOR/RELATED COURSES	6	0	6
MATHEMATICS	3/4	0	3/4
Totals……..	**14/15**	**2**	**15/16**

Spring Semester	**CL**	**LAB**	**CR**
ENGLISH	3	0	3
HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
MAJOR/RELATED COURSES	9	0	9
SCIENCE….	Varies	Varies	3/4
Totals……	**Varies**	**Varies**	**18/19**

Total Credits for Year = 33-35

SECOND YEAR

Fall Semester	**CL**	**LAB**	**CR**
LIBERAL ARTS	3	0	3
MAJOR/RELATED COURSES	9	0	9
SOCIAL SCIENCE	3	0	3
Totals……	**15**	**0**	**15**

Spring Semester	**CL**	**LAB**	**CR**
ELECTIVE….	3/4	0	3/4
LIBERAL ARTS	3	0	3

MAJOR/RELATED COURSES	9	0	9
Totals…….	**15/16**	**0**	**15/16**

Total Credits for Year = 30/31
Total for A.S. Degree = 64

Please refer to back of course catalogue for Liberal Arts selections

GRAPHIC DESIGN

The Graphic Design program offers a diverse educational experience in all phases of graphic communications. The program exposes the student to a thorough scope of the industry. The program's faculty cover and discuss all the phases of the Graphic Arts Industry which leads to an understanding of mass production of graphic designs. This is the unique characteristic of our program. A strong combination of theory and hands-on application gives students a variety of valuable, as well as very employable, learning experiences.

As one of the largest and most diversified industry in the country, the graphic arts industry offers a large variety of placement opportunities. Graduates obtain positions as graphic designers, desktop publishers, electronic pre-press pre-flighters, scanning and imaging specialists, web page designers, art specialists for screen printing, pre-press customer service representatives, and sales trainees. Projected growth in the graphics communication industry shows increased demand for highly skilled individuals in all areas. Recent graduates have successfully transferred their Associate Degree credits to Keene State College, Plymouth State University, Rochester Institute of Technology and Savannah College of Art.

Students also have the opportunity to participate in a cooperative education experience with a host graphics communication company. The combination of classroom and co-op industry experience provides a very successful educational program.

Technical Requirements

In order to be successful in the Graphic Design Program a student must:

- have command of the English language;
- have normal vision for reading instructions and course materials;
- have a high school diploma or equivalent;
- be able to complete requirements for college level classes;
- be able to understand and follow both written and oral instructions;
- have sufficient vision to make fine visual discriminations;
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- have a sufficient dexterity to perform manual skills related to graphics industry;
- have adequate typing skills;
- have good understanding of measurement systems;
- have the ability to work with others;
- have a good eye for detail/attitude toward quality.

As a result of completing the Graphic Design Program, the student will be able to:

- demonstrate an understanding of the theory and processes associated with the Graphic Design profession;
- understand and use appropriately, in both verbal and written context, the technical vocabulary associated with the Graphic Design profession;
- demonstrate the ability to apply critical thinking skills to successfully problem solve customer needs;
- demonstrate the skills and attitudes of a life long learner.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LGRA1340	Typography and Layout with Adobe® InDesign®	2	3	3
LMMA1200	Design Software Essentials	2	3	3
LART1100	Drawing I	2	4	3
LMAT2160	Statistics			
	OR			
	Mathematics Elective	3/4	0	3/4
	Totals	**12/13**	**10**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LART2100	35mm Photography	2	2	3
LGRA1350	Introduction to Graphic Design with Adobe® Illustrator®	2	3	3
LGRA2420	Digital Imaging I with Adobe Photoshop	2	3	3
LART1150	Drawing II	2	4	3
	ADVERTISING/MARKETING OR BUSINESS ELECTIVE	3	0	3
	ENGLISH	3	0	3
	Totals	**14**	**12**	**18**

Total Credits for Year = 33/34

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LGRA2230	Graphic Design I	2	3	3
LGRA2250	Designing for the Web I	2	3	3
LART1200	2-D Design	2	4	3
	SCIENCE	3	0	3
Select 6 credits from the following programs:				
	GRA, MMA, ART	Varies	Varies	6
	Totals	**Varies**	**Varies**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LGRA2240	Publication Design	2	3	3
LART2120	Digital Photography	2	3	3
	SOCIAL SCIENCE	3	0	3
Select 6 credits from the following programs:				
	GRA, MMA, ART	Varies	Varies	6
	Totals	**Varies**	**Varies**	**15**

Total Credits for Year = 33
Total for A.S. Degree = 66/67

GRAPHIC DESIGN CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LGRA1340	Typography and Layout with Adobe® InDesign®	2	3	3
LGRA1350	Introduction to Graphic Design with Adobe® Illustrator®	2	3	3
LMMA1200	Design Software Essentials	2	3	3
LGRA2230	Graphic Design I	2	3	3
Select 6 credits:				
LART2120	Digital Photography	2	2	3
LGRA2240	Publication Design	2	3	3
LGRA2250	Designing for the Web I	2	3	3
	Totals	**12**	**17/18**	**18**

COURSE DESCRIPTIONS

LGRA1340 Typography and Layout with Adobe® InDesign® CL2 L3 CR3
A study of typography and type, its form, anatomy, races, design and measurement. A focused study of digital typesetting and Adobe® InDesign® essentials; working with documents, text, pictures, type, color, page elements and printing. Tutorials, lab exercises and hands-on projects will be assigned.

LGRA1350 Introduction to Graphic Design with Adobe® Illustrator® CL2 L3 CR3
This course introduces the student to graphic design: proportion, balance, sequence, emphasis (contrast), unity and color theory. The student will use creative thinking and experimentation to solve visual communication problems. Adobe® Illustrator® is introduced through tutorials, theory classes, demonstrations and hands-on projects. (Prerequisite: LGRA1340 or permission of instructor)

LGRA1760 Cooperative/Internship Education CL0 L9 CR3
Provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a Graphic Design job-related environment. Cumulative GPA 2.0 minimum required.

LGRA2230 Graphic Design I CL2 L3 CR3
A focused study of graphic design including; but not limited to, logo design, business package design and advertising design. The student will be given the opportunity to work on a project of their choice. Pre-flighting and digital mechanicals will be addressed. Adobe® Illustrator® and Adobe® InDesign® will be explored. (Prerequisite: LGRA1350 or permission of instructor)

LGRA2240 Publication Design CL2 L3 CR3
Students will learn publication design theory, which they demonstrate through the integration of Adobe® Photoshop®, Adobe® Illustrator®, and Adobe® InDesign® to produce a unique magazine. Advanced typesetting and computer techniques will be addressed. (Prerequisite: LGRA1340 and LMMA1200)

LGRA2250 Designing for the Web I CL2 L3 CR3
This course introduces Web Design using uses Adobe® Dreamweaver® to develop a website. This course covers Adobe® Dreamweaver® interface, workflow process, site management, linking; cascading style sheets (CSS); typography; tables; rollovers; behaviors; and optimizing images for the web. The fundamentals of graphic design and typography will be addressed during weekly critiques.

LGRA2420 Digital Imaging I with Adobe Photoshop CL2 L3 CR3
Building on the baseline knowledge from Design Software Essentials, this course focuses in on Photoshop as a tool for production and design. The course approaches Photoshop from the standpoint of two related areas; print design & production, and web design. The course covers the general skill set for both print and web design, and the techniques which are most useful in each. (Prerequisites:LMMA1200 Design Software Essentials)

LGRA2430 Digital Imaging II with Adobe Photoshop CL2 L3 CR3
Extending the skills in Digital Imaging I, this course teaches advanced Photoshop techniques for print and web design. It provides a palette of abilities and skills to get the most out of Photoshop, as a crucial tool for production and design. Students will learn techniques such as advanced layering and blending modes, adjustment layers, and specialized selection & photo-retouching tools. Lab assignments focus on effectively working with Photoshop to accomplish complex tasks, plus 'tips and tricks' to enhance efficiency and creativity. (Prerequisite: LGRA 2420)

LGRA2450 Designing for the Web II CL2 L3 CR3
This course develops student's web design skills further with the introduction to XHTML and JavaScript. This course covers forms, accessibility, inserting media objects, and using spry tools. Adobe® Dreamweaver® and CSS will be explored in depth. (Prerequisite: LGRA2250)

LGRA2653 Independent Study with Lab CL2 L3 CR3
Students in an independent study option will engage in learning about a topic of special interest and/or need. This course has a 48-hour lab requirement. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

LGRA2660 Independent Study CL3 L0 CR3
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

LGRA2710 Screen Process Printing CL2 L3 CR3
This course introduces the student to commercial screen printing techniques. Areas of emphasis include types of frames, terminology, fabric selection, photo mechanical stencil preparation, fabric stretching techniques, screen printing inks, squeegee selection, and substrates. Projects are selected and designed by each student and must be printed on predetermined substrates. Classroom theory will be supported by lab demonstrations. (Prerequisite: LGRA 1350)

LMMA1200 Design Software Essentials CL2 L3 LCR3
In Design Software Essentials, students cover the necessary functions of Photoshop and Illustrator. These are the two major 2D image creation and editing softwares. These programs form the foundation of digital imaging in both print screen and video graphics. Students will learn through several lab assignments that cover pixel manipulation, composing, adjusting, and resizing in Photoshop. In Illustrator, students will learn how to properly and efficiently manipulate vectors; how to create and use color properly, and finally how to efficiently output vector images for screen or print. Concepts learned in this course carry over into animation, motion graphics, 3D design, and more. This course is a prerequisite to most core Media Arts courses.

Please refer to back of course catalogue for Liberal Arts selections

HUMAN SERVICES

The Human Services Program, with concentrations in Human Services or Gerontology, utilizes a strength- based approach to working with people in the community. At the core of the program is the understanding that in order to successfully help others one must be able to build and support healthy relationships. In order to accomplish this, students develop skills in the areas of supportive counseling, written and oral communication, assessment, planning, asset identification, and community organization. The Program provides a sound theoretical understanding of the traditional models used to understand and assist people with differences including the sociology of deviance, disability, and service systems, while recognizing that methods for understanding and helping others are constantly evolving. Opportunities to apply the skills and knowledge acquired in the classroom to real work situations is provided in Practicum courses that require students to work in community settings under the supervision of professionals in the field.

The field of Human Services is broad and diverse. It offers opportunities to work with community members who may be disadvantaged, disabled, and/or socially devalued. Assisting such individuals to acquire skills and relationships necessary to become valued members of community life is an honor and a privilege. Regardless of the type or extent of disability; recipients of human services not only have the same needs as everyone else, but also have untapped capacities that can benefit the community and society. The effective human services worker uses professional interventions to identify and enhance competencies, and strengthen the connections between individuals and their communities.

Human service occupations demand that prospective employees have more than just a strong desire to help. Therefore, to ensure that the candidate chooses the appropriate career, the applicant will be required to meet with the Department Chair and the College Counselor to discuss the specific professional standards and competencies (behaviors) necessary for satisfactory human service work. Human service students must demonstrate capacities for systematic analysis, skilled communication, imaginative problem-solving, empathic insight, and a strong sense of accountability to the persons on whose behalf they work.

The Human Services Program prepares students to:

- enter occupations in public and private human services agencies;
- acquire skills and knowledge related to the student's current human services employment;
- pursue further studies leading to advanced academic degrees and special certifications.

Students benefit from an agreement between Springfield College School of Human Services and LRCC which allows graduates to transfer directly into Springfield's Bachelor program as third year students.

Depending on the employment setting, job titles and duties vary a great deal. The Certificate in Human Services provides students with knowledge, skills, and attitudes required for humane and effective work in entry level positions. The Associate Degree in Human Services prepares students for more advanced positions requiring greater autonomy and a broader range of knowledge and skills. Many students completing the Human Services Program continue their education and obtain bachelor and master level degrees in Human Services and allied professions.

The college must ensure that students do not place clients in jeopardy during learning experiences. Therefore, students in practica and service learning must demonstrate sufficient emotional stability to withstand stresses, uncertainties, and changing circumstances that characterize client care responsibilities. Furthermore, the student is expected to have the emotional stability required to exercise sound judgment, and accept direction and guidance from a supervisor or faculty coordinator; and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and/or clients and their families.

Character Expectations

It is important for perspective students to keep in mind that failure to complete the required practica will result in the student being ineligible to successfully complete the Human Services Certificate or Degree Program.

- Human Services students work closely in the field with individuals of all ages. Many practicum sites and potential employers perform background checks through the New Hampshire Department of Safety as well as through the Police and possibly the FBI. A student's driving record will also be examined and considered prior to acceptance by some practicum sites and potential employers. The student may be called upon to pay for such background checks.
- Applicants who have been in difficulty with the law, depending upon the nature of the problem, may not be employable or even eligible for practica. Applicants need to discuss these issues in an interview with the Department Chairperson prior to admission to the program so that future goals will not be compromised.

Technical Requirements

Technical Standards have been established as guidance tools to inform program applicants of skills and standards necessary for successful completion of the Human Service Programs. Any applicant who has concerns or questions regarding the Technical Standards is encouraged to contact the Department Head to discuss their individual issues.

Students entering Human Services programs must demonstrate:

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

Upon completion of the program the successful student will be prepared to:

- enter occupations in public and private human services agencies;
- enhance and strengthen the individual capacities of those they work with, encouraging full community participation;
- demonstrate skills and knowledge related employment in the human services profession;
- pursue further studies leading to advanced academic degrees and special certifications.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		CL	LAB	CR
LCIS1320	Software Applications	3	2	4
LENG1200	College Composition	3	0	3
LHUS1200	Introduction to the Human Services Profession	3	0	3
LHUS1100	Professional Seminar	3	0	3
LPSY1250	Introduction to Psychology	3	0	3
	Totals	**15**	**2**	**16**

Spring Semester		CL	LAB	CR
LENG1230	Business Communications	3	0	3
LHUS1260	Learning and Behavior	3	0	3
LHUS1280	Individual Assessment and Planning	3	0	3
LHUS1300	Gerontology	3	0	3
LHUS1500	Introduction to Practicum	1	0	1
LSOC1280	Chemical Dependency	3	0	3
	Totals	**16**	**0**	**16**

Total Credits for Year = 32

SECOND YEAR

Fall Semester		CL	LAB	CR
LHUS1610	Human Services Practicum I	2	9	5
LHUS2210	Mental Health/Developmental Disabilities	3	0	3
LPSY1260	Human Growth and Development	3	0	3
LSOC2350	Children, Youth, and Families	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**14/15**	**9**	**17/18**

Spring Semester		CL	LAB	CR
LHUS2280	Political/Social Issues in Human Services	3	0	3
LHUS2620	Human Services Practicum II	2	9	5
LPHI2270	Ethical Issues	3	0	3
	HUMAN SERVICES ELECTIVE	3	0	3
	LAB SCIENCE	3	2	4
	Totals	**14**	**11**	**18**

Total Credits for Year = 35/36
Total for A.S. Degree = 67/68

HUMAN SERVICES
with a Focus in Gerontology

Fall Semester		CL	LAB	CR
LCIS1320	Software Applications	3	2	4
LENG1200	College Composition	3	0	3
LHUS1200	Introduction to the Human Services Profession	3	0	3
LHUS1100	Professional Seminar	3	0	3
LPSY1250	Introduction to Psychology	3	0	3
	Totals	**15**	**2**	**16**

Spring Semester		CL	LAB	CR
LENG1230	Business Communications	3	0	3
LHUS1260	Learning and Behavior	3	0	3
LHUS1280	Individual Assessment and Planning	3	0	3
LHUS1300	Gerontology	3	0	3
LHUS1500	Introduction to Practicum	1	0	1
LSOC1280	Chemical Dependency	3	0	3

	Totals	**16**	**0**	**16**

Total Credits for Year = 32

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LHUS1310	Psychosocial Aspects of Aging	3	0	3
LHUS1710	Gerontology Practicum I	2	9	5
LHUS2300	The Aging Process	3	0	3
LPSY1260	Human Growth and Development	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**14/15**	**9**	**17/18**

Spring Semester		**CL**	**LAB**	**CR**
LHUS2280	Political/Social Issues in Human Services	3	0	3
LHUS2710	Gerontology Practicum II	2	9	5
LPHI2270	Ethical Issues	3	0	3
LSCI1440	Human Biology with Lab			
	OR			
LSCI1450	Anatomy & Physiology I	3	2	4
LSOC2210	Organizational Behavior	3	0	3
	Totals	**14**	**11**	**18**

Total Credits for Year = 35/36
Total for A.S. Degree = 67/68

HUMAN SERVICES CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LHUS1200	Introduction to the Human Services Profession	3	0	3
LHUS1100	Professional Seminar	3	0	3
LHUS1260	Learning and Behavior	3	0	3
LHUS1280	Individual Assessment and Planning	3	0	3
LHUS1500	Introduction to the Practicum	1	0	1
LHUS1610	Human Services Practicum I	2	9	5
LPSY1260	Human Growth and Development	3	0	3
Choose 3 credits				
LHUS1300	Gerontology	3	0	3
LHUS2210	Mental Health/Developmental Disabilities	3	0	3
LSOC1280	Chemical Dependency	3	0	3
	Totals	**24**	**9**	**27**

GERONTOLOGY CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LHUS1100	Professional Seminar	3	0	3
LHUS1300	Gerontology	3	0	3
LHUS1310	Psychosocial Aspects of Aging	3	0	3
LHUS1500	Introduction to the Practicum	1	0	1
LHUS1710	Gerontology Practicum I			
	OR			
LNUR1000	Licensed Nursing Assistant	2	9	5
LHUS2300	The Aging Process	3	0	3
LSOC1280	Chemical Dependency	3	0	3
Choose 3 credits				
LHUS2320	Political/Social Issues in Gerontology	3	0	3
LSOC1240	Introduction to Sociology	3	0	3
LPSY1260	Human Growth and Development	3	0	3

	Totals	**24**	**9**	**27**

DEVELOPMENTAL DISABILITIES CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LHUS1120	Overview of Developmental Disabilities	3	0	3
LHUS1130	Community Inclusion	3	0	3
LCIS1320	Software Applications	3	2	4
LHUS1500	Introduction to the Practicum	1	0	1
LHUS1610	Human Services Practicum I	2	9	5
LHUS2140	Meaningful Supports	3	0	3
LHUS2150	Families and Support Networks	3	0	3
Choose 3 credits				
LHUS1200	Introduction to the Human Services Profession	3	0	3
LHUS2210	Mental Health and Developmental Disabilities	3	0	3
LHUS2280	Political/Social Issues of Human Services	3	0	3
	Totals	**24**	**11**	**28**

COURSE DESCRIPTIONS

LHUS1100 Professional Seminar **CL3 L0 CR3**

This course covers the basic steps to becoming a Human Services professional. Self-evaluations and aptitude testing will be a part of the curriculum. Students will acquire an understanding of the responsibility of working with others and how confidentiality and ethics play a major role in the field. Other topics will include; cultural diversity, domestic violence, community awareness, and communication skills, both verbal and written. (Prerequisite: Interview with Instructor)

LHUS1120 Overview of Developmental Disabilities **CL3 L0 CR3**

This course will cover the broad range of developmental disabilities; including what is a developmental disability, an overview of specific developmental disabilities, what are the best ways to support a person with a specific disability. Included in this course will be the history of the provision of services to people with developmental disabilities, nationally and specifically in New Hampshire.

LHUS1130 Community Inclusion **CL3 L0 CR3**

This course will cover how as a society we have come from segregation to integration to full inclusion. How does this impact someone through their lifespan, what are some specific strategies and tools one can use when working with individuals with disabilities and their families. (Prerequisite: LHUS1120) (2011)

LHUS1200 Introduction to the Human Services Profession **CL3 L0 CR3**

This course provides the full range of human service topics for the student to become familiar with the profession in all its diversity. Topics include: administration, assessment, diversity, gerontology, mental health, and direct care. Students will understand the theory and practice of the services available for disabled and disadvantaged people in the community. Information and concepts are drawn from history, sociology, and psychology.

LHUS1220 Supportive Communication Skills **CL3 L0 CR3**

This course provides an overview of theory, process, and the practice of primary interpersonal communication skills. Students are assisted in developing skills to supportively communicate with a variety of people in a range of environments.

LHUS1260 Learning and Behavior **CL3 L0 CR3**

This course discusses the history and principles of behaviorism and presents learning theories and teaching techniques based on positive behavior principles. Presentation and discussion focus on the ethical and client rights issues of understanding and promoting effective behavior. Recent trends and techniques for applying learning principles in a variety of settings will be included.

LHUS1280 Individual Assessment and Planning CL3 L0 CR3
In this course we address the question of how human potential can be recognized and enhanced. To answer this question, we will critically examine the perspectives and tools that are commonly used. Our focus will be to build on strengths and develop ways of supporting continued growth and personal goals of people who choose to participate in human services.

HUS1300 Gerontology CL3 L0 CR3
This survey course in gerontology includes a history of the changing demographics of aging, social and economic factors, potential impact of stress, housing, and retirement. Legal issues, as well as protection, safety, community services, and care are discussed.

LHUS1310 Psychosocial Aspects of Aging CL3 L0 CR3
This course examines the growth and development of older persons from both psychological and sociological perspectives. The interaction of the individual with the social environment provides a framework for this course with special attention given to societal valuing and devaluing of older persons. The growth and development of older adults, social roles, expectations, opportunities, and new perspectives on aging are discussed.

LHUS1400 Justice and the Community CL3 L0 CR3
This course will provide a comprehensive overview of emerging trends in community justice and support services, with an emphasis on community integration of service delivery, juvenile justice, and violence in society. Changing societal, judicial, and community values will be explored within a historical context; with regard to their impact on the evolution of emerging community-based juvenile justice models and responses to violence through the development of community justice models.

LHUS1450 Foundations of Conflict Resolution CL3 L0 CR3
This course is designed to provide students with the essential foundations of Conflict Resolution. This is a theory based course that will enhance students' awareness of violence in society as well as bullying and conflict related issues that arise in the workplace and personal environment. Students will study, research, and analyze various theoretical models of conflict resolution to realize that there are a variety of concepts that can be used to create a peaceable environment. Students will participate in role-plays to further enhance their understanding of each model and its impact on the field of conflict resolution. The research component will be the foundation in which the student can build a plan/program for the practicum experience that follows.

LHUS1480 Marketing Management for Non-Profit Organizations CL3 L0 CR3
Marketing Management for Non-Profit Organizations combines conceptual learning of the marketing function, the marketing communications process, consumer behavior, and marketing strategy development with a practical hands-on project in which students develop an integrated marketing communications plan for a non-profit organization. Students will learn how to design, manage, and implement marketing function into their agency mission and operations. (Prerequisite: LHUS1200)

LHUS1500 Introduction to the Practicum CL1 L0 CR1
Designed to prepare students for human services practicum experiences, this course provides opportunities to identify and practice skills in the areas of interviewing, communications, human relations, research, ethics, and management of time and work. This course is required for all Human Services students.

LHUS1610 Human Services Practicum I CL2 L9 CR5
A course combining: supervised human services work at a community agency, with instructor-facilitated student peer review. This is an individualized learning experience that enables the student to develop and apply attitudes, skills, and knowledge in a real work setting. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LHUS1200, 1500 or POI)

LHUS1710 Gerontology Practicum I CL2 L9 CR5
This course combines supervised human services work at a community agency with instructor facilitated student peer review. This is an individualized learning experience that enables the student to develop and apply attitudes, skills, and knowledge in a real work setting. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LHUS1300, 1500 or POI)

LHUS2140 Meaningful Supports **CL3 L0 CR3**
We all find meaning in how we spend our days- where we choose to go, work, recreate. People with disabilities have gone from a time of segregation to inclusion in their community. This course will look at how to bring meaning to one's day, so that community members with disabilities are contributing members of their community. This course will also examine barriers to full participation and strategies to overcome perceived barriers. (Prerequisite: LHUS1120) (2011)

LHUS2150 Families and Support Networks **CL3 L0 CR3**
In this course, the student will learn about the importance of relationships, social networks, family support and individualized support for people with disabilities.(Prerequisite: LHUS1120) (2011)

LHUS2210 Mental Health and Developmental Disabilities **CL3 L0 CR3**
This course introduces students to human services within the fields of mental health and developmental disabilities. Recent developments in the delivery of services that enhance the self-determination of individuals and families will be examined. Students will also be introduced to concepts and methods of family support, community membership, school inclusion, supported employment, stigma, peer support, and recovery. With guidance, students will be responsible to develop and present an individual learning project.

LHUS2230 Social Biology of Behavior **CL3 L0 CR3**
This course sill help human service and other students with the actual types of behavior that they may encounter in their real world experiences in future careers. The course will explore the relevant biological structures, processes, and social influences that result in behaviors and issues commonly encountered by human services workers.

LHUS2280 Political/Social Issues of Human Services **CL3 L0 CR3**
This course presents students an opportunity to study and present on topics related to social and political trends and forces that profoundly influence service recipients and service systems. An analysis of historical issues with regard to their impact on current service system trends is conducted. Issues that are expected to have a significant impact on service delivery in the future are discussed.

LHUS2300 The Aging Process **CL3 L0 CR3**
This course provides an overview of the processes underlying the phenomena of aging across the lifespan. An overview of genetics and the cellular bases of living and dying as factors of growing older are provided. The effects of aging on organs and bodily system functioning, as well as the impact of life style on health and longevity are reviewed.

LHUS2320 Political/Social Issues in Gerontology **CL3 L0 CR3**
This is an opportunity for students to study and present on topics related to social and political trends and forces profoundly affecting aging individuals and their families. Issues are evaluated in a historical context with regard to their impact on current service system trends. Issues that are expected to have a significant impact on service delivery in the future are discussed.

LHUS2620 Human Services Practicum II **CL2 L9 CR5**
Building on skills and knowledge gained in Human Services Practicum I (LHUS1610), students develop more advanced competencies as the basis for the learning experience and will be evaluated using criteria appropriate for second year students. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports a deeper level of personal and professional growth. (Prerequisite: LHUS1610 or POI)

LHUS2710 Gerontology Practicum II **CL2 L9 CR5**
Building upon attitudes, skills, and knowledge acquired in Gerontology Practicum I (LHUS1710), the student will develop more advanced competencies as a basis for the learning contract and will be evaluated by criteria appropriate for a second year student. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports a deeper level of personal and professional growth. (Prerequisite: LHUS1710 or POI)

Please refer to back of course catalogue for Liberal Arts selections

LIBERAL ARTS

This Associate in Arts (A.A.) degree program offers the equivalent of the first two years in a four-year Bachelor of Arts or Bachelor of Science program. In this flexible program, students select courses based on the requirements of the four-year college to which they plan to transfer. Working with an advisor, students design a program that best meets their

future plans. It is recommended that students identify the college to which they plan to transfer and discuss a transfer plan with their advisor as soon as possible.

Upon completion of the program, students have an academic background sufficient to transfer into a baccalaureate degree program. The program provides a foundation for the acquisition of skills and abilities essential for jobs requiring a broader base of arts and sciences.

Students may start this degree program in the fall, spring or summer semester.

Graduates of this program must master eight general outcomes designed to prepare them to perform competently and confidently in a rapidly changing world. Four of these outcomes involve their ability to:

- communicate effective both verbally and non-verbally;
- explore diverse ideas and emotions, as expressed through the disciplines, to evaluate the effect of historical trends, events, institutions, and social systems as applied to the Liberal Arts;
- perform mathematical operations basic to functioning in present and future disciplines or occupations and to prepare for further education;
- demonstrate scientific thought both quantitatively and qualitatively by learning to recognize and formulate questions for analysis of human and technical problems.

The following courses satisfy Liberal Arts requirements:

English	Courses with LENG prefixes and LHUM1600
Humanities	LENG2230, LENG2240, LENG2460, LENG2500, LENG2540, LENG2550, LENG2560, LENG2570, and courses with LART, LFRE, LHIS, LHUM, LPHI and LSPA prefixes
Literature	LENG2230, LENG2240, LENG2460, LENG2500, LENG2540, LENG2550, LENG2560, LENG2570
Mathematics	Courses with LMAT prefixes
Science	Courses with LSCI prefixes
Social Science	LHUM1310, LHUM1500, LHUM1510, LHUM2500, LHUM2520, and courses with LHIS, LPHI, LPOL, LPSY and LSOC prefixes

NOTE: Prerequisites may be waived with permission of instructor (POI).

ASSOCIATE IN ARTS DEGREE

FIRST YEAR

Fall Semester	**CR**
LENG1200 College Composition	3/4
Mathematics	3/4
Humanities	3
Social Science	3
Science	4
Totals	**16/18**

Spring Semester	**CR**
English Elective	3
Mathematics	3/4
Computer Elective*	3/4
Social Science	3
Liberal Arts Elective	3
Totals	**15/17**

***** Recommended but can be replaced with an open elective if student is proficient in computers and receiving institution doesn't require a computer course.

Total Credits for Year = 31/35

SECOND YEAR

Fall Semester	**CR**
Liberal Arts Elective	3

Humanities	3
Open Elective	3
Science	4
Social Science	3
Totals	**16**

Spring Semester	**CR**
Humanities	3
Open Elective	3
Liberal Arts Elective	3
Liberal Arts Elective	3/4
Liberal Arts Elective	3/4
Open Elective*	2/3
Totals	**15/17**

***If needed to ensure minimum credits for degree requirements.

Total Credits for Year = 31/33

Total Credits for A.A. Degree = A Minimum of 64

COURSE DESCRIPTIONS

ART

LART1100 Drawing I **CL2 L4 CR3**
An introduction to the materials, techniques and subject matter of observational drawing in pencil, pen and ink, charcoal, conte and brush, as well as using experimental tools and techniques. Subject matter includes the still life and landscape. One and two point perspective is introduced. The student will gain mastery of the fundamental techniques of drawing as the primary means of documentation, communication and self-expression.

LART1150 Drawing II **CL2 L4 CR3**
A continuation of the principles, media and techniques of drawing established in Drawing I. Emphasis is placed on the exploration of creative visual expression through observational and imaginary drawing from the human figure, still life and landscape. Concepts and media of drawing in color are introduced and emphasis is placed on the use of drawing as a means of personal self-expression. (Prerequisite: LART1100)

LART1200 2-D Design **CL2 L4 CR3**
An introduction to the basic two-dimensional design concepts of color, composition and the organization of pictorial space. A variety of design media will be explored which includes drawing, painting and collage.

LART1250 3-D Design **CL2 L4 CR3**
An introduction to three-dimensional concepts and sculptural materials that are involved in the creation and appreciation of functional and non-functional sculptural form. A variety of sculptural media, materials and techniques will be explored including clay, plaster, wire, cardboard and mixed media.

LART1300 History of Art I **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the pre-historic period through the Middle Ages. Lectures will be supplemented by slides, film, video, and/or computer presentations.

LART1350 History of Art II **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the Renaissance through the 19th Century. Lectures will be supplemented by slides, film, video, and/or computer presentations. (Prerequisite: LART1300)

LART1400 Exploration in the Visual Arts **CL3 L0 CR3**
This course is designed to provide an overview of the visual arts, its traditions, history and techniques as part of our general education offerings. This course will fulfill a Liberal Arts elective requirement, but will not be appropriate for students pursuing the Associate Degree in Fine Arts.

LART1450 The Clay Experience I **CL2 L4 CR3**
An overview of basic techniques and processes of working with clay. Topics include hand-building and wheel-throwing methods, glazes and firing. This course will fulfill a humanities or liberal arts requirement for all majors. Fine Arts majors are directed to LART1450 as their elective.

LART1500 Introduction to Art Education **CL3 L0 CR3**
An introduction to the art teaching profession. Provides an overview of issues concerning the theory and practice of art education, as well as possible career paths in art education. Topics include, but are not limited to: history of art education in American schools; theory and practice in art education; child development in art; life in the art classroom; and career paths in art education.

LART1630 Screen Printing **CL2 L2 CR3**
This course introduces the student to screen printing techniques. Areas of emphasis include: types of frames; terminology; fabric selection; stencil preparation; fabric stretching techniques; screen printing inks; and squeegee selection. Projects are selected and designed by each student. Classroom theory will be supported by lab demonstrations. Credit will not be given for more than one of the following courses: LART1630, LGRA2710

LART2100 Introduction to 35mm Photography **CL2 L2 CR3**
This course will provide the inexperienced photographer with instruction in basic 35mm camera techniques, types of cameras, lens and exposure controls. Particular attention will be given to various types of films, their exposure and development, followed by print development and darkroom techniques. Understanding technical terminology as it applies to photography will be stressed. Each student must provide film, print paper and his/her own 35mm manual camera.

LART2120 Digital Photography **CL2 L2 CR3**
This course is the digital complement to Introduction to 35mm Photography (LART2100). It covers differences between film and digital cameras, the benefits and pitfalls of taking digital photographs, how to move your images from camera to computer, to a printer, or the web. Students will also learn how to use photographic techniques such as lighting and composition, and how to use the cameras automatic and manual settings. Finally, the student will produce a PowerPoint presentation using all of the skills they have learned.

LART2150 Drawing III **CL2 L4 CR3**
This course introduces the student to drawing the human figure. Clothed and nude models will be the subjects of this course. Students will study the structure of the figure with an introduction to anatomy for artists, and will continue their exploration of a variety of materials that began in Drawing I and II. Gesture and pose, spatial constructions and the foreshortening of the figure will be discussed. (Prerequisites: LART1100 & LART1150 or permission of instructor)

LART2200 Drawing IV **CL2 L4 CR3**
This course continues the inquiry from Drawing III into the representation of the human form. Students will be expected to expand upon and refine their observation skills and conceptual knowledge of the figure. The use of color will be introduced to the subject at this time. (Prerequisites: LART1100, LART1150 & LART2150 or permission of instructor)

LART2350 20th Century Art **CL3 L0 CR3**
This course provides an introductory survey of the styles and conventions of the principle artistic movements and trends of the late 19th through 20th century. (Prerequisite: LART1300 & LART1350)

LART2400 Painting I **CL2 L4 CR3**
An introduction to the basic principles, media and techniques of painting in oils and acrylics. The development of understanding color mixing, exploration of form, content and space is emphasized while working from abstract and realistic subject matters. The course synthesizes composition, creative thought and critical thinking. (Prerequisite: LART1200)

LART2450 The Clay Experience II **CL2 L4 CR3**
An introduction to the media, techniques and processes of clay in both functional and non-functional methods which builds on the skills and experiences of 3-D Design (LART1250). Students will gain an understanding of wheel-throwing and hand-forming methods, as well as glazing and firing. (Prerequisite: LART1450)

LART2510 Issues in Contemporary Art **CL1 L0 CR1**
An exploration of current topics, trends, issues, and artists in the contemporary art world. This course will be taught in a seminar format, supplemented with slides, film and video, computer presentations, and visiting artists. When possible,

field trips to area galleries, museums, exhibitions, arts events, or studios may be taken. (Prerequisite: LART1300 & LART1350)

LART2550 Printmaking **CL2 L4 CR3**
An introductory studio course in the methods and materials of printmaking, building on principles and concepts of design established in 2-D Design (LART1200). A variety of printmaking techniques will be introduced including woodblock printing, etching, lino-printing, embossing and collograph. (Prerequisite: LART1200)

LART2600 Sculpture **CL2 L4 CR3**
Introduction to three-dimensional sculpture processes in a variety of media, which include clay, plaster, metals and wood. The course builds upon concepts and skills established in 3-D Design (LART1250), with emphasis on creative expression and critical thinking. Students will work from a variety of subject matter in both additive and subtractive sculptural methods. (Prerequisite: LART1250)

LART2650 Senior Portfolio **CL0 L4 CR1**
An introduction to portfolio presentation techniques to provide students with the skills and knowledge essential for the preparation for further education and a career in the visual arts. The course focuses on preparation of artwork, portfolio development, slide production, matting and the care of art works. Through the portfolio development process, students will gain an understanding of the skills essential to the effective transfer to a four-year institution for study of fine arts.

LART2700 Painting II **CL2 L4 CR3**
Further development of skills introduced in Painting I (LART2400). Primary focus on observational painting from landscape, still-life, and an introduction to painting the figure. The course will include analysis of the painting styles of the past and emphasis upon the role of the artist in contemporary society. (Prerequisite: LART2400)

LART2750 Independent Study in Fine Arts **CL0 L6 CR3**
The Independent Study in Fine Arts is designed for those students who either want to delve more deeply into a particular aspect of art, or who have a personal project they would like to explore. Students are expected to have enough art experience to formulate their own interests and goals, as well as work independently to completion. (Prerequisite: Permission of instructor)

ENGLISH

LENG0900 Foundations of Writing* **CL3 L0 CR3**
Strategies for strengthening and developing writing skills, sentence structure, paragraph organization and essay development, as well as spelling, punctuation and grammar usage are emphasized. Critical thinking and library research skills are also included. **Credits do not apply to degree requirements.**

LENG0951 Reading/Basic Skills* **CL1 L0 CR1**
Students work on improving reading skills, emphasizing word attack skills and vocabulary development. **Credits do not apply to degree requirements.**

LENG0952 Reading/Comprehension* **CL1 L0 CR1**
Students work on improving reading skills, identifying main idea and supporting details, and inferential comprehension. **Credits do not apply to degree requirements.**

LENG0953 Reading/Organization* **CL1 L0 CR1**
Students work on patterns of organization, apply critical and analytical thinking skills, and improve study skills. **Credits do not apply to degree requirements.**

LENG1200 College Composition **CL3 L0 CR3**
In this course students learn to write clearly and effectively for defined audiences through a variety of strategies. Emphasis is on the writing process from prewriting through drafting, revising and editing. Formal essays and a research paper are required. (Prerequisite: Placement or successful completion of competency assessment)

LENG1204 College Composition/Portfolio **CL1 L0 CR1**
Students write additional essays to add to their portfolio. The writing process is emphasized. (Prerequisite: LENG1200, may be taken concurrently)

LENG1220 Technical Communications **CL3 L0 CR3**
The focus in this course is on the principles of, and practice in, clear and accurate presentation of information as directed to specific audiences. This includes planning, composing and editing resumes, reports, descriptions of mechanisms, instructions and critiques, and incorporation of graphics. The oral component includes interview strategies, informal and formal presentations. (Prerequisite: LENG1200 or POI)

LENG1230 Business Communications **CL3 L0 CR3**
Efficient techniques of written and oral communication emphasizing both process and product in the modern business environment are examined. Students gain an understanding of the theory of the communication process and then prepare reports in direct, indirect and persuasive order. (Prerequisite: LENG1200 or POI)

LENG2230 Survey of American Literature **CL3 L0 CR3**
An overview of how America's best-known thinkers, authors and poets have reflected and influenced culture, this course takes an historical approach to studying literature from colonial to contemporary times. (Prerequisite: LENG1200 or POI)

LENG2240 The American Short Story **CL3 L0 CR3**
Early, modern and contemporary short stories are read closely and analyzed for theme, plot development, character study and author's style. Stories are placed in their historical context. (Prerequisite: LENG1200 or POI)

LENG2300 Creative Writing Workshop **CL3 L0 CR3**
Techniques, practice and feedback help access creative writing skills and develop an understanding of different creative writing genres through weekly writing, revision and a final portfolio. Students compose a short story, five pieces of poetry and two dramatic scenes. Focus is on characterization, plot, imagery and theme. (Prerequisite: LENG1200 or POI)

LENG2310 Fiction Workshop **CL3 L0 CR3**
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. Principal, traditional forms of fictional narrative writing are explored, including the short story, novella and novel. Students are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on character, plot and thematic development. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2320 Poetry Workshop **CL3 L0 CR3**
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course emphasizes the analysis and writing of poetry. Students study the idea of creativity and the poetic use of language, and are encouraged to discover and reflect their own voice. Attention is focused on tone, style, voice and thematic development. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2330 Playwriting Workshop **CL3 L0 CR3**
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course includes the analysis and writing of dramatic scripts designed for the theater. Students study and write one- and multiple-act plays and are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on conflict, character and thematic development. Emphasis is placed on effective dialogue. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2340 Scriptwriting for Film and Television **CL3 L0 CR3**
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course includes the analysis and writing of dramatic scripts designed for television and/or large screen production. Students are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on conflict, character and thematic development, as well as logistics. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2460 Tolkien and The Ring of Power **CL3 L0 CR3**
The Hobbit and The Lord of the Rings by J.R.R. Tolkien are studied and analyzed. Tolkien's biography, his writing life, the origins of the stories, and their publication history, as well as his construction of a mythological world and its peoples

and languages, his characters and their development, and his thematic concerns are researched. Finally, Tolkien's influence on 20th century fantasy literature is considered. (Prerequisite: LENG1200)

LENG2500 Introduction to Literature **CL3 L0 CR3**
Various literary types are defined and compared. Representative examples of short stories, plays, poems and novels are read and critically analyzed. (Prerequisite: LENG1200 or POI)

LENG2540 The Nature Writers **CL3 L0 CR3**
The course introduces students to the prose and poetry of British and American nature writers. It also helps them understand the historical, social and intellectual background of various literary periods. (Prerequisite: LENG1200 or POI)

LENG2550 Popular Fiction **CL3 L0 CR3**
Elements of horror fiction and popular fiction are studied and researched. Representative samples are read and analyzed for techniques and themes. Writers include Poe, Hawthorne, Faulkner, Oates and Conrad. The evolution of imaginative literature from the gothic through contemporary horror, science fiction and fantasy is studied using various critical approaches. (Prerequisite: LENG1200 or POI)

LENG2560 Introduction to Drama **CL3 L0 CR3**
The basis of this course is the reading and discussion of significant plays in Western literature, from the Greeks to the present with related writing assignments. The plays are viewed within their historical and social contexts, with an emphasis on the relationship between their literary and theatrical forms. (Prerequisite: LENG1200 or POI)

LENG2570 The Myth of the Hero **CL3 L0 CR3**
The character of the hero, as he or she appears in the myths of different societies, is studied and analyzed. Students explore the meanings of mythological figures, motifs, and references from a variety of perspectives. Creation and fertility myths of the world, as they impact understanding the role of the hero, are considered as well. (Prerequisite: LENG1200)

LENG2600 Public Speaking **CL3 L0 CR3**
This course provides an introduction to the fundamentals of public speaking and offers students the opportunity to practice these skills through a variety of in-class speeches. Students research, develop, prepare and deliver oral presentations. In addition, class members serve as an audience and provide feedback to their fellow classmates. (Prerequisite: LENG1200 or permission of instructor)

FRENCH

LFRE1200 Elementary French I **CL3 L0 CR3**
This course is open to students with little or no prior experience in the language. It stresses the four basic skills of listening, speaking, reading and writing, as well as the language in a cultural setting. (Prerequisite: LENG1200 may be taken concurrently)

LFRE1210 Elementary French II **CL3 L0 CR3**
A continuation of LFRE1200 with the same emphasis on listening, speaking, reading and writing. (Prerequisite: LFRE1200)

HISTORY

LHIS1310 American History and Civilization I **CL3 L0 CR3**
This survey, from the "Age of Exploration" until approximately 1865, examines the development of American civilization, institutions and cultures during this period. The course's approach to American history is a "holistic" one that explores the social, cultural, philosophical, political and economic aspects of that history.

LHIS1320 American History and Civilization II CL3 L0 CR3
This survey, from approximately 1865 to the present, examines the development of American civilization, institutions and culture during this period. The course's approach to American history is a "holistic" one that explores the social, cultural, philosophical, political and economic aspects of that history.

LHIS1380 Women in U.S. History – 1600 to the Present CL3 L0 CR3
This course is a multicultural survey of women's roles, experiences and contributions to American society and culture from 1600 to the present. Topics included will be colonial women and domestic work; witchcraft persecutions; women as masters and slaves; women reformers; the suffrage and woman's rights movement; women and war; women's physical and mental health; women and political power; immigrant women; women as Other – lesbians and gender rebels; women in the Civil Rights and peace movements; women and political power; contemporary feminism.

LHIS1500 Latin American History and Civilization CL3 L0 CR3
This course covers the historical development of Latin American/Hispanic culture and civilization from the Pre-Columbian period until the present. Topics will include: the geography and culture of Latin America; Native American cultures and civilizations in the region; the Spanish and Portuguese conquests; the Spanish colonial economy, society, and politics; Latin American independence movements and wars; the early independent republics in Latin America; U.S./Latin American relations, human rights issues, and modern developments in the region.

LHIS2100 World History I CL3 L0 CR3
This survey course covers the historical development of various representative world cultures and civilizations until approximately 1500. Areas covered include: human evolution and migration out of Africa, prehistoric human cultures, the Agricultural Revolutions in the Old and New Worlds, the major "Cradles of Civilization": Mesopotamia, Egypt, India, China, MesoAmerica, and the Andes, human technical developments, the development of political and legal systems, Ancient Europe, Medieval Europe, contact between Asia and Europe, and other topics. Students will understand history as not only WHO, WHAT, WHERE, and WHEN but will also understand the "WHY". (1/2014)

LHIS2200 World History II CL3 L0 CR3
This survey course covers the historical development of various representative world cultures and civilizations from approximately 1500 to the present. Areas covered include: European expansion and conquest; the development of the "modern" political and economic systems; the rise and fall of "empires"; the Industrial Revolution; the Enlightenment and its influence; the development of the modern nation-state; imperialism, colonialism, and nationalism. Students will understand history as not only WHO, WHAT, WHERE, and WHEN but will understand the "WHY". (1/2014)

LHIS2250 History of the Twentieth Century CL3 L0 CR3
The course examines major social, cultural, political and technological events, trends and movements in the world during the twentieth century. Topics covered include: Russian Revolution, Communism, World Wars I and II, industrial and technological advances and trends, the demise of colonialism, the Cold War, the Middle East, Vietnam, social and cultural trends in the 1950's and 1960's, and the downfall of the Soviet Union. It is hoped that class members will go beyond an understanding of history as simply "who, where and when," and begin to understand why.

LHIS2350 US Labor and Reform Movements CL3 L0 CR3
The focus of the course is on those trends, movements and leaders that have sought to give voice and power to the traditionally voiceless and powerless segments of American society. Movements that have fought to eliminate or reduce inequality based on class, gender and race and to realize the "American Dream" are studied. The history and development of organized labor and its effect on American life and culture and such related movements and trends as the Civil Rights and Women's Rights movements are discussed. The music, art, literature and other elements of "popular culture" associated with these movements are examined. (Prerequisites: LHIS1310 or LHIS1320 or LHIS2250 or LHUM2500 or LHUM2520 or LPOL2310 or POI)

HUMANITIES

LHUM1310 Cultural Anthropology CL3 L0 CR3
This survey course involves the study of human beings and their cultures, customs, origins and development. Specific topics examined and discussed include human origins and evolution, human cultures, race and ethnicity, religions, taboos, political systems, economic systems, kinship, sexual norms and mores, gender roles, marriage, educational systems, art, and the effects of globalization on local cultures.

LHUM1500 Arabic Language and Culture **CL3 L0 CR3**
This course is designed to teach the students the Arabic alphabet, numbers and their sounds accurately. Also, to teach basic vocabulary words of conversation in the form of politeness, social greetings, etc. Also, the course touches on different Arabic culture, such as education, politics, women's roles, dress code, food, etc.

LHUM1510 Chinese Language and Culture **CL3 L0 CR3**
This course is intended for non-Chinese background students with no previous knowledge of Chinese. Emphasis is placed on developing conversational and reading skills, while some relevant cultural background is also integrated with the language training. The Chinese phonetic system "Pinyin" is introduced at the beginning of the course. Vocabularies of 120 words plus approximately 30 sentence patterns are covered in this course.

LHUM1550 Music Appreciation **CL3 L0 CR3**
This course is designed to see and understand the connection of music to human life and living in order to demonstrate its importance in the world. Throughout this course, music of different cultures and styles will be explored in our societies.

LHUM1600 Introduction to Theatre **CL3 L0 CR3**
This overview of theater through the production process combines a history of theater with elements of stage craft, acting technique, play analysis and script writing. (Prerequisite: LENG1200 or POI)

LHUM1610 Acting and Scene Study I **CL3 L0 CR3**
A workshop-style, basic acting and scene study, this course is based on the Sanford Meisner approach, and an overview of the great theater practitioners from Thespis to Stanislavski. Students participate in vocal and movement activities, as well as theater exercises, and they analyze characters through scene studies of playwrights' texts. (Prerequisite: LHUM1600)

LHUM2500 Humanities in Western Civilization I **CL3 L0 CR3**
This interdisciplinary course examines evolutions of western culture from its classical origins up through 1550 A.D. This is accomplished through the examination of multiple perspectives including literature, art, music, philosophy, politics and theater. Classes consist of lectures, group seminars on readings and student projects.

LHUM2520 Humanities in Western Civilization II **CL3 L0 CR3**
This interdisciplinary course examines the ideological, economic, political, religious, psychological, artistic, social, philosophical, and military components involved in the cause and effect relationships which have molded the western cultural heritage from 1650 to the present. Classes consist of informal lectures, readings, quizzes, seminars on readings, and student presentations.

MATHEMATICS

LMAT0610* Math Prep **CL3 L0 CR3**
This course provides an extensive review of basic arithmetic and algebra concepts. Topics covered include operations with whole numbers, fractions, and decimals; percent; properties of real numbers; solving linear equations and inequalities; interpreting and solving application problems; graphing linear equations and inequalities; exponents, scientific notation; polynomials, factoring; and measurement in both the U.S. customary and the metric systems. **Credits do not apply to degree requirements**. (9/2013)

LMAT1280 Topics in Applied College Math **CL4 L0 CR4**
This course is designed to expose the student to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved solving applied problems. Topics to be covered include: Number Theory and Systems, Functions and Modeling, Finance, Geometry and Measurement, Probability and Statistics, and selected subtopics related to the student's major field of study. (Prerequisite: Successful completion of LMAT0610, or competence as demonstrated on math placement exam.)

LMAT1310 Boolean Algebra **CL1 L0 CR1**
This course relates principles of Boolean Algebra directly to elementary circuit analysis. It includes an examination of the decimal, octal, binary, and hexadecimal number systems. The use of NOT, AND, OR, XOR, NAND, and NOR in logic statements, as well as in simple circuit analysis, is covered. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam.)

LMAT1370 Technical Algebra & Geometry CL4 L0 CR4
This course is intended for technical students and introduces concepts from algebra, geometry, and trigonometry that will facilitate the solution of applied problems which could be encountered in technical fields. Topics include measurement, absolute and relative error, linear equations, roots, plane and solid geometric figures and their areas/volumes, finding missing dimensions of plane and solid figures, inscribed and circumscribed angles, radian measure, right triangle trigonometry, and an introduction to personal finance. (Prerequisite: Successful completion of LMAT0610, or competence as demonstrated on math placement exam.)

LMAT1420 Essentials of Algebra CL3 L0 CR3
This course includes a study of linear equations and their graphs, linear inequalities, an introduction to functions and their graphs, absolute value equations and inequalities, systems of equations in 2 and 3 variables, operations with polynomials, rational expressions, rational exponents, and an introduction to solving quadratic equations. Also included is basic competency on the T183 graphing calculator. A grade of C or better must be achieved in this class to use it as a prerequisite for a subsequent class. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam.)

LMAT2110 College Algebra CL4 L0 CR4
This is a comprehensive course that includes the graphs and solutions of linear, radical and quadratic functions; graphs and solutions of linear, compound, absolute value, and nonlinear inequalities; exponential and logarithmic functions and their graphs; systems of equations in 2 and 3 variables, including solutions using matrices; rational exponents; and an introduction to trigonometry. A grade of C or better must be achieved in this class to use it as a prerequisite for a subsequent class. (Prerequisite LMAT1420 or equivalent with a grade of C or better or competence demonstrated on math placement exam).

LMAT2160 Statistics CL4 L0 CR4
This is a first course in statistics and probability. Analysis of single and bivariate data, algebraic and graphical analysis, sample statistics, probability, probability distributions, sample variability, sample distributions, the Central Limit Theorem, estimation and hypothesis testing, correlation and regression are covered. Emphasis is on applications throughout the course. (Prerequisite: LMAT1230 or LMAT1420 with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2250 Finite Math CL4 L0 CR4
Topics in this course include linear, quadratic, exponential and logarithmic functions; financial formulas such as rate of change, growth, compounding, etc.; the use of matrices and linear programming techniques in solving multi-variable problems; basic set and probability theory with Venn diagrams, and permutation/ combination formula analysis. (Prerequisite: LMAT1420 or LMAT2100 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2350 Pre-Calculus CL4 L0 CR4
Topics in this course include polynomial, rational, trigonometric, logarithmic, and exponential functions and their graphs; trigonometry and the unit circle; trigonometric identities; composite and inverse functions; logarithmic and exponential equations; solution of higher degree equations; quadratic, rational, and absolute value inequalities. (Prerequisite: LMAT2100 or LMAT2110 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2700 Calculus I CL4 L0 CR4
This course is designed for the student who has a strong math background. Included is a brief review of topics from Pre-Calculus. Calculus topics include functions, limits, continuity, slope/rate of change and the derivative, rules for and applications of the derivative, derivatives of trigonometric and logarithmic functions, and an introduction to integrals. (Prerequisite: LMAT2350 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2710 Calculus II CL4 L0 CR4
This course is designed for the student who has a working knowledge of differentiation. Topics include integration techniques and applications, introduction to multi-variable functions, integrals of transcendental functions, calculus in probability, and an introduction to series and sequences. (Prerequisite: LMAT2700 or equivalent with a grade of C or better.)

PHILOSOPHY

LPHI1290 Introduction to Philosophy CL3 L0 CR3
This course is an introduction to the major areas of philosophical thought including metaphysics, the investigation and analysis of what is real; epistemology; ethics, the investigation into how we can live a "good life"; and esthetics.

LPHI2250 Comparative World Religions CL3 L0 CR3
The course examines the major "question" or "issues" addressed by religion in general. It then examines major, representative systems of religious belief and practice, as well as their historical and sociological development. These religious systems are analyzed using a "world view outline" which addresses different aspects of religious belief and practice, such as the Absolute, the Human Problem, the Human Solution, Rituals, the Meaning of History, Life After Death, Community and Ethics, and Attitudes Toward Other Religions.

LPHI2270 Ethical Issues CL3 L0 CR3
This course examines standards of professional conduct, values identification, moral development and the process of making moral decisions. Major contemporary ethical issues are examined. The emphasis is on acquiring the skills necessary to be able to guide oneself and others in the process of ethical decision-making.

LPHI2300 Introduction to Eastern Philosophy CL3 L0 CR3
This introductory survey covers various components of Eastern Philosophy, including Jainism, Hinduism, Theraveda Buddhism, Mahayana Buddhism, Taoism, Confucianism and Shintoism. (Prerequisite: LPHI1290 or LPHI2250 or POI)

POLITICS

LPOL2220 Current Social and Political Issues CL3 L0 CR3
Students learn to understand and analyze important and current events, as well as social, cultural and political issues. Due to the rapid rate of change in our society, specific issues vary depending on what is currently "newsworthy." General topics, however, include foreign affairs and policy, civil rights and liberties, crime and punishment, economic and welfare issues, political and social reform, gender issues, racial and ethnic disharmony, and other current "hot" issues in American life. Class members not only learn how to understand "both sides of an issue" they also learn how to better articulate their own positions.

LPOL2310 American Government CL3 L0 CR3
This introductory course in government examines the relationship between government, politics and power. Students discuss how people in a representative democracy can effect change in government to address current and future needs.

LPOL2350 Constitutional Law CL3 L0 CR3
Constitutional law is an inquiry into constitutional interpretation by the Supreme Court based on examination of leading cases. Particular emphasis is placed on questions of federalism, executive power, civil liberties, and economic regulation. This course is designed to be preparation for students interested in going into law, law enforcement, public service, business, and political science Students will conduct research, generate case briefs, participate in classroom debates, perform oral arguments, and present on contemporary legal issues. (Prerequisites: A grade of B or better in LPOL2310 or equivalent high school-level Citizenship or its equivalent.) (9/2013)

PSYCHOLOGY

LPSY1250 Introduction to Psychology CL3 L0 CR3
Various areas of psychology, including scientific investigation, motivation, personality, psychological testing, behavioral deviation, perception, learning and human development are studied.

LPSY1260 Human Growth and Development CL3 L0 CR3
This course surveys physiological, mental and emotional development over the human life span. Using the central concepts of epigenetic stages and interaction with the environment, the course identifies the main trends of human development and explores the needs and typical responses of persons at each stage.

LPSY2000 Educational Psychology CL3 L0 CR3
Psychological principles are applied to the learning environment. Theories of learning, memory, cognition, and behavior management are discussed in relation to formal education. (Prerequisites: LPSY1250 and LPSY1260 which may be taken concurrently)

LPSY2200 Abnormal Psychology CL3 L0 CR3
This course is an introduction to the categories, causes and methods of treatment of the major forms of psychopathology: neurosis, psychosis, personality disorders, addictions, sexual deviations, psychophysiological problems. (Prerequisite: LPSY1250)

LPSY2240 Crisis Psychology CL3 L0 CR3
This course covers the basic concepts and theories of human behavior with emphasis on the neurological and biological effects of stress. Traumatic situations such as death and dying, suicide, drug abuse, assaults, and large scale disasters are covered. (Prerequisite: LPSY1250)

SCIENCE

LSCI1040 Astronomy and Space CL3 L2 CR4
An introductory course designed to acquaint students with the wonders and complexity of the universe. Topics covered include Earth's place in the universe, the day and night skies, the origins of modern astronomy, gravity and orbits, telescopes, the solar system, newly discovered planets around other stars, types of stars, the birth and death of stars, the Milky Way and other galaxies, the Big Bang, Dark Matter and Dark Energy, and the fate of the universe. The lab component consists of outdoor observations, use of telescopes, (weather permitting), computer simulations, and scheduled trips to planetariums. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LSCI1210 Chemistry I CL2 L2 CR3
This course provides an introduction to chemistry on a qualitative level. The major topics covered include measurement, energy, chemical terminology, classification of matter, atomic models, the Periodic Table, sources and types of chemical bonds, chemical reactions, acids and bases, phases of matter and the properties of common gases. This course is not recommended for students in Liberal Arts or Fine Arts, or for pre-nursing students. **Credit will not be given for more than one of the following courses: LSCI1210, LSCI1360.** (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LSCI1250 Technical Physics CL2 L2 CR3
This course is an introduction to the principles and concepts of physics. Math review, vectors, motion, Newton's laws, work, power, energy, friction, equilibrium, torque, concurrent forces, mechanical advantage, simple machines, and the properties of matter are covered. (Prerequisite: C or better in LMAT1280 or LMAT1370 or LMAT2110 or equivalent)

LSCI1280 Introduction to Physical Sciences CL3 L2 CR4
This fast-paced course covers the major concepts of physics and uses them in explaining how our world actually works. These concepts are developed through demonstrations and experiments, and require a minimum of mathematics. What is required is the ability to conceptualize the big underlying ideas, the ability to overcome notions about what we think we see versus what is actually happening, and the ability to combine and apply previously learned concepts to explain technology. The physics content covers motion, mechanics, work and energy, thermodynamics, waves, electricity, magnetism, light, and radioactivity. Amongst the course topics covered are the workings of air conditioners, electric motors, musical instruments, rockets, hot air balloons, four-stroke automobile engines, and radios. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LSCI1290 Nutrition for Health and Fitness CL3 L0 CR3
This course is a study of the nutrients and how the body handles the nutrients throughout the life cycle. Topics include metabolism of macro- and micro-nutrients; physiological benefits of an optimal diet with exercise; behavioral issues related to eating; energy balance and weight control; and disease prevention strategies related to diet. Life style behaviors, which optimize nutritional health and wellness, are also emphasized.

LSCI1310 Nutrition for Health and Fitness Lab CL0 L2 CR1
This lab course is designed to reinforce selected topics covered in the lecture portion of Nutrition for Health and Fitness including energy requirements and ideal weight, chemical composition of common foods, chemical aspects of digestion, and several other topics. (Prerequisite: Math: Successful completion of LMAT0610 or competence as demonstrated on math placement exam; B or better in LSCI1290 which may be taken concurrently.)

LSCI1360 Principles of Chemistry CL3 L2 CR4

This algebra-based course with integrated laboratory component provides a college-level introduction to the core concepts of chemistry for students new to, or reviewing, the subject. Beginning with the basic concepts of measurement, energy, classification of substances, and chemical terminology, it examines how the history of atomic models leads to the development of the wave mechanics model of the atom and the modern Periodic Table. These are then used in explaining chemical bonding and the nature of ionic, metallic, and covalent substances. Chemical reactions and the mole concept are then introduced leading to stoichiometry problems. Finally, the kinetic theory of particles is used in explaining the behavior of the phases of matter. **Credit will not be given for more than one of the following courses: LSCI1210, LSCI1360.** (Prerequisite: C or better in LMAT 1370 or LMAT 1420 or equivalent. Math prerequisite may be fulfilled by competence demonstrated on math placement exam.)

LSCI1380 General Chemistry I CL3 L2 CR4

This is the first course in a full-year sequence examining the core concepts of chemistry. Students considering this course must have previous exposure to chemistry concepts, and must be prepared to work to develop their problem solving skills. Topics include atomic and molecular structure, stoichiometry, types of reactions, thermochemistry, gases, chemical bonding, molecular structures, intermolecular forces and solutions. The laboratory component is strongly connected to the subject material and promotes student experience with experimental techniques. (Prerequisites: A C or better in LSCI1360 or equivalent AND a C or better in LMAT2110 or equivalent OR permission of instructor. Math prerequisite may be fulfilled by competence demonstrated in math placement exam.)

LSCI1390 General Chemistry II CL3 L2 CR4

This is the second course in a full-year sequence examining the core concepts of chemistry, further expanding upon the content in General Chemistry I. Topics include kinetics, chemical equilibrium, acids and bases, thermodynamics, electrochemistry, nuclear chemistry, properties of representative elements and transition elements, and an introduction to organic chemistry. The laboratory component is strongly connected to the subject material and promotes student experience with experimental techniques. (Prerequisites: A C or better in LSCI1380 General Chemistry I OR permission of instructor).

LSCI1440 Human Biology with Lab CL3 L2 CR4

This course is a study of the human anatomical structure and physiological systems. It is designed to provide the student with knowledge and perspectives necessary to work cooperatively with professionals in medicine and other human service disciplines. Background topics include chemistry for human biology, cell structure and function, and human organization. Major topics include the digestive, circulatory, lymphatic, respiratory, urinary, skeletal, muscular, nervous, reproductive systems, the senses and genetics. Lab activities are designed to enhance and reinforce selected lecture topics. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam or POI. Math prerequisite may be taken concurrently.)

LSCI1450 Anatomy & Physiology I CL3 L2 CR4

An introduction to the structure and function of the human body. Includes a review of the chemical and biological basis of living organisms and the anatomy and physiology of the integumentary, musculoskeletal and nervous systems. Integrated lab experience is provided using anatomical models and dissection of selected specimens, as well as observation of histologic preparations. (Prerequisite: LSCI1440 or successful completion of high school biology with lab within 5 years)

LSCI1460 Anatomy & Physiology II CL3 L2 CR4

Sequential study of the structure and function of the human body. Includes the anatomy and physiology of the blood and lymphatic systems, respiratory system, circulatory system, excretory system, fluid and electrolyte balance and reproductive system. Laboratory work parallels lecture topics, and consists of selected exercises in the study of anatomical models, dissection and physiological experimentation. (Prerequisite: C or better in LSCI1450)

LSCI1470 Music and the Brain CL3 L2 CR4

This course is an introduction to the structure and function of the special sense of hearing and its relationship to music, including the neurological functions involved in processing sounds and music. We will also examine the relationship between music and the cognitive functions of memory, movement, emotion and identity. Case studies involving music and its effect on humans will be examined. Labs will examine the anatomy and physiology of the ear, auditory nerve and associated brain structures. Subjective assessments of various types of music will also be studied.

LSCI1500 Environmental Science CL3 L2 CR4

This course provides an introduction to environmental science as a complex, interdisciplinary, scientific area of study. The focus of this course is on the scientific and ecological principles basic to understanding environmental issues. Major

themes examined include water quality, human population, sustainability, biodiversity, and the relationship between human society and the natural world. Coursework will include lecture, laboratory exercises, field trips and in-class discussions. (Prerequisite: Successful completion of LMAT0610 or math competence as demonstrated on math placement exam).

LSCI1520 Ecology CL2 L3 CR4

Students will study the general ecological principles regarding the relationships between organisms and their physical and biological environments in both lecture and the laboratory. These principles will be used to interpret patterns in the distribution, abundance, and characteristics of organisms over space and time. Students will study the differences among the various segments of ecology including individuals, populations, communities and biomes. The focus of this course is on the scientific and ecological principles basic to understanding environmental issues. Coursework will include lecture, laboratory exercises, field trips and in-class discussions. (Prerequisite: LENG1200 College Composition with a C or better or POI)

LSCI1530 Intro. to Plant Biology CL3 L2 CR4

This course is an introduction to the structure, function and diversity of plants. Covered topics include plant structure and function, growth and development, reproduction and genetics, and ecology, identification, classification and naming of plants. Laboratory activities are designed to enhance selected topics. (Available 9/2012)

LSCI1540 Plants & Man CL3 L2 CR4

People have depended on plants for food, shelter, clothing, warmth, communication and medicines. This course will present the major processes of biological sciences as applies to topics in the lecture material including plant anatomy & physiology review, plants as food, drink derived from plants, plants and health, and impact of other plant forms on society. Lab activities will be selected to enhance specific topics. (Prerequisite: LSCI1530 with a C or better) (Available 1/2013)

LSCI1550 Biology of AIDS CL3 L0 CR3

This course provides the student with an opportunity to explore the biology, immunology, epidemiology and treatment of acquired immune deficiency syndrome, or AIDS. This course includes: 1) the emergence of AIDS and the HIV-AIDS connection; 2) viruses and the human immunodeficiency virus (HIV); 3) the immunology of HIV-AIDS; 4) clinical progression of HIV disease and AIDS; 5) the epidemiology of AIDS; 6) transmission of the HIV virus and preventing HIV transmission; 7) HIV testing and diagnosis; 8) treatment of HIV infection and AIDS; 9) possible HIV vaccines; 10) prevalence of HIV and AIDS in various populations; and 11) the social and political aspects of AIDS worldwide.

LSCI1560 Biology of AIDS Lab CL0 L2 CR1

This lab serves as an introduction to the more advanced concepts in biological laboratory science. The course includes: 1) basics of laboratory safety; 2) use, care and handling of the compound microscope; 3) basic lab skills in pipetting, weighing and measuring; 4) preparing and running agarose gel electrophoresis; 5) staining gels and reading DNA “fingerprints”; 6) preparing and running polymerase chain reactions to amplify DNA; 7) learning to avoid DNA contamination; 8) using PCR to diagnose infectious diseases (including detection of the HIV) and other interesting DNA lab work.

LSCI1600 Introduction to Geology CL3 L2 CR4

This course provides an introduction to the geologic processes that make the Earth a very dynamic and active planet. The focus of this course is on discovering why processes such as volcanoes, landslides and earthquakes occur and how these processes shape the Earth’s surface on a daily basis. Major themes examined include understanding the Earth’s age, the rock cycle, identification of rock types and geologic features, and the interactions of atmosphere and ocean with the geological environment. Coursework will include lecture, homework, oral presentations, laboratory exercises, field trips and in-class discussions. (Prerequisites: Successful completion of LMAT0610 or competence as demonstrated on math placement exam or POI.)

LSCI2200 College Physics I (9/2011) CL3 L2 CR4

This algebra-based course with integrated laboratory component is a standard first-semester college physics course. This course is designed to help students develop thoughtful problem solving strategies in tandem with the coverage of the course material. Topics include mechanics, static and dynamic equilibrium, gravitation, rigid-body motion, conservation laws, energy transformations, and thermodynamics. (Prerequisite: C or better in LMAT1370 or LMAT2110 or equivalent or POI)

LSCI2210 College Physics II (09/2011) CL3 L2 CR4
This algebra-based course completes the sequence for a year-long physics course having an integrated laboratory. Continuing the approach used in its prerequisite course, one major emphasis of this course is to promote student development of thoughtful problem-solving strategies by explicitly identifying and consistently applying methods to obtain solutions while considering a broad variety of problems. Course topics include the thermal properties of matter, fluids, waves, optics, electricity and magnetism, and electromagnetic waves. (Prerequisite: C or better in College Physics I or equivalent.)

LSCI2410 Microbiology CL3 L2 CR4
Modern principles and concepts of microbiology. The morphology, physiology, genetics and classification of bacteria, viruses and other organisms are studied. Their relationships to sanitation and infectious diseases are emphasized. The course, nature, incidence and control of communicable diseases, especially those of man, are included. (Prerequisite: LSCI1450 with a C or better)

LSCI2460 Introduction to Genetics CL3 L2 CR4
The study of human genetics and its application in various disciplines. It is designed to help students gain knowledge of this subject area and to be able to apply this knowledge in cooperative work with medical, research, criminal justice and many other science-related disciplines. Major topics include introduction and history of genetics, cell reproduction (meiosis and mitosis), genetic pedigrees and inheritance patterns, tools used in genetic testing, mutations and cancer. Lab activities are designed and used to reinforce selected topics. (Prerequisites: LSCI1440 with a C or better AND LMAT2100 or LMAT2110. Math prerequisite may also be fulfilled by competence demonstrated on math placement exam.)

LSCI2610 Independent Study in Science CL3 L2 CR4
Independent Study in Science is an opportunity for a student to enroll in a higher-level science class to explore focused topics in science. Some suggested topics might be the Biology of Cancer, Neuroscience or Environmental Microbiology. This course includes a lab component. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0, two or more courses in the sciences with a grade of B or better).

SOCIAL SCIENCE

LSOC1240 Introduction to Sociology CL3 L0 CR3
Our daily lives are affected, consciously and unconsciously, by social forces and influences of which we are largely unaware. This introductory course to sociology, the scientific study of society, explores and uncovers these hidden factors behind the behaviors and attitudes of individuals, groups and societies.

LSOC1280 Chemical Dependency CL3 L0 CR3
This course examines chemical dependency and substance abuse issues including etiology, diagnosis and treatment, the effect of alcohol and drugs on the body, family dynamics of addiction, and special topics selected by students.

LSOC1420 Introduction to World Geography CL3 L0 CR3
An introduction to the physical, cultural and cartographic aspects of the earth's regions, this course is designed to assist students in their understanding of social, political and economic development. Topics covered are location, movement, connection and interaction of populations in Europe, Australia, Pacific areas, South Asia, North, Central and South America, Middle East and Africa.

LSOC2210 Organizational Behavior CL3 L0 CR3
Coursework involves the students developing an understanding of how working together and leading people in organizations leads to the maintenance of healthy future organizations. It includes the challenges of leadership.

LSOC2250 Critical Thinking and Decision Making CL3 L0 CR3
This course focuses on the development of critical thinking skills through analysis and critique. Influences and problems associated with reason and the thinking process are explored, while strategies to develop reason-based decision making are also covered.

LSOC2280 Human Sexuality CL3 L0 CR3
Students learn about sexuality from a developmental perspective, focusing on stages of growth and development. Personal attitudes, values and controversial social issues related to sexuality are examined and discussed. Upon completion of this course, students will better understand the individual and social impact of human sexuality on thought, feeling and behavior.

LSOC2310 Microeconomics CL3 L0 CR3
This course provides an introduction to the economic concepts that are studied in microeconomics. Students gain an understanding of how consumer and producer decision making forms the basis of supply and demand and how the price system operates within a market economy to allocate scarce resources among unlimited wants.

LSOC2320 Macroeconomics CL3 L0 CR3
This course provides an introduction and framework to the economic concepts that are studied in macroeconomics. Emphasis is placed on the following topics: physical and financial markets, national income accounting, savings and investment, business cycles, economic growth, inflation, unemployment, money and the central bank, and the role that government plays in the economy.

LSOC2350 Children, Youth and Families CL3 L0 CR3
Students are provided an introduction to families from a sociological and systems perspective. The interplay between families and the larger society is the background against which the phenomena of childhood, adolescence and parenting are examined. Topics include, but are not limited to, poverty, delinquency, disability, aging, self-determination, community supports and interventions.

SPANISH

LSPA1200 Elementary Spanish I CL3 L0 CR3
This course is open to students with little or no prior experience with the language. It stresses the four basic skills of listening, speaking, reading and writing, as well as the language in a cultural setting. (Prerequisite: LENG1200 may be taken concurrently)

LSPA1210 Elementary Spanish II CL3 L0 CR3
A continuation of LSPA1200 with the same emphasis on listening, speaking, reading and writing. (Prerequisite: LSPA1200)

MARINE TECHNOLOGY

The Marine Technology program concentrates on recreational marine equipment; including outboards, inboards, inboard/outboards, engines, and diagnostic equipment. Students become knowledgeable in the maintenance and repair of internal combustion engines and drive systems through classroom and lab experience.

In addition to the mechanical aspects, students learn basic marina operations, safety management, uses of marine products, customer relations, and communications.

Opportunities for marine technicians are found in coastal and lakeside communities. Graduates will find employment as inboard drive, or outboard technicians. Many other opportunities in the recreational off-road vehicle market; such as motorcycle and snowmobile technician are also available.

Technical Requirements

Candidates for Marine Technology must:

- have command of the English language;
- have a high school diploma or equivalent;
- be able to purchase the minimum required tools;
- be able to work in a marine service environment;
- be able to work in confined spaces;
- be able to complete requirements for college level classes;
- be able to understand and follow both written and oral instructions;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment, and information from a computer screen (adaptive equipment acceptable);
- have reading comprehension skills sufficient to read and comprehend service literature;
- have communication skills sufficient to prepare required reports;
- have sufficient hearing to distinguish various sounds and noises (adaptive equipment acceptable);
- have the ability to stand for extended periods of time and the physical strength to lift components and equipment;
- have sufficient dexterity to perform manual skills related to marine service.

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Semester		CL	LAB	CR
LENG1200	College Composition	3	0	3
LMAR1200	Fundamentals of Electricity and Electronics	3	3	4
LMAR1220	Basic Service Operations	3	3	4
LMAR1250	Marine Technician Fundamentals	3	0	3
	Totals	**12**	**6**	**14**

Spring Semester		CL	LAB	CR
LMAR1230	Outboard Engine Service I	3	3	4
LMAR1240	Starting, Ignition, and Charging Systems	3	3	4
	ENGLISH	3	0	3
	MATHEMATICS	3/4	0	3/4
	SOCIAL SCIENCE	3	0	3
	Totals	**15/16**	**6**	**17/18**

Summer Semester		CL	LAB	CR
LMAR1703	Independent Study	3	0	3
	Totals	**3**	**0**	**3**

Total Credits for Year = 34/35

SECOND YEAR

Fall Semester		CL	LAB	CR
LMAR2230	Inboard Engine Service	3	6	5
LMAR2310	Outboard Engine Service II	3	4	4
	HUMANITIES	3	0	3
	SCIENCE	3	0	3
	Totals	**12**	**10**	**15**

Spring Semester		CL	LAB	CR
LMAR2220	Marina Operations	4	0	4
LMAR2250	Marine Drive Systems and Service	3	6	5
LMAR2350	Advanced Diagnostics	3	0	3
	LIBERAL ARTS	3	0	3
	Totals	**13**	**6**	**15**

Total Credits for Year = 30
Total for A.A.S. Degree = 64/65

MARINE TECHNOLOGY CERTIFICATE

Courses		CL	LAB	CR
LMAR1200	Fundamentals of Electricity and Electronics	3	3	4
LMAR1220	Basic Service Operations	3	3	4
LMAR1230	Outboard Engine Service I	3	3	4
LMAR1240	Starting, Ignition, and Charging Systems	3	3	4
LMAR1250	Marine Technician Fundamentals	3	0	3
LMAR2230	Inboard Engine Service	3	6	5
LMAR2250	Marine Drive Systems and Service	3	6	5
	Totals	**21**	**24**	**29**

COURSE DESCRIPTIONS

LMAR1200 Fundamentals of Electricity and Electronics **CL3 L3 CR4**

Theory, principles and measurements of DC and AC electricity and electronics are covered. Schematic and conventional

wiring diagram interpretation allows the student to become familiar with common 12-volt marine electrical systems. Hands-on troubleshooting includes various gauge, trim, battery, lighting, ignition feed, dash, engine, accessory, lanyard, relay and other systems found in small craft.

LMAR1220 Basic Service Operations **CL3 L3 CR4**
This course covers basic service shop operations including safety, use of hand and power tools, use of marine hardware, service literature, identification and operating principles of marine power packages, and common maintenance procedures. Topics included; but not limited to, are shop practices and safety, minor service procedures, engine model identification, service literature, fuel systems and steering systems. Students are responsible for the additional fee associated with the NH Marine Patrol Boater Safety Course as part of Basic Service Operations. See instructor for details.

LMAR1230 Outboard Engine Service I **CL3 L3 CR4**
Entry level fundamentals of recreational marine industry operations to include; but not limited to, model identification, service support literature, rigging and maintenance procedures for warranty support. (Prerequisite: C or better in LMAR1220 or permission of instructor)

LMAR1240 Starting, Ignition, and Charging Systems **CL3 L3 CR4**
This course will concentrate on theory, setup, maintenance and diagnostic procedures for common inboard and stern drive, starting, charging and ignition systems. Diagnostic exercises include battery point, Delco EST, Thunderbolt IV & V, MEFI and PCM EFI, Waste fire and other common marine ignition systems. (Prerequisite: C or better in LMAR1200 or permission of instructor)

LMAR1250 Marine Technician Fundamentals **CL3 L0 CR3**
Materials in this course are offered to the student in various formats including video, CD-Rom and printed text. This course also provides basic theoretical and foundational principles of 2- and 4-stroke engines and other marine propulsion systems. Setup and service literature are stressed. This is a required course for all Marine Technology students.

LMAR1703 Independent Study **CL3 L0 CR3**
Students in an independent study option will engage in learning about a topic of special interest and/or need. (Prerequisite: Approval of instructor, advisor, and department chair)

LMAR2220 Marina Operations **CL4 L0 CR4**
Marina operations will prepare entry-level technicians to use the Mercury Marine's Midas System including; but no limited to, warranty claims, product registration, product history, parts and insurance estimation. (Prerequisite: LMAR2310 or permission of instructor)(Effective Fall 2013)

LMAR2230 Inboard Engine Service **CL3 L6 CR5**
Internal engine repair, as well as carburetor, fuel injection, ignition, cooling, alignment, maintenance and winterization are covered in this course. Diagnostic methodology is a major strongpoint. (Prerequisite: LMAR1220 or permission of instructor)

LMAR2250 Marine Drive Systems and Service **CL3 L6 CR5**
This course involves identification, maintenance, setup and repair procedures for common marine stern drive, transom and trim systems including, but not limited to, MerCruiser, R, Alpha and Bravo systems. A section of inboard transmission setup, alignment and diagnostic procedures are included. (Prerequisite: LMAR1220 or permission of instructor)

LMAR2310 Outboard Engine Service II **CL3 L4 CR4**
This course covers two- and four-cycle engine theory, ignition system theory function and diagnostics, fuel system theory function and diagnostics, cooling system theory function and diagnostics, and power transfer systems theory function and diagnostics. (Prerequisite: LMAR1230 or permission of instructor)

LMAR2350 Advanced Diagnostics **CL3 L0 CR3**
This highly specialized course is specifically tailored for technicians who require or seek advanced levels of expertise on MerCruiser and Mercury Outboard EFI Systems technology. The research activities of this course are designed to further improve the working knowledge/skills of experienced technicians on EFI Systems technology, diagnosis and repair procedures. (Prerequisites: LMAR2310, LMAR2230) (Until Fall 2014)

LMAR2350 Marine Engine Diagnostics CL3 L0 CR3

This highly specialized course is specifically tailored for technicians who require or seek advanced levels of expertise on MerCruiser and Mercury Outboard EFI Systems technology. The research activities of this course are designed to further improve the working knowledge/skills of experienced technicians on EFI Systems technology, diagnosis and repair procedures. (Prerequisites: LMAR2310, LMAR2230) (Effective Fall 2014)

Please refer to back of course catalogue for Liberal Arts selections

MEDIA ARTS AND TECHNOLOGY

Media Arts and Technology focuses on the concepts, processes and production of digital filmmaking. Lakes Region Community College's Media Arts Program prides itself on encouraging student creativity while instilling the necessary technical skills and work ethics to live your dream.

The Media Arts and Technology Program is committed to educating responsible filmmakers. Here we guide you through your raw ideas to your finished product with the fundamentals of scriptwriting, pre-visualization and planning, cinematography, non-linear editing with Final Cut Pro, visual effects with After Effects, and post-production techniques and mastering including DVD creation. Media Arts and Technology students will have a comprehensive core of courses that will assist them in meeting their individual career or transfer focus. The program focus will include a detailed education in cinematography and digital filmmaking practice, history and criticism, and encourages critical exploration of emerging forms of visual storytelling. This program encourages student experimentation and personal growth.

Technical Requirements

In order to be successful in the Media Arts and Technology Program a student must:

- have command of the English language;
- have a high school degree or equivalent;
- be able to complete requirements for college level classes;
- have normal vision for reading instructions and course materials and for performing manipulative tasks;
- have reading comprehension skills sufficient to read and comprehend service literature;
- be able to understand and follow both written and oral instructions;
- have communication skills sufficient to prepare required reports;
- have sufficient vision to distinguish colors, read gauges, scopes, diagnostic equipment and information from a computer screen (adaptive equipment acceptable);
- have a good eye for detail/ attitude toward quality.
- have sufficient hearing to distinguish various sounds and noises(adaptive equipment acceptable);
- have the physical strength to lift 50 lbs;
- have a sufficient dexterity to perform manual skills related to graphics industry;
- have adequate typing skills;
- have a good understanding of measurement systems;
- have a basic mechanical aptitude;
- have the ability to work with others;

As a result of completing the Media Arts and Technology Program, the student will be able to:

- demonstrate an understanding of the theory and processes associated with the Media Arts profession;
- understand and use appropriately, in both verbal and written context, the technical vocabulary associated with the Media Arts profession;
- demonstrate the ability to apply critical thinking skills to successfully problem solve audio, video and interactive tasks;
- demonstrate the skills and attitudes of a life long learner.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LMMA1100	Communicating through Storyboards	2	3	3
LENG1200	College Composition	3	0	3/4
LMMA1200	Design Software Essentials	2	3	3
LMMA1300	Movie Making I	2	3	3
LMMA1360	Intro to Cinematography	2	3	3
	Totals	**11**	**12**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LART2120	Digital Photography	2	2	3
LENG2300	Creative Writing Workshop	3	0	3
	MATHEMATICS	3/4	0	3/4
LMMA1350	Movie Making II	2	3	3
LMMA1500	Intro to Motion Graphics	2	3	3
LMMA2100	Introduction to 3D Design	2	3	3
	Totals	**14/15**	**11**	**18/19**

Total Credits for Year = 33/35

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LMMA2350	Movie Making III	2	3	3
LENG2340	Script Writing for Film and Television	3	0	3
LMMA2400	Studio I	1	10	6
	SCIENCE	3	0/2	3/4
	Totals	**12**	**10/12**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LMMA2600	Intro to Post Production	2	3	3
LMMA2450	Studio II	1	10	6
	LIBERAL ARTS	6	0	6
	SOCIAL SCIENCE	3	0	3
	Totals	**12**	**13**	**18**

Total Credits for Year = 33/34
Total for A.S. Degree = 66/69

COURSE DESCRIPTIONS

LMMA1100 Communicating through Storyboards **CL2 L3 CR3**

Communicating through storyboards plays a major roll in visual storytelling. The ability to visually communicate directions to others in the production process is imperative. Storyboards simplify set-up times, delegate production teams, create shot lists and most importantly, keep everyone on track. In this course, students are not required to be accomplished artists; instead this course teaches students how to sketch in a clear and understandable way. Scene staging, perspective, proportion, lighting, and camera direction are some of the concepts covered in this course. In the final project, students will create a 10+ panel storyboard with all the concepts covered in the course. (09/2009)

LMMA1200 Design Software Essentials **CL2 L3 LCR3**

In Design Software Essentials, students cover the necessary functions of Photoshop and Illustrator. These are the two major 2D image creation and editing softwares. These programs form the foundation of digital imaging in both print screen and video graphics. Students will learn through several lab assignments that cover pixel manipulation, composing, adjusting, and resizing in Photoshop. In Illustrator, students will learn how to properly and efficiently manipulate vectors;

how to create and use color properly, and finally how to efficiently output vector images for screen or print. Concepts learned in this course carry over into animation, motion graphics, 3D design, and more. This course is a prerequisite to most core Media Arts courses.

LMMA1300 Movie Making I (documentary) CL2 L3 LCR3
Students dive into visual storytelling in Movie Making I. Key software concepts are covered as students learn the Non-Linear Editing interface. Students learn through a series of lab-based tutorials and discussions, creating short documentaries that introduce essential editing functions. Students are tasked with creating a one-minute documentary about themselves and a short five-minute documentary (or mockumentary) about a chosen subject of their own concept and design. The final product is a self-produced DVD with the two documentaries.

LMMA1350 Movie Making II (narrative) CL2 L3 LCR3
In Movie Making II, students continue their technical journey exploring more nuances of Final Cut Pro and strengthening their skill behind the camera. This is achieved by the development of a short story. Students may use their own short or cull from years of student shorts written in the college's annual literary book, P.H.A.S.Tracks. The majority of this course is instructor-lead hands-on lab work. Students will also be encouraged to work on their own as this is the first of many time consuming courses. (Prerequisite: LMMA1300)

LMMA1360 Introduction to Cinematography CL2 L3 LCR3
Introduction to Cinematography is the companion course to LMMA1300 Movie Making I. While Introduction to Movie Making covers computer related editing concepts, this course covers camera mechanics, lighting, staging, sound, and more. What happens in front of the lens is essential to the success of the finished assignment. Students will complete a series of different camera experiments both in the lab and in the field, then transfer files to Final Cut and make evaluations on their shots. Students are currently shooting with Panasonic HVX200 High Definition cameras. (09/2009)

LMMA1500 Intro to Motion Graphics CL2 L3 CR3
This is a very exciting course built to compliment the movie-making core of the program. This course explores Adobe's motion graphics software, After Effects. With this program students can create dynamic title sequences, composite clips and images, make color corrects and/or enhancements, remap time, in general make Hollywood-style special effects. This course concentrates on the software and developing organized work habits in a production pipeline. Students will create a series of small video clips throughout the course to develop their skills and understanding of the program. (Prerequisite: LMMA1200 Digital Software Essentials)

LMMA2100 Introduction to 3D Design CL2 L3 CR3
This exciting course is an introduction in working with 3D. Students learn how to navigate virtual three-dimensional space while building and texturing polygonal models. This course is meant to enhance the filmmaking aspects of the curriculum. We use Maxon's Cinema 4D to model, texture, light, animate and render elements into After Effects, Premiere and Final Cut Pro for compositing. This software is extremely powerful while being completely accessible to beginners. (Prerequisite: LMMA1200 Design Software Essentials)

LMMA2350 Movie Making III (music video) CL2 L3 CR3
In Movie Making III, students work in groups to design and produce a music video. The focus is on planning and organization, multi-camera shoots and editing, and most importantly, working with deadlines. Students will work in groups and rotate duties as they work through each video. During pre and post production, instructors will reinforce principles, techniques, and technical applications. The shoot itself will take the students on location. This is a working semester, meaning large amounts of lab time will be concentrated on completing the project. Grading is based on benchmarks and deadlines set by the instructor. (Prerequisites: LMMA1300 Movie Making I, LMMA 1350 Movie Making II)

LMMA2400 Studio I CL1 L10 CR6
Studio I is part one of a portfolio program designed to develop and nurture a senior's cumulative skill set in digital film production. Students will work with real clients to develop broadcast compliant short-form narratives and advertisements. This class may require a significant amount of outside lab work. This class is not open to non-majors. (Prerequisite: LMMA1350 Movie Making II) (Updated 9/2013)

LMMA2450 Studio II CL1 L10 CR6
Studio II is part two of a senior's portfolio development. Students will crew together and work with real clients to develop family-friendly viral videos. This class makes an in-depth study in video for social media and broadcast markets. Students research the psychology and methodology behind creating clever viral videos. This class may require a significant amount of outside lab work. This class is not open to non-majors. (Prerequisite: LMMA2400 Studio I) (Available Spring 2014)

LMMA2500 Portfolio **CL0 L2 CR1**

This course prepares the individual student for their next step. Whether they want to go on to a four-year school or start working in their field, a good portfolio will help promote the student. Students will learn to package their work and present them in an engaging manor that will allow them to stand out and be noticed.

LMMA2600 Intro to Post Production **CL2 L3 CR3**

Post Production focuses on some of the finishing software that gives your film/video a professional presentation. Some topics covered will be color correction using Apple's Color program, and creating a custom DVD menu using Apple's DVD Studio Pro. Students will also use this course to compile all their works over the past four semesters into one DVD portfolio. (Prerequisites: LMMA1200 Design Software Essentials, LMMA1300 Movie Making I)

LMMA2653 Independent Study with Lab **CL2 L3 CR3**

Students in an independent study option will engage in learning about a topic of special interest and/or need. This course has a 48-hour lab requirement. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

Please refer to back of course catalogue for Liberal Arts selections

NURSING

The Nursing Program offers the opportunity to earn an Associate of Science Degree in Nursing, in preparation for the licensing exam (NCLEX-RN) to become a Registered Nurse. The program has Full Approval of the New Hampshire Board of Nursing.

Graduates of the program will be prepared to:

1. Plan and deliver safe individualized care across the lifespan using the nursing process and nursing knowledge.
2. Provide culturally appropriate care.
3. Practice as a member of the inter-professional health care team.
4. Provide evidence-based strategies for optimal practice.
5. Use health care system resources and technology to coordinate and deliver care that is effective and efficient.
6. Communicate clearly using written, verbal, non-verbal, and electronic modalities.
7. Demonstrate accountability for professional practice using legal, ethical, and regulatory guidelines.

Two program options exist: a traditional two-year program of study and a one-year program for individuals who have successfully completed an LPN program.

The New Hampshire State Board of Nursing may restrict licensing of candidates who have been involved in civil or criminal legal action. Questions about licensing restrictions should be addressed to the Board of Nursing. Satisfactory completion of the A.S. in Nursing does not guarantee RN Licensure.

All students accepted into the Nursing Program will:

Obtain and maintain current Basic Life Support for the professional rescuer certification.
Pay the nursing clinical surcharge of $350 per semester.
Purchase the required uniform.

Students admitted into the Nursing Program must achieve a minimum grade of C in all science courses, C+ in all nursing courses and a grade of satisfactory in the clinical component in order to continue in the program.

Graduates of the program are encouraged to pursue the Bachelor and/or Master of Science in Nursing. Students of the Community College System of New Hampshire have the opportunity to pursue further nursing education through a collaborative program at Southern New Hampshire University. Articulation agreements are maintained with Franklin Pierce University, Rivier College, St. Joseph College of Maine, the University of New Hampshire and Plymouth State University for further education. Students planning to continue their education toward the Bachelor's or Masters of Science in Nursing should plan their program of study with an academic advisor from the Department of Nursing.

Admissions Requirements for Level I applicants

- Submit a completed college application for admission. Applications completed prior to December 15 will be considered for an early action notification. If an applicant is not admitted through the early action process their application will be reconsidered with the other regular decision applications after the February 1 application deadline. Applications completed after February 1 may only be considered on a space available basis if the program is not at capacity. Applications are considered complete only when all required documentation is received by the LRCC Admissions Office prior to the above deadlines;
- Meet all general college admissions requirements;
- Successfully complete the Test of Essential Academic Skills (TEAS) with the following minimum score in each section: Reading - 69, Math - 63.3, Science - 45.8 and English – 60. Test dates are available on the LRCC website www.lrcc.edu or by contacting the Admissions Office. The test may also be completed at any other TEAS test site. It is the student's responsibility to have the results forwarded to the LRCC Admissions Office if the test is completed elsewhere;

Students wishing to retake the TEAS exam must wait a minimum of three months between exams and must retake and pass the entire exam. Students are not permitted to take individual sections of the exam. Students also must pass all sections of the exam in a single test administration. Students having additional questions about the TEAS exam should contact the LRCC Admissions Office prior to registering for the exam.

- Submit two professional references on the appropriate LRCC Nursing recommendation forms. The forms are available on the LRCC website www.lrcc.edu or by contacting the Admissions Office;
- Document successful completion of high school or college algebra, chemistry with lab and biology with lab classes all with a minimum grade of "C" or higher.
- Candidates who do not meet the admissions requirements may, in certain circumstances, be evaluated on an individual basis for evidence of competence based on recent college level academic performance;
- Applicants who are successfully admitted to the program will be required to submit proof of immunizations, health insurance, a physical exam and pass a criminal background check prior to beginning the program.

All Level II (LPN) applicants must:

- Meet college requirements for admission;
- Meet all Level I course requirements and possess a current NH Practical Nurse License;
- Upon acceptance, participate in an assessment of knowledge and skills in fundamentals of nursing and maternal and child nursing;
- Provide the admissions office with documentation of three credits for college level psychology and three credits of Human Growth and Development with a minimum grade of C in each class. The applicant must also provide the equivalent of eight college credits of Anatomy and Physiology I and II with lab, with a minimum grade of C. These courses must have been completed within the past five years. Applicants whose Anatomy and Physiology, and/or Microbiology course credit is more than 5 years old; can elect to retake the course(s), or take the Excelsior College Exam. Applicants must attain a grade of C or better in these subject areas to meet this admission requirement.
- Submit official college transcripts of their LPN program to the LRCC Admissions Office.
- Applicants who are successfully admitted to the program will be required to submit proof of immunizations, health insurance, a physical exam and pass a criminal background check prior to beginning the program.

Technical Standards

The following technical standards are to guide students to make an informed decision regarding a career in nursing. These standards are required to complete the nursing curriculum and to enter nursing practice as a Registered Nurse.

The skills are as follows:
Auditory: Each student must possess auditory ability to monitor, and assess health needs, including (but not limited to);

- hear and interpret information a client is communicating verbally;
- hear auscultory sounds using a stethoscope;
- hear auditory signals from equipment;
- communicate over the telephone.

Visual: Each student must possess visual ability sufficient for observation, and assessment necessary to provide nursing care, including (but not limited to);

- observe drainage on dressings and drainage of body fluids;
- note fluid levels in supplies and equipment;
- read gauges that monitor clients;
- see to administer treatments;
- observe changes in client skin color;
- observe clients behavior and movement.

Tactile: Each student must possess tactile ability sufficient to perform a physical assessment, and procedures on clients, including (but not limited to);

- perform palpation, and other functions necessary for physical exam;
- assess texture, shape, size, temperature, and vibration;
- perform therapeutic procedures;
- collect specimens.

Sense of Smell: It is desirable that each student possess a sense of smell acute enough to detect strong odors that may indicate a change in a client's condition, including (but not limited to);

- a purulent wound;
- ketones on a person's breath;
- body fluids that have a strong odor;
- smoke or other indicator of danger.

Communication: Each student must be able to communicate in English effectively with clients, families, and other health care professionals. This includes expressive, and receptive modes of verbal, nonverbal, and written communication, including (but not limited to);

- explain procedures, and treatments;
- initiate health education;
- document nursing assessment, planning, implementation, and evaluation of nurse and client actions, and responses;
- read client documentation, and medical literature;
- give an accurate report of client information to other health care providers.

Motor Function: Each student must have sufficient motor function, neuromuscular strength, and coordination to effectively perform nursing functions, including (but not limited to)

- transfer clients to/from wheelchair to bed, and bed to/from stretcher;
- gather assessment data by palpation, auscultation and percussion;
- manipulate instruments to perform physical assessment;
- apply pressure (to stop bleeding).

Gross and Fine Motor Coordination: Each student must have sufficient gross and fine motor coordination to;

- move around in the health care environment;
- perform treatments, and procedures;
- calibrate, and use equipment;
- navigate stairs or other non-handicapped client settings.

Stamina: Each student must have sufficient stamina to sit, stand, and move within the classrooms; skills lab, nursing units, operating room, and community settings, for periods of time as long as eight hours at a time. Each student must be able to lift 20 lbs.

Behavioral: Each student must possess the ability to establish, and maintain, appropriate professional relationships, including the following factors;

- act ethically;
- exercise sound clinical judgment;
- be compassionate;
- develop mature, and effective relationships with clients;
- complete all responsibilities required for client care.

Emotional Health: Each student must possess the emotional health required for full utilization of his/her intellectual abilities, including (but not limited to);

- prioritize competing demands;
- function in stressful situations;
- tolerate physically taxing workloads;
- adjust to changing circumstances.

Program Outcomes:

- to educate the student to provide safe, and competent nursing care;
- to promote the student's individual growth in meeting personal, and career goals;
- to prepare the student to take the NCLEX–RN exam;
- to provide for the nursing employment needs within the community through multiple program options.

ASSOCIATE IN SCIENCE DEGREE

LEVEL I (FRESHMAN)

Fall Semester		**CL**	**LAB**	**CR**
LNUR1300	Fundamentals of Nursing	5	0	5
LNUR1310	Clinical I	0	15	5
LSCI1450	Anatomy and Physiology I	3	2	4
LPSY1260	Human Growth and Development	3	0	3
	Totals	**11**	**17**	**17**

Spring Semester		**CL**	**LAB**	**CR**
LNUR1400	Nursing Care of Families	4	0	4
LNUR1410	Clinical II	0	15	5
LPSY1250	Introduction to Psychology	3	0	3
LSCI1460	Anatomy and Physiology II	3	2	4
	Totals	**10**	**17**	**16**

Total Credits for Year = 33

LEVEL II (SENIOR)

Fall Semester		**CL**	**LAB**	**CR**
LENG1200	College Composition	3	0	3
LENG1204	College Composition Portfolio	1	0	1
LNUR2200	Psychiatric/Medical/Surgical Nursing (Fall 2013)	4	0	4
LNUR2210	Clinical III	0	15	5
LSCI2410	Microbiology	3	2	4
	Totals	**11**	**17**	**17**

Spring Semester		CL	LAB	CR
LNUR2300	Advanced Psychiatric/Medical/Surgical Nursing (Spring 2014)	4	0	4
LNUR2310	Clinical IV	0	15	5
LPHI2270	Ethical Issues (Effective 9/2012)	3	0	3
	ENGLISH	3	0	3
	MATHEMATICS	3/4	0	3/4
	Totals	**13/14**	**15**	**18/19**

Total Credits for Year = 35/36
Total for A.S. Degree = 68/69

COURSE DESCRIPTIONS

LNUR1300 Fundamentals of Nursing **CL5 L0 CR5**
This course introduces the student to the role of the nurse and the basic concepts of nursing practice, including the nursing process and therapeutic communication. Legal, ethical and cultural considerations in nursing practice are presented. Basic physiologic and psychosocial needs of the individual and adaptive responses to health and illness are addressed. Principles of pharmacology and medication administration, fluid and electrolyte balance, nutrition and oxygenation are introduced. (Corequisite: LSCI1450) (Effective Fall 2012)

LNUR1310 Clinical I **CL0 L15 CR5**
The clinical consist of two 7.5 hour days each week in which students will be expected to master basic nursing skills. The settings will include a college based lab and a long term care facility. (Corequisites: LNUR1300 and LSCI1450)

LNUR1400 Nursing Care of Families **CL4 L0 CR4**
In this course the nursing process provides a framework for nursing care of the family across the life cycle. The course continues to examine the physiologic, psychosocial and cultural factors which influence the individual's and family's response to health and illness. Common health deviations and associated nursing interventions that affect growth and development over the life cycle are presented. Evidenced based practice is introduced. (Prerequisites: LNUR1300 with a C+ or better, LNUR1310; Corequisite: LSCI1460) (Effective Fall 2012)

LNUR1410 Clinical II **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will gain experience in nursing assessment and care of pediatric, obstetric, and medical surgical patients. (Prerequisites: LNUR1300, LNUR1310; Corequisites: LNUR1400, LSCI1460)

LNUR2200 Psychiatric/Medical/Surgical Nursing **CL4 L0 CR4**
This evidence-based nursing course examines the theoretical concepts of leadership, delegation and patient education. Students use the nursing process to conceptualize nursing care that is used to support and promote effective adaptation in individuals and families experiencing multiple physical and mental health problems. (Prerequisites: LNUR1400 with a C+ or better, LNUR1410, LSCI1460 with a C or better, and LPSY1250; Corequisite: LSCI2410) Effective Fall 2013)

LNUR2210 Clinical III **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will increase their skills in critical thinking, prioritizing, and advanced care of the medical surgical/psychiatric patient. (Prerequisites: LNUR1400, LNUR1410; Corequisites: LNUR2200 and LSCI2410)

LNUR2300 Advanced Psychiatric/Medical/Surgical Nursing **CL4 L0 CR4**
This course continues to focus on the delivery of comprehensive care to those experiencing multiple health problems. Current health care trends, issues and evidence based research are integrated into course work. A capstone project is completed and presented to faculty, students and professional nurses. (Prerequisites: LNUR2200 with a C+ or better, LNUR2210, LSCI2410 with a C or better) (Effective Fall 2013)

LNUR2310 Clinical IV **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will incorporate expanded roles in professional practice. These will include medical surgical, psychiatric, and school/community nursing. (Prerequisites: LNUR2200, LNUR2210; Co requisite: LNUR2300)

Please refer to back of course catalogue for Liberal Arts selections

OFFICE TECHNOLOGY MANAGEMENT

The Office Technology Management degree offers a solid foundation in office management skills with opportunities for specialization in administrative or medical Office Technology Management. Certificates are also available in Administrative Office Assistant, Medical Office Assistant, Medical Transcription, or Health Care Unit Coordinator. These programs define and develop knowledge, skills, and attitudes needed by office professionals to integrate the office resources of people and technology in today's changing environment. Certificate programs may be extended through additional coursework to meet degree requirements.

Each concentration offers excellent employment opportunities. Economic forecasts continue to project an increase in office positions through 2014. Employers in today's business climate require employees who possess excellent interpersonal, communication, and technical skills. Graduates are positioned to enter this ever-changing viable marketplace. Students may declare a concentration in Administrative Office or in Medical Office. The requirements for the Administrative Office concentration include: LACC2730, LCIS2350, LCIS2420, and LOTM2250. The Medical Office concentration includes: LOTM1310, LOTM1560, LOTM2270, and LOTM2520.

Technical Requirements

Candidates for the Office Technology Management program must:

- have command of the English language;
- have eye/hand coordination (dexterity) for manipulating computer keyboard and other office equipment;
- have grade 12 level verbal, written, oral communication skills and critical thinking skills;
- have arithmetic and computation skills;
- have the ability to cope with multi-tasking, self-management of some course content/tasks/simulations, and a variety of teaching/learning methods;
- ability to sit/concentrate for long periods of time completing office-oriented tasks at the computer and in groups;
- have the ability to follow instructions;
- exercise professional decorum in the classroom environment.

The student who successfully completes this program will:

- demonstrate employable skill sets in Word, Excel, Access, Outlook, and PowerPoint;
- complete routine office tasks without supervision;
- demonstrate appropriate verbal and written communication;
- demonstrate analysis and decision-making skills in completing tasks and projects.

ASSOCIATE IN APPLIED SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LBUS1300	Introduction to Business	3	0	3
LENG1200	College Composition	3	0	3
LOTM1210	Business Documentation I	2	2	3
Select One Concentration				
ADMINISTRATIVE OFFICE ASSISTANT				
LSOC2250	Critical Thinking and Decision Making	3	0	3
	LIBERAL ARTS	3	0	3
OR				
MEDICAL OFFICE ASSISTANT				
LOTM1310	Medical Terminology	3	0	3
LOTM1560	Law and Ethics for the Medical Professional	3	0	3
	Totals	**14**	**2**	**15**

Spring Semester		CL	LAB	CR
LCIS1320	Software Applications	3	2	4
LENG1230	Business Communications	3	0	3
LOTM1250	Administrative Office Management	3	0	3
LOTM2210	Business Documentation II	2	2	3
	BUSINESS (LBUS, LCIS, LFIN, LOTM)	3	0	3
	Totals	**14**	**4**	**16**

Total Credits for Year = 31

SECOND YEAR

Fall Semester		CL	LAB	CR
LACC1310	Accounting I	3	0	3
LOTM 1400	Principles of Records Management	2	0	2
	BUSINESS (LBUS, LCIS, LFIN, LOTM)	3	0	3
	MATHEMATICS	3/4	0	3/4
ADMINISTRATIVE OFFICE ASSISTANT				
LCIS2420	Database Management	2	2	3
LOTM2250	Administrative Office Procedures	2	2	3
OR				
MEDICAL OFFICE ASSISTANT				
LOTM2270	Medical Office Procedures	2	2	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Totals	**15/17**	**4/2**	**17/18**

Spring Semester		CL	LAB	CR
LBUS1150	Professional Development	1	0	1
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	SCIENCE	3	0	3
	ELECTIVE	3	0	3
ADMINISTRATIVE OFFICE ASSISTANT				
LCIS2350	Spreadsheets	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3
OR				
MEDICAL OFFICE ASSISTANT				
LOTM2520	Medical Insurance Billing	3	0	3
	LIBERAL ARTS	3	0	3
	Totals	**14/16**	**0/4**	**16**

Total Credits for Year = 33/34
Total for A.A.S. Degree = 64/65

ADMINISTRATIVE OFFICE ASSISTANT
CERTIFICATE

Courses		CL	LAB	CR
LACC1310	Accounting I	3	0	3
LBUS1150	Professional Development	1	0	1
LCIS1320	Software Applications	3	2	4
LENG1230	Business Communications	3	0	3
LOTM1210	Business Documentation I	2	2	3
LOTM1250	Administrative Office Management	3	0	3
LOTM1400	Principles of Records Management	2	0	2
LOTM2210	Business Documentation II	2	2	3
LOTM2250	Administrative Office Procedures	2	2	3
LACC2730	Introduction to Computerized Accounting (Effective Spring 2013)	2	2	3

	Totals	**23**	**10**	**28**

MEDICAL OFFICE ASSISTANT CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LBUS1150	Professional Development	1	0	1
LCIS1320	Software Applications	3	2	4
LOTM1210	Business Documentation I	2	2	3
LOTM1250	Administrative Office Management	3	0	3
LOTM1310	Medical Terminology	3	0	3
LOTM1400	Principles of Records Management	2	0	2
LOTM1560	Law and Ethics for the Medical Professional	3	0	3
LOTM2210	Business Documentation II	2	2	3
LOTM2270	Medical Office Procedures	2	2	3
LOTM2520	Medical Insurance Billing	3	0	3
	Totals	**24**	**8**	**28**

COURSE DESCRIPTIONS

LOTM1210 Business Documentation I **CL2 L2 CR3**
This course provides training in keyboard skills and document formatting using a word-processing application program. Students participate in simulated office projects to develop competencies in language art skills and document production.

LOTM1250 Administrative Office Management **CL3 L0 CR3**
The theory and practice of office management, concepts and applications of personnel, system interactions, and information technology are covered. Keyboarding skills are required.

LOTM1310 Medical Terminology **CL3 L0 CR3**
This course establishes the foundation for the medical courses offered in the program. The parts, definitions, applications, and spelling of medical terms will be covered.

LOTM1400 Principles of Records Management **CL2 L0 CR2**
A comprehensive course designed to develop proficiency and competency in managing paper and computer records based on ARMA rules.

LOTM1560 Law and Ethics for the Medical Professional **CL3 L0 CR3**
Students will gain a working knowledge of the complex legal, moral, and ethical issues pertaining to the health profession.

LOTM2210 Business Documentation II **CL2 L2 CR3**
This course focuses on the production of business documents by integrating software applications including word processing, spreadsheets and data management, as well as Windows and desktop publishing. Prerequisites: LOTM1210, LCIS1320 or permission of instructor)

LOTM2250 Administrative Office Procedures **CL2 L2 CR3**
A systematic simulation-related approach to the increasing complexities of tasks and technology faced by office support personnel. (Prerequisites: LOTM2210, LCIS1320 or permission of instructor)

LOTM2260 Legal Office Procedures **CL3 L0 CR3**
This course provides a task-related approach to basic law office procedures, as well as general legal research, law office ethics, the court system, etc. (Prerequisites: LOTM1250, LCIS1320 or permission of instructor)

LOTM2270 Medical Office Procedures **CL2 L2 CR3**
This course provides a realistic approach for students to learn the skills required in a medical office including communications, records management, telecommunications, billing, scheduling and terminology. (Prerequisites: LOTM1250, LOTM1310, LCIS1320 or permission of instructor)

LOTM2520 Medical Insurance Billing **CL3 L0 CR3**

This course develops the skills to apply information using proper coding and billing procedures. (Prerequisites: LOTM1210, LOTM1310 or permission of instructor)

LACC2730 Introduction to Computerized Accounting **CL2 L2 CR3**

This course will introduce students to computerized accounting systems using QuickBooks Pro and an educational version of an integrated accounting system. The accounting procedures done manually in Accounting I will now be performed on the computer using accounting software that is currently being used in business and industry. Students will set up and perform routine tasks such as recording business transactions, maintaining customer and vendor files, vouchering, controlling inventory, processing sales, maintaining fixed asset and depreciation schedules, and preparing the payroll. Additional procedures students will perform include setting up a chart of accounts, summarizing data, generating financial reports, and banking transactions. (Prerequisites: LACC1310) (2013)

Please refer to back of course catalogue for Liberal Arts selections

PASTRY ARTS

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCUL1460	Bakery Production	1	4	3
LCUL1450	Breads and Rolls	1	4	3
LCUL1520	Sanitation & Safety	3	0	3
LENG1200	College Composition	3	0	3
	MATH	3/4	0	3/4
	Totals	**11/12**	**8**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LCUL1470	Hot & Cold Plated Desserts	1	4	3
LCUL1480	Cake Decorating	1	4	3
LCUL1590	Cost Control	3	0	3
LENG1230	Business Communications	3	0	3
	Liberal Arts Elective	3	0	3
	Totals	**11**	**8**	**15**

Summer Semester		**CL**	**LAB**	**CR**
LCUL2300	Pastry Arts Cooperative Education (300 hours required)	0	9	3
	Totals	**0**	**9**	**3**

Total Credits for Year = 33/34

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCUL2100	Nutritional & Alternative Baking	1	4	3
LCUL2200	Advanced Cake Decorating	1	4	3
LSCI1290	Nutrition for Health and Fitness	3	0	3/4
LSOC2250	Critical Thinking and Decision Making	3	0	3
	Liberal Arts	3	0	3
	Totals	**11**	**8**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LCUL1490	Baking and Pastry Technologies	3	0	3
LCUL2250	Advanced Pastry and Confections	1	4	3
LCUL1580	Restaurant Facility & Menu Design	1	4	3
LCUL2310	Pastry Arts Capstone	1	0	1
	Liberal Arts Elective	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	Totals	**12**	**8**	**16**

Total Credits for Year = 31/32
Total for A.S. Degree = 64/66

PASTRY ARTS CERTIFICATE

Courses		CL	LAB	CR
LCUL1450	Breads and Rolls	1	4	3
LCUL1460	Bakery Production	1	4	3
LCUL1470	Hot and Cold Plated Desserts	1	4	3
LCUL1480	Cake Decorating	1	4	3
LCUL1490	Baking and Pastry Technologies	3	0	3
	OR			
LCUL2300	Pastry Arts Co-op	0	9	3
LCUL2310	Pastry Arts Capstone	1	0	1
	Totals	**7/8**	**16/22**	**16**

COURSE DESCRIPTIONS

LCUL1450 Breads and Rolls **CL1 L4 CR3**
Students will be introduced to the bakers scale and taught how to properly measure ingredients. Reading a formula and recipe conversions will also be covered. The history of bread making will be explored as well as the creating of many classical items from several cultures around the world. The milling process of flour will be discussed as well as the function of important ingredients in the dough. The class will largely focus on the organized process of preparing dough. Mixing, shaping, proofing, baking, and storing are critical steps that will be explored. The bread and roll productions that will be created in each class will be used in our dining room bakery case.

LCUL1460 Bakery Production **CL1 L4 CR3**
This course will focus on the common items found in any bakery/pastry shop. Muffins, quick breads, coffee cakes, and donuts will be explored. Pie dough, puff pastry, pâte à choux, short dough and Danish dough will be taught, and several items will be created from each. Classical European pastry will be touched upon and the "classics" of pastry will be introduced. Pies, tarts, cookies, and common bakery items will also be created. Students will be introduced to various ingredients such as nuts, chocolates, and fruits; they will be taught how, when, and why to use them.

LCUL1470 Hot and Cold Plated Desserts **CL1 L4 CR3**
The focus of this course is plated desserts that would be found in a restaurant setting. The critical components of a plated dessert will be explored along with detailed instructions of each. Various sauces and garnishes will be introduced, as well as various plate presentations. This course will include the production of slow-bake desserts (custards, cheesecakes), frozen desserts, traditional desserts (Baked Alaska, Bananas Foster, Cherries Jubilee), and creative ways to present simple desserts. Students will be required to use their creativity and create a plated dessert of their own for a project grade.

LCUL1480 Cake Decorating **CL1 L4 CR3**
This course will be concerned with creating various cakes, icings, fillings, frostings, and butter creams. Each student will learn the proper techniques for covering a cake, as well as ways to enhance the decoration on it. Making paper cones, writing on cakes, and making several types of butter cream flowers is covered. Classical cakes will also be covered (Dobos, Sacher) along with their history. There will be a large concentration on using a piping bag, the function of various tips, and proper piping techniques. This course will also introduce the use of marzipan, fondant, airbrushing, and wedding cakes.

LCUL1490 Baking and Pastry Technologies **CL3 L0 CR3**
Baking & Pastry Technologies is a look into the scientific side of baking. Baking & Pastry Technologies is dedicated to teaching different scenarios, and reactions of ingredients, while baking. The lab element gives the experience of seeing different reactions of ingredients in baking; knowing, by looking at finished products, what works best and what may ruin the project. At the completion of this course, the student will have basic knowledge of the scientific breakdown that goes

into the formulas of baking. This course will enable graduates to better be prepared to gain positions as a pastry chef or patissière.

LCUL1520 Sanitation & Safety CL3 L0 CR3
This course offers a look into the fundamentals of food service sanitation and safety. Students will demonstrate knowledge of proper hot and cold food handling procedures, cross contamination of ready-to-eat foods, proper receiving practices, proper storage guidelines, who is affected by improper food handling, and federal/state food service sanitation requirements. When this course is completed, the student will test for the ServSafe certification.

LCUL1580 Restaurant Facility & Menu Design CL3 L0 CR3
Both menu and facility design are important aspects of the restaurant industry. This course gives students realistic practice at mastering both. Students will practice proper menu layout as well as its design. Students will learn the importance of cross-utilization and how to optimize it. This course will give students the opportunity to see different writing styles of menus including a la carte, rotating, and institutional menus. Different types of culinary establishments will be discussed as well as the equipment needed for them. Students will be designing menus to match kitchen layouts through projects conducted one-on-one with the instructor.

LCUL1590 Cost Control CL3 L0 CR3
This course covers such subjects as pricing menus, food costing equations, weights and measurements, scaling, yield testing, food cost percentages, inventories, and recipe conversions. The student will be expected to cost out recipes to find per portion costs as well as multi-portion costs. This course discusses money saving techniques, waste control, and the importance of portion size as it relates to menu prices. Beverage costing, as well as alcohol procurement, will also be examined. The Food for Thought Café's menus, inventories, and recipes will be exposed for practical use through projects or discussion conducted by the instructor.

LCUL2100 Nutritional & Alternative Baking CL1 L4 CR3
This course introduces student into not only the nutritional aspects of baking, but the alternative baking world. Alternative baking meaning such subjects as gluten free, sugar free, dairy free, and other allergy sensitive baking procedures. Nutritional aspects cover such subjects as low fat, low sodium, carbohydrate sensitive, as well as diabetic responsive dessert composition. Focus will revolve around techniques and alternative methods of producing health conscious pastries, product substitutions, ideas and concepts of creative alternative and nutritional desserts. (Fall 2011)

LCUL2200 Advanced Cake Decorating CL1 L4 CR3
This course is a continuation of our cake decorating course. Advanced cake decorating takes what has been learned in cake decorating and introduces new ingredients, techniques, and skill sets. Intricate piping techniques are demonstrated and practiced. The uses of ingredients such as rolled fondant, gum paste, royal icing and molding chocolate will be established. Advanced cake styles and wedding cakes will be practiced. This is a fifteen week course that will provide students with the enhanced knowledge, techniques and proficiency of cake decorating. (Prerequisites: LCUL1480). (Fall 2011)

LCUL2250 Advanced Pastry and Confections CL1 L4 CR3
In this course the student will learn an array of international pastries and advanced pastry methods, techniques and showpieces The student will be introduced to chocolate tempering, shaping, basic show piece construction and candy making. Subjects such as pastiage, pouring sugar and confection artistry will also be confection artistry will also be covered, researched and practiced. Students will fine tune their skills and challenge themselves both technically and artistically. (Prerequisites: LCUL1460). (Fall 2011)

LCUL2300 Pastry Arts Co-op C0 L6 CR3
This course provides the opportunity for the student to utilize baking and pastry course competencies in a real-life setting along with supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LCUL2310 Pastry Arts Capstone C1 L0 CR1
This course provides the vehicle for students to demonstrate overall competency in baking and pastry and in the specific operations in which they have chosen to concentrate. Under the supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project which pertains directly to baking and pastry operations.

Please refer to back of course catalogue for Liberal Arts selections

RESTAURANT MANAGEMENT

This program prepares students for responsible, mid-level employment in both skilled and professional positions. It combines a foundation of culinary and management skills that the industry demands. The curriculum incorporates opportunities to learn and work in a student-operated restaurant located in the Lakes Region. Summer employment in restaurant management complements the learning experience. These workplace opportunities provide the student with hands-on knowledge and the benefit of work experience.

The Restaurant Management program offers a two-year degree and a one-year certificate.

Graduates of the degree may transfer to Southern New Hampshire University with junior year status in the Hospitality Administration Program.

Restaurant Management is a fast growing field with tremendous job potential. Graduates have a selection of jobs in many areas including; assistant food and beverage manager, dining room manager, bar manager, kitchen manager, food and beverage manager, and assistant restaurant manager. Quality employees are always in high demand in a growing field. The Restaurant Management program provides opportunities for fulfilling jobs in all aspects of an exciting and growing industry.

Technical Requirements

Restaurant Management candidates must:

- have command of the English language;
- be capable of lifting or carrying at least twenty five pounds;
- comprehend new terminology;
- understand the importance of personal hygiene, appearance, and etiquette for interaction with the public;
- have the physical and mental ability to satisfy long hours, demands, and stress that the restaurant industry cultivates.

Students who successfully complete this program will:

- be prepared for mid-level management employment in both skilled and professional positions;
- have an understanding of successful management styles which promote skills such as teamwork, employee motivation, no excuses management, critical thinking and decision making;
- acquire managerial accounting skills that will specifically deal with cost controls within the Hospitality Industry and prepare them for both chain and independent properties;
- gain practical experience in the complete management of the front of the house, both dining room and bar, including hiring, termination, POS control systems, dining techniques and scheduling;
- gain practical experience in the complete management of the back of the house focusing on costing, purchasing, menu design and terminology, quality recipe production and kitchen organization;
- gain practical experience in catering thru actual mandatory functions taken by the restaurant management program;
- understand the laws and legislation which apply to hotels and inn-keeping, restaurants and related hospitality operations with an emphasis on management policies to minimize the risks of liability.

ASSOCIATE IN SCIENCE DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LCIS1320	Software Applications	3	2	4
LENG1200	College Composition	3	0	3
LCUL1510	Culinary Fundamentals	1	6	3
LHOS1140	Dining Room Management I	0	6	3

	LIBERAL ARTS	3	0	3
	Totals	**10**	**14**	**16**

Spring Semester		**CL**	**LAB**	**CR**
LBUS2600	Principles of Marketing	3	0	3
LHOS1010	Bartending I	1	0	1
LHOS1130	Introduction to Worldwide Cuisine	1	6	3
LHOS1150	Dining Room Management II	0	6	3
LHOS1230	Food and Beverage Management	3	0	3
	HOSPITALITY	1	0	1
	MATHEMATICS	3	0	3
	Totals	**12**	**12**	**17**

Summer Semester		**CL**	**LAB**	**CR**
LHOS1762	Restaurant Cooperative Education	0	6	2
	Totals	**0**	**6**	**2**

Total Credits for Year = 35

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LACC1310	Accounting I	3	0	3
LHOS2020	Banquet Dining Room Techniques	0	6	3
LHOS2100	Hospitality Law	3	0	3
LHOS2220	Quantity Food Purchasing	3	0	3
LSOC2250	Critical Thinking and Decision Making	3	0	3
	LIBERAL ARTS	3	0	3
	Totals	**15**	**6**	**18**

Spring Semester		**CL**	**LAB**	**CR**
LCUL2560	U.S. Regional and Infusion Cuisine	1	6	3
LHOS2230	Accounting Applications for Hotels and Restaurants	3	0	3
	ENGLISH	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	SCIENCE	3	0	3
	Totals	**13**	**6**	**15**

Total Credits for Year = 33 Total for A.S. Degree = 68

RESTAURANT MANAGEMENT CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LBUS2600	Principles of Marketing	3	0	3
LHOS1010	Bartending I	1	0	1
LCUL1510	Culinary Fundamentals	1	6	3
LHOS1130	Introduction to Worldwide Cuisine	0	6	3
LHOS1140	Dining Room Management I	0	6	3
LHOS1150	Dining Room Management II	0	6	3
LHOS1230	Food and Beverage Management	3	0	3
LHOS2020	Banquet Dining Room Techniques	0	6	3
	HOSPITALITY (Choose 3 one-credit electives)	3	0	3
Choose One				
LHOS1763	Restaurant Cooperative Education	0	9	3
LHOS2220	Quantity Food Purchasing	3	0	3
	Totals	**11/14**	**30/39**	**28**

INSTITUTIONAL FOOD SERVICE CERTIFICATE

Courses		**CL**	**LAB**	**CR**
LHOS1170	Institutional Dining Services Management	0	2	1
LHOS1180	Institutional Dining Services Management Lab	0	3	1
LHOS1190	Institutional Cooking	1	6	3
LHOS1240	Sanitation and Safety	1	0	1

LHOS1770	Institutional Cooperative Education	0	6	2
LCUL2560	U.S. Regional and Infusion Cuisine	1	6	3
LHOS2040	Therapeutic Nutritional Foodservice	2	0	2
LHOS2050	Institutional Foodservice Management	3	0	3
LHOS2070	Institutional Foodservice Computer Skills	1	0	1
LHOS2220	Quantity Food Purchasing	3	0	3
	Totals	**11**	**23**	**20**

COURSE DESCRIPTIONS

LCUL2560 U.S. Regional and Infusion Cuisine **CL1 L6 CR3**
This course will give an overview of food origins and how they have shaped our modern day cuisine. Students will focus on a variety of cultural and regional cuisines throughout the United States. The trend towards cross-cultural cuisines, and the eclectic foods they produce, will be discussed in depth. Students will learn how to create dishes using various cultural ingredients. Preparation, plating and garnishing techniques will be addressed.

LHOS1010 Bartending I **CL1 L0 CR1**
This course includes a basic overview of mixology, serving mixed drinks, equipping, maintaining and service in a bar setting. Serving liquor outside the regular bar settings, and beverage systems will be covered.

LHOS1030 Bartending II **CL1 L0 CR1**
This course includes an more in-depth overview of wine, spirits, liquors, beer types, mixology, serving mixed drinks, managing a bar, and New Hampshire State Laws and T.E.A.M. Certification. Students will be eligible to test for the T.E.A.M. Certification. Upon successful completion of course requirements, students will be awarded a certificate in bartending. (Prerequisite: LHOS1010 or permission of instructor)

LHOS1090 Independent Study **CL1 L0 CR1**
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. Subject matter must be approved by the instructor and the department chair. (Prerequisite: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LHOS1130 Introduction to Worldwide Cuisine **CL1 L6 CR3**
The student will apply concepts and skills learned in Introduction to Hot Foods (LHOS1120) and expand knowledge of the restaurant setting. A six-hour lab will focus on international cuisine. Costing, purchasing, menu terminology, quality recipe production and kitchen organization are stressed. Students will continue to operate a restaurant that is open to the public. (Prerequisite: LCUL1510 or LHOS1120, equivalent or permission of instructor)

LHOS1140 Dining Room Management I **CL0 L6 CR3**
This course presents an in-depth analysis of dining room personnel as well as menu planning, styles of service, and customer service responsibilities. A six-hour working lab will take place where students will set and serve in a student-run restaurant that is open to the public. A discussion of wines and wine service is included.

LHOS1150 Dining Room Management II **CL0 L6 CR3**
This class is an extension of the management aspects of the front of the house. A six-hour lab will take place where students set and serve in a student-run restaurant that is open to the public. A discussion of tableside service, scheduling, customer relations and staff supervision is included.

LHOS1160 Independent Study II **CL0 L3 CR1**
Individual courses will vary. This course provides the vehicle for students to demonstrate overall competency in specific concentration areas. Under supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a series of projects that pertain directly to their area of interest. Projects will be designed on a case-by-case basis. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LHOS1170 Institutional Dining Services Management **CL0 L2 CR1**
This course describes the options available to the institutional dining services managers, including scheduling, settings, servicing your clientele, training and orientation, as well as a clear understanding of the requirements that would present a smooth and efficient operation from the angle of the dining room.

LHOS1180 Institutional Dining Services Management Lab CL0 L3 CR1
This course will act as a follow-up to the lecture course by providing the hands-on support of dining services in an institutional setting. This will provide interaction with clients and the experience of serving and setting up the dining room. This experience will reinforce the need for professionalism, provide a variety of dining settings, and expand on the different training methods used in the industry.

LHOS1190 Institutional Cooking CL1 L6 CR3
Discussion of procedures of selecting, handling and cooking meats, poultry, fish, vegetables, fruits, salads and pasta products in a manner that will be appropriate for large groups, including holding and delivery of food product to remote locations. Included in this course is the preparation of various dietary textures, ground, puree and low salt, the presentation of these textures, and nutritional portions. Cooking in an institutional situation will be emphasized. This course is a one-hour lecture and a six-hour lab where students prepare and serve food in an institutional setting. Provides students with knowledge to organize, plan, cook, and deliver food.

LHOS1200 Introduction to Hospitality Management CL3 L0 CR3
This course is an introduction to the field of hospitality, emphasizing the development of the hotel, restaurant and resort industries. It will examine differences and similarities of each of these operations and their relationships to each other. Management styles, skills and functions will be examined as part of the decision-making process with an emphasis on teamwork.

LHOS1230 Food and Beverage Management CL3 L0 CR3
This course examines the structure and management of a food and beverage operation. Special attention is given to the cost flow within the operation, basic menu design, purchasing, receiving, storeroom operations and production planning and control. Students will also be introduced to the concept of food cost, issues in menu pricing, and elements of food service facility layout and design. During the course, each student will complete a project that includes planning and developing a food service concept.

LHOS1240 Sanitation and Safety CL1 L0 CR1
This course covers sanitation and safety concepts, regulations, and procedures for food service and other sectors of the hospitality industry. Certificate may be issued.

LHOS1761 Restaurant Management Cooperative Education CL0 L3 CR1
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1762 Restaurant Management Cooperative Education CL0 L6 CR2
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1763 Restaurant Management Cooperative Education CL0 L9 CR3
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1770 Institutional Cooperative Education CL0 L12 CR2
This course provides the student the opportunity to utilize learned course competencies in the real-life setting. It also provides supplemental laboratory experience on the extensive array of equipment and processes. Site selection is to be determined by instructor. (Prerequisite: Permission of instructor)

LHOS2020 Banquet Dining Room Techniques CL0 L6 CR3
This course presents in-depth analysis of banquet dining room personnel including banquet menu planning, styles of banquet service and customer service responsibilities. A six-hour lab will take place where students set and serve in a student-run restaurant that is open to the public. Students will attain knowledge in all aspects of organizing banquet personnel including hiring, firing and scheduling.

LHOS2040 Therapeutic Nutritional Foodservice CL2 L0 CR2
This course will familiarize students with the USDA and other professional organizations guidelines, along with applicable local and state standards on nutrition. The course provides the student with comprehensive concepts, guidelines and practices needed to implement appropriate policies and procedures to ensure proper nutrition to the customer.

LHOS2050 Institutional Foodservice Management CL3 L0 CR3
This course will discuss all aspects of institutional foodservice management, including ethics, scheduling, sexual harassment, employee motivation, management styles, labor costing, training and orientation, hiring and firing, multi-ethnic services and legal issues.

LHOS2070 Institutional Foodservice Computer Skills CL1 L0 CR1
This course will familiarize the student with basic software applications needed in the operation of an institutional setting. This will include databases, spreadsheets and word processing. The student will be introduced to the process of collecting information to be used in institutional foodservice. There will be an overview of programs used to develop tray tickets and a hardware application to assist in this process.

LHOS2100 Hospitality Law CL3 L0 CR3
Laws and legislation which apply to hotels and inn-keeping, restaurants and related hospitality operations are the focus of this course, with emphasis on management policies to minimize the risks of liability. State and federal statutes governing liability, alcoholic beverage controls, safety and responsibility to guests are topics. Personnel and labor laws pertaining to employees are also included.

LHOS2160 Catering CL1 L0 CR1
This self-directed course provides students with opportunities to learn the catering business. It includes culinary and business skills, licensing and insurance requirements, menu and pricing, developing a marketing plan and contracts.

LHOS2170 Creative Menu and Plate Design CL1 L0 CR1
The ability to design and artfully create menus and plate presentation is the basis to successful food and beverage management. This course will outline color, design and layout as they pertain to a selection of establishments to contrast their different needs. It will also expand on general food and garnishing techniques.

LHOS2190 Employee Motivation-Team Strategies CL1 L0 CR1
Helpful motivational techniques to assist managers with the difficult task of keeping employees excited about their jobs and specifics on how to assist hospitality employees with teamwork strategies that will increase both profits and customer satisfaction levels.

LHOS2220 Quantity Food Purchasing CL3 L0 CR3
This course covers the duties of stewardship and all related functions including specifications, centralized procurement and container sizes. Emphasis is given to the examination and establishment of the various grades and types of categories of produce, meats, poultry, and fish. Comparisons are made between canned products as well as scrutinizing their pros and cons. The importance of inventory control methods, product loss management and vendor selection are stressed.

LHOS2230 Accounting Applications for Hotels and Restaurants CL3 L0 CR3
This course emphasizes the operation and integration of accounting applications with an emphasis on managerial accounting and its adaptation to industry standards. Point of sale, payroll, inventory, front desk and general ledger functions will be discussed, and hands-on applications will be explored. Budgeting, purchasing and staffing will be the topics of project simulation. Topics covered reinforce the concepts of Accounting I (LACC1310) and their applications to the hotel and restaurant industry. Course projects will specifically deal with cost controls within the hospitality industry. (Prerequisite: LACC1310 or permission of instructor)

LHOS2240 Restaurant Capstone Project CL3 L0 CR3
This course provides the vehicle for students to demonstrate overall competency in Restaurant Management and in the specific operations in which they have chosen to concentrate. Under supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project that pertains directly to restaurant operations and food and beverage management.

Please refer to back of course catalogue for Liberal Arts selections

TEACHER PREPARATION

The Associate in Arts in Teacher Preparation concentrates on the foundations of education in a well-balanced approach. The program is designed to allow a student to transfer to a 4-year degree program to become a teacher. It allows students to focus on elementary, middle, and secondary education with a common first year of course work. In the second year, students elect an educational transfer focus in any of the following areas: elementary education; math education; science education; social science education, or English education. This program also provides teachers and paraprofessionals with the knowledge, skills, and strategies for supporting students with disabilities.

By offering a broad range of courses, the program prepares graduates to be Paraeducators, or to transfer their credits to baccalaureate degree-granting institutions to pursue a career in teaching. The Community College System of New Hampshire has transfer agreements with both the University of New Hampshire System, and Southern New Hampshire University. Those students who intend to transfer to Plymouth State University must achieve a minimum GPA of 2.7 in addition to passing the Praxis 1 exam.

Technical Requirements

Teacher Preparation Program candidates must:

- before taking any EDU or ECE course, students must achieve an Accuplacer score of 65 or better in Reading, and either 5 or better in the Essay OR 4 in the Essay plus 75 or better in Sentence Skills.
- have both oral and written command of the English language;
- have the ability to secure transportation to field observation sites;
- be able to complete requirements for college level classes;
- be able to understand and follow both written and oral instructions;
- be able to demonstrate and maintain organizational skills, time management and professional respect and conduct as a Teacher Preparation student, either at a field observation site, or in the community;
- uphold the ethical codes relevant to his or her discipline (Council for Exceptional Children, National Association for the Education of Young Children, and National Education Association);
- have sufficient verbal ability to express and exchange information and ideas as well as to interpret important instructions to children, fellow students and supervising teachers.

Upon successful completion from this program the successful students will:

- understand the learning process and how curriculum is planned, adopted, implemented and assessed;
- be able to demonstrate an understanding of various instructional modalities and educational delivery systems;
- be able to demonstrate knowledge of how children learn and develop, and provide learning opportunities that support their intellectual, social and personal development.

ASSOCIATE IN ARTS DEGREE

FIRST YEAR

Fall Semester		**CL**	**LAB**	**CR**
LEDU1200	Foundations of Education	3	0	3
LEDU1300	Introduction to Exceptionalities	3	0	3
LENG1200	College Composition	3/4	0	3/4
LPSY1250	Introduction to Psychology	3	0	3
	COMPUTER ELECTIVE	2	2	3
	Totals	**14/15**	**2**	**15/16**

Spring Semester		**CL**	**LAB**	**CR**
LEDU2000	Teaching and Learning	3	0	3
LPSY1260	Human Growth and Development	3	0	3
	EDUCATIONAL ELECTIVE***	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE	3	0	3
	LITERATURE ELECTIVE	3/4	0	3/4
	MATHEMATICS** (200 Level)	3/4	0	3/4
	Totals	**18/20**	**0**	**18/20**

Total Credits for Year = 33-36

SECOND YEAR

Fall Semester		**CL**	**LAB**	**CR**
LHUM1310	Cultural Anthropology	3	0	3
LPSY2000	Educational Psychology	3	0	3
	EDUCATIONAL ELECTIVE***	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE*	3	0	3
	LAB SCIENCE****	3	2	4
	Totals	**15**	**2**	**16**

Spring Semester		**CL**	**LAB**	**CR**
LPOL2310	American Government	3	0	3
	EDUCATIONAL ELECTIVE***	3	0	3
	HUMANITIES/FINE ARTS/FOREIGN LANGUAGE*	3	0	3
	LAB SCIENCE****	3	2	4
	MATHEMATICS** (200 Level)	3/4	0	3/4
	Totals	**15/16**	**2**	**16/17**

Total Credits for Year = 32-33
Total for A.A. Degree = 65-69

Students are advised to contact transfer institutions in addition to consulting with their academic advisor in order to make appropriate course selections.

* Recommend Art, Music, History

** Mathematics electives can only be Finite Mathematics, Statistics, Pre-Calculus, Calculus, Intermediate Algebra, and Mathematical Concepts.

*** Educational Electives – Students will select transferable courses. Options will include: LECE2310, LEDU1450, LEDU1550, LEDU2010, LEDU2040, LEDU2080, LEDU2090, LEDU2100, LEDU2300, and courses from the 200 level areas of Computer Information Systems, English, Mathematics, Science, and Social Science.

**** Lab sciences are those sciences with a laboratory component. In some transfer programs, sequential science courses may be required. Other transfer programs require that courses be taken from a variety of science disciplines. Please check with an academic advisor prior to registering.

INTEGRATED ARTS CERTIFICATE

Teacher Preparation majors have the option of pursuing a certificate program in Integrated Arts. This certificate will provide a thorough introduction to the discipline of arts-based teaching, emphasizing an approach that integrates arts learning with other school disciplines. Integrated Arts provides learning “in and through” the arts, providing a conceptual framework for meaningful learning across the K-12 curriculum. Teacher Preparation students who obtain the Integrated Arts Certificate will find themselves well-positioned to teach an integrated curriculum, and will have the added layer of experience in the arts that can give them an employment edge.

Certified teachers will find the Integrated Arts Certificate a valuable professional development addition to their skill and knowledge base. The certificate will enhance the scope of teachers’ curricula, develop skills in collaborating with colleagues to create exciting and meaningful arts-based activities, and will prepare teachers to pursue graduate work in Integrated Arts.

The Program:		**CL**	**LAB**	**CR**
LART1400	Exploration in the Visual Arts	3	0	3
LART1500	Introduction to Art Education	3	0	3
LECE 2250	Art, Music, Drama & Dance	3	0	3
LEDU 2090	Integrated Arts	3	0	3
LEDU 2200	Integrated Arts Service Learning Project	1	2	3
	Totals	**13**	**2**	**15**

COURSE DESCRIPTIONS

LEDU1200 Foundations of Education CL3 L0 CR3
This course investigates the philosophical, historical, and social/cultural character of education in the United States. It examines how schools function organizationally and the motivation for selecting teaching as a profession. Students will complete 20 hours of observation/participation in a public school.

LEDU1300 Introduction to Exceptionalities CL3 L0 CR3
This course will introduce the federal laws that regulate special education, the basic values that underlie supporting students who experience disabilities, and the roles of teacher assistants in supporting those individuals including: the value of inclusion in home, education, work and community life; respect for the inherent worth and dignity of each person. Through readings, in-class discussions, lectures, presentations and classroom discussions, teachers and teacher assistants will develop strategies on how to facilitate students' independence, learning, social connections and self-advocacy skills. Curriculum will emphasize the philosophical and practical applications of valuing students' abilities and diversity, collaborating with educators and families, supporting classroom teachers and curriculum modifications. Topical issues to be explored include: A History of Disability Law; Implementing IDEA's (IDEIA's) Principles in public education; the practical application of these laws in an inclusive instructional setting; effective instructional strategies for curriculum adaptation and delivery within the context planning under IDEA (IDEIA) and Section 504 of the 1973 Rehabilitation Act; rights of teachers, parents and students; inclusion and collaboration. Emphasis will be placed upon the most prevalent disabilities, such as learning disabilities, emotional disorders, cognitive impairment, and physical disabilities.

LEDU1450 Planning for Diverse Learners CL3 L0 CR3
This course will explore students with their unprecedented challenges in today's education. It will enable educators to expand the scope of services and delivery they provide for all students, K-12. This course explores all facets of student diversity and addresses the teacher's need to design and deliver effective teaching for all learners. Topics to be explored include: developing and instilling a positive and inclusive classroom; encouraging and developing strengths rather than weaknesses; accommodating broad ranges of student abilities, talents, interest, backgrounds, and preparedness for learning; removing barriers to learning; and tracking student progress through "Follow the Child" initiatives.

LEDU1550 Alternative and Extended Learning Models CL3 L0 CR3
This course explores alternative and extra-curricular educational settings and practices. These settings include, but are not limited to: charter and theme-based schools; home schooling; before and after-school programs; community for-profit and non-profit programs and partnerships; and museum settings. The roles of instructors, administrators, program developers, and their relationship(s) to traditional schooling will also be explored. (Prerequisite: LEDU1200)

LEDU2000 Teaching and Learning CL3 L0 CR3
This course studies principles of curriculum, organizations, and teaching methods through supervised observation and participation in a public school. This course introduces the student to rubric evaluation and learning styles, lesson planning, and curriculum delivery. (Prerequisite: LEDU1200)

LEDU2010 Introduction to Middle/High School Teaching CL3 L0 CR3
This course will explore the unique issues and challenges that teachers face when working with this population of students. Topics include, but are not limited to: the pre-adolescent/adolescent learner; middle/high school paradigms; behavioral and developmental concerns and management; and curriculum mapping. 20 hours of observation in middle/high school is required. (Prerequisites: LEDU1200, LEDU2000)

LEDU2040 Special Education Behavior Methods and Teaching Strategies (K-12) CL3 L0 CR3
Strategies taught include developing student's study skills through the use of mnemonics, double column notes, reading techniques, time management and organization, and active vs. passive learning. Individual behaviors that influence integrated classrooms (preK-12) will be addressed including the following: designing and adapting instructional material for personal and small group use; teacher characteristics which enhance the learning situation; and assessment (both formal and informal). This course will further focus on techniques to address the needs of pre-kindergarten through grade twelve students exhibiting difficulties with basic reading, writing, and elementary content area subjects. In addition, students will explore how curricula can be used to challenge all students and allow them the opportunity to demonstrate their knowledge and skills. Further, this course will provide students with knowledge and skills for supporting students with challenging behaviors, using the framework of positive behavioral supports. By developing strategies to determine the functions of certain behaviors, students will gain new and effective strategies for supporting students who demonstrate challenging behaviors in the classroom. These strategies for addressing emotional and behavioral issues will also include

family, faculty, staff, and community resources. (Prerequisite: LEDU1300)

LEDU2080 Teaching Literature for Children Across the Curriculum CL3 L0 CR3
This course explores genres of literature for children in grades K-8 with an emphasis on the integration of the language arts across the content areas. Discussion and development of thematic units using a variety of genre is included. Extensive reading and critiquing of children's books are required with the aim of developing an appreciation and understanding of the value of children's literature in language and literacy development. (Prerequisites: LEDU1200, LEDU2000)

LEDU2090 Integrated Arts CL3 L0 CR3
An exploration into the value and practical application of integrating the arts across all content areas of the curriculum. Students will gain an understanding of the role of the creative process in the classroom and will investigate the various means of expressing ideas, emotions and images through the use of music, drama, movement, puppetry, visual arts, and theatre. This course involves a team-teaching practicum component with a minimum of 10 hours in a public school setting. (Prerequisites: LEDU1200, LEDU2000, POI)

LEDU2100 Instructional Technology CL3 L0 CR3
This course presents theory and strategies for effective integration of technology resources and technology-based methods of instruction to enhance and extend student learning. The role of technology in the classroom with regard to student use, teacher productivity, and communication will be explored, including assistive technology designed for students with disabilities, to discover ways in which technology supports differentiated instruction. State and National technology standards will be addressed with respect to planning curricula and technology-based activities. (Prerequisite: LEDU 1200) (9/2012)
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LEDU2200 Integrated Arts Service Learning Project CL3 L0 CR3
This course is intended to provide both service to the community and real-world experience for students in the Integrated Arts Certificate program. Students in other programs, such as fine arts, teacher preparation, and early childhood education, may also be considered for participation in this course. Students will design and implement an integrated arts program for a select group of children, the population, location, and scope of which will be determined by both the community partner's and the college's needs and resources. NOTE: a background check is required and will be performed before being allowed to work with children.

LEDU2300 Essentials of Career and Technical Curriculum and Instruction CL3 L0 CR3
This course will explore the history, philosophy, principles, organization and operation of career and technical education in the United States. Students will develop a functional understanding of the role and responsibilities of a professional career and technical educator. This course will provide the participant with the foundation and skills needed 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 learning outcomes, and the selection and development of activities and evaluation methods will be explored.

LEDU2400 Independent Study in Education CL0 L9 CR3
The Independent Study in Education course is designed for those students who have a particular interest in a subject matter, population, or approach to teaching that could be explored in greater depth or breadth than current course offerings allow, or who may wish to design a personal project or practicum experience that supplements or focuses their college experience. Students are expected to have enough knowledge and experience to formulate their own goals and interests, as well as work independently to completion.

Please refer to back of course catalogue for Liberal Arts selections

BASIC SKILLS

Basic Skills is a competency-based program designed for students who would benefit from building academic skills in English, mathematics and/or reading prior to enrollment in college level courses. With small class sizes, instructors provide a supportive environment, focusing on students' individual academic needs. Peer tutoring, instructor-led labs and ongoing meetings with Basic Skills advisors help maximize student success.

Basic Skills courses follow the same grading system as college-level courses, and these grades are computed into the grade point average (GPA), but do not provide credits toward graduation. To exit a Basic Skills course, students must receive a grade of C- or better. Tuition is charged for each semester of Basic Skills coursework.

Nursing applicants who require Basic Skills courses are not automatically admitted to the nursing program upon completion of Basic Skills courses. Nursing applicants must meet prerequisite course requirements and participate in the nursing pre-admission examination before admission review.

Students enrolled in Basic Skills follow the same college policies regarding tuition, financial aid, academic grading, academic standards and student activities.

CENTER FOR WORKFORCE DEVELOPMENT (CWD)

The CWD provides training services for business and industry by assisting employers in identifying and meeting their workforce training and education goals. The primary mission of the CWD is to prepare people for the workplace of the future through customized training; instilling a drive for continuous learning, and serving as a technical and information resource. Working in partnership with area businesses to advance technological, interpersonal, and management skills, the CWD assists companies in meeting their training and educational goals by first identifying the specific needs of the organization then helping to design training programs that meet the specific needs of New Hampshire employers. We also help business and industry deal with the rapid evolution in technology, management practices, and sophisticated manufacturing and quality initiatives. Our extensive assessment services enable companies to design effective and efficient training programs that have earned commendations from our customers. Find out how we can help you prepare your workforce for the future. Information about this training program is available at 524-3207, Ext. 759.

Services Offered:

- Training Needs Assessments
- Custom-Designed Programs, Workshops and Curricula
- Job Task Analysis
- Grant Development
- Information Resources
- Training Cost-Benefit Analysis
- Group Facilitation Consulting

Workshop and Customized Training:

- Employee Skills Testing
- Business and Technical Skills
- Communication and Problem Solving
- Teamwork
- Interpersonal Skills
- Quality and Production
- Supervision and Leadership
- Customer Service
- Hazardous Materials
- Computer Technology (including Microsoft software)
- English for Speakers of Other Languages (ESOL)
- Maintenance and Motion Control
- Entry Level Manufacturing Technician
- American Sign Language
- Explorations in Clay

Specialized Training Programs

TRACTOR TRAILER DRIVER PROGRAM, CLASS A CDL

The college offers a 16 week competency based, nights and weekends, driver training program that focuses on both classroom work and in-the-vehicle training time. When trainees have mastered driver competencies and earned their CDL's, they begin working in the industry, often having lined-up a job before finishing the course.

Training topics include trip planning, maintaining daily logs, handling cargo, cargo documentation, employer relations, and public relations. The course covers written and practical tests. For those who may need extra help in reading or test taking, tutoring time can be arranged with the on-campus Learning Center.

Students who successfully complete the CDL-A training earn a certificate of course completion and receive assistance in job-seeking skills. Even though the course is non-credit, participants are graded on attendance, understanding regulations, keeping logbooks, pre-trip inspection, range skills, and road skills.

Requirements
Training applicants must be at least 18 years old, possess a valid driver's license, have a clean driving record, and possess a high school diploma or a GED. Additionally, before participants can be enrolled in the program, the program director must review their driving records to determine their suitability for employment. As a condition of enrollment, each applicant must pass a Department of Transportation (DOT) physical exam, and pass a standard DOT pre-employment drug test.

Application and Registration
To apply, prospective applicants should submit a certified copy of their Motor Vehicle Record for the previous five years from the NH Department of Motor Vehicles. Upon approval, applicants should submit a completed registration form for the Department of Transportation (DOT) physical exam and standard DOT pre-employment drug test and pay the non-refundable deposit. The College will then set up the DOT physical and drug screen for the applicant at a health clinic.

After a registrant's driver's record, physical exam and drug screening have been approved by the program director, the student will need to pay the tuition in order to enroll in the program. The college will accept vouchers from funding agencies as well as checks and credit card payments from individual trainees or from their corporate sponsors. Deferred payment plans can be arranged through the College's business office.

New Hampshire jobTrainingfund

SKI LIFT MAINTENANCE
The Ski Lift Maintenance Institute offers the opportunity for ski area lift maintenance employees to participate in a training program designed especially for them, improving lift maintenance skills through pertinent technical classroom training backed up with timely and practical hands-on lab experience. This will enable lift maintenance employees to become more effective in their lift maintenance jobs by better understanding how lift systems operate and enhancing their safety awareness and the overall ski area's operational reliability.

Course Descriptions

ACCOUNTING

LACC1310 Accounting I **CL3 L0 CR3**
An introduction to accounting as the language of business. The student will be introduced to the procedures necessary to record, classify, and summarize basic business transactions. The course will cover the accounting cycle for service and merchandising sole proprietorships, including: journalizing transactions in general and special journals, recording adjusting and closing entries, and preparing worksheets and financial statements. The course will also cover banking and payroll procedures.

LACC1320 Accounting II **CL3 L0 CR3**
A more in-depth study of accounting procedures and concepts. The course closely examines balance sheet accounts, such as accounts receivable, notes receivable and payable, inventory, property plant and equipment and long-term debt. Different structures of equity are examined through the study of partnership and corporate forms of business. Financial statement analysis and the statement of cash flows are introduced. General accounting principles are introduced and applications are discussed throughout the course. (Prerequisite: LACC1310)

LACC2310 Cost Accounting **CL3 L0 CR3**
Accounting for transactions and summarizing data particular to manufacturing and service environments. The course will examine in detail the three elements of cost: materials, labor and overhead, in both the job order and process cost systems. It will also cover standard cost systems, including variance analysis. The student will be introduced to cost behavior patterns and apply them to cost analysis for decision making. (Prerequisite: LACC1320)

LACC2350 Managerial Accounting **CL3 L0 CR3**
The study of the use of accounting information for management decision-making purposes in the manufacturing and service environments. Cost behavior and classification, as well as cost-volume-profit analysis, differential cost analysis and absorption vs. variable costing principles, will be applied to cost and volume control, pricing and other management decisions. The student will learn to develop budgets and evaluate performance internally. Special considerations of

decentralized operations and capital investment decisions will be studied. The student will be exposed to current trends in the global business environment, including the principles of activity-based costing, Just-in-Time manufacturing, and the theory of constraints. (Prerequisite: LACC2310)

LACC2510 Federal Taxes CL3 L0 CR3
A study of Federal Income Tax regulations and reporting. The course will cover individual returns, including filing requirements and status, rules of dependency, income inclusions and exclusions, expenses, deductions and credits, capital gains and losses. Special attention will be paid to depreciation. The partnership and corporate returns will be introduced. Topics relating to tax administration and tax planning will also be covered. (Prerequisite: LACC1320)

LACC2710 PC Accounting Applications I CL2 L2 CR3
The student will work with an educational version of an integrated accounting system to set up the system and perform routine tasks such as recording business transactions, maintaining customer and vendor files, vouchering, controlling inventory, processing sales, maintaining fixed asset and depreciation schedules, and preparing the payroll. The student will also work with partnerships, corporations and departmentalized firms. Other topics include preparation of budgets and performance of financial statement analysis. (Prerequisite: LACC1320)

LACC2720 PC Accounting Applications II CL2 L2 CR3
This is a capstone project course. The student will use a variety of computer applications, such as spreadsheet preparation, word processing, automated tax return preparation, commercial automated accounting systems and the Internet. The projects cover a range of accounting applications, including solving cost and managerial problems, preparing financial statements, preparing tax returns and analyzing financial reports. (Prerequisites: LACC2310, LACC2350 (may be taken concurrently), LACC2510, LACC2710, LCIS1320)

ADVANCED MANUFACTURING

COURSE DESCRIPTONS

LMAN1200 Machine Tool Math CL3 L0 CR3
This focused class develops the skills of students in areas of mathematics relevant to modern manufacturing. An emphasis will be placed on practical applications as found in machining. The topics include usage of fractions and decimals, conversion between units, interpreting and using percentages, usage of tolerances, interpretation and usage of formulas and proportions, and the practical application of geometry and trigonometry in interpreting and using drawings. The usage of scientific calculators will be integrated into the course content.

LMAN1300 Blueprint Reading & Solid Modeling CL2 L3 CR3
Students will learn the fundamentals of blue print reading including multiview drawings, basic dimensioning, holes, fasteners, assemblies, and tolerancing. Solid modeling software will be introduced with training of sketch demands, extruded boss/base features, drawing planes, fillets, chamfers, multiview drawings, and dimensioning. Three dimensional assembly modeling will also be covered with emphasis on advanced mates, exploded views, and animation.

LMAN1400 Machine Processes CL3 L6 CR5
This course introduces students to manufacturing processes utilizing traditional machine tools such as band saws, drill presses, and lathes. Topics covered are selecting machine stock, basic layout, drilling, reaming, countersinking, counter boring, tapping, chamfering, machine setup, grooving, and threading. Also students will work with standard precision measuring tools such as but not limited to micrometers, dial calipers, and vernier scales with an introduction to gauging, tolerancing, and dimensioning. Machine tool and shop safety will be covered and stressed throughout the course. (9/2013)

LMAN1450 Manufacturing Processes CL3 L0 CR3
This course will cover a qualitative and quantitative study of manufacturing processes. Fundamental principles of value-added processing of materials into useable forms for the customer will be covered. Topics will include material properties and traditional and non-traditional manufacturing processes with an emphasis on process selection for optimum design with quality, strength and economic evaluations.

LMAN1500 CNC Machines I CL2 L6 CR4
Students will be introduced to the fundamentals of Computer Numerical Controlled (CNC) Milling machines and their programming. First covered in this course is the basic operation of CNC machines with topics such as safety, simulation, tooling with tool selection, and machine zeroing. Hands-on training via simulation will expose the student to absolute and

incremental positioning, circular interpolation, program interpolation, and cycle pausing. CNC Machine safety will be stressed throughout this course. (Prerequisites: LMAN1200, LMAN1400).

LMAN2100 CNC Machines II CL2 L6 CR4
In this course students will expand on knowledge gained from CNC Machines I as well as be introduced to Computer Aided Manufacturing. (CAM) CNC Machine Topics will include machine speeds and feeds, feed rate, and cycle time optimization. Students will also learn alternative drilling cycles, subprograms, cutter compensation, and scaling/mirroring. CNC Machine safety will be stressed throughout this course. Students will also be introduced to CAT/CAM with topics to include part geometry, CAM-Mill processes, contouring, cycle time estimation, tool selection, material selection, cutter compensation, parameter pages, contour applications, roughing, finishing, and tool paths. (Prerequisites: LMAN1500)

LMAN2200 Properties of Materials CL3 L2 CR4
This course introduces the student to the processes and materials used in modern manufacturing, with an emphasis on steels and nonferrous metallic alloys. After establishing the sources of stock materials and the means to modify them to adjust material properties, the selection of why certain materials are appropriate for different applications is covered. The understanding of manufacturing processes is central to the course, including machine tooling, hot working, cold working, casting, joining processes, and powder metallurgy. In addition, the processes required to manufacture plastics and composites will also be incorporated. (Prerequisites: A grade of C or better in LMAT1370 AND LSCI1250)

LMAN2300 CAD/CAM CL2 L3 CR3
This course covers Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM). The course includes demonstrations as well as hands-on of CAD/CAM software and hardware. An emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, speed and feed selection, and tool path generation along with post processing to CNC machines. Students need a basic knowledge in drafting/design, machine processes and procedures, and computer operating systems (MS Windows).

LMAN2400 Lean Manufacturing CR3 L0 CR3
This course will cover all of the aspects of Lean Manufacturing. Topics will include line balancing, batching versus single piece flow, standard work, inventory control models, value stream mapping, 5-S, and waste elimination. Students will learn tools for identifying and reducing waste such as fishbone modeling, brainstorming techniques, “spaghetti” mapping, and observation techniques. An emphasis on quality control and people empowerment will be stressed throughout the course.

LMAN2500 Advanced CNC Machine Processes CL2 L6 CR4
This course expands on the machining skills presented in the CNC I & II courses. This course will include 3-D and solid modeling, programming, machine setup, and operating procedures. Tool selection, quality measurement/control, and operator maintenance, are also topics covered..

LMAN2600 Operations Management CL3 L0 CR3
This course will cover how to manage activities involved in the process of transformation resources into products or services. Strategic decision making using tools such as forecasting, basic inventory models, aggregate planning, master scheduling, materials requirements, and scheduling of operations will be covered. Also procurement, movement, and storage of materials are covered. Inventory and production flows, line balancing, and lean principals will be discussed throughout the course

LMAN2700 Advanced Manufacturing Capstone CL3 L0 CR3
This course provides the vehicle for students to demonstrate overall competency in advanced manufacturing and in the specific operations in which they have chosen to concentrate. Under the supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project which pertains directly to advanced manufacturing.

LMAN2800 Advanced Manufacturing Internship CL0 L9 CR3
This course provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a manufacturing job related environment. Cumulative GPA 2.0 minimum required.

AUTOMOTIVE SERVICE EDUCATION

LAUT1210 Automotive Systems **CL2 L9 CR5**
This course prepares the student for their first co-op experience by introducing the student to safe shop practices; General Motors products; maintenance requirements and procedures; periodic motor vehicle safety inspection and tire service. It consists of five units - Safety and Shop Practices, Maintenance of Automotive Systems, Tire Service, Vibration Correction, and Basic Steering and Brakes.

LAUT1220 GM Automotive Electricity **CL2 L8 CR4**
This course introduces the student to the theory and application of electricity, magnetism and electronics. This includes reading, understanding and applying the information from GM schematics and service literature to diagnose the integrated electronic control systems used on today's GM vehicles.

LAUT1220.1 GM Automotive Electricity **CL3 L0CR3**
This course introduces the student to the theory and application of electricity, magnetism, and electronics. This includes reading, understanding, and applying the information from GM schematics and service literature to diagnose the integrated electronic control systems used on today's GM vehicles. (This combination of this course plus the LAUT1220.2 is the equivalent of LAUT1220)

LAUT1220.2 GM Automotive Electricity II **CL0 L4 CR1**
In this lab only course, students put into practice the electrical and electronics theory studied in the GM Automotive Electricity I theory class. This includes the application of Ohms Law and Kirchhoff's Law to the solution of electrical and electronic concerns; wiring schematics and symbols, series and parallel circuits; the use of multimeters, logic probes, oscilloscopes and graphing multimeters; wiring repair; electronic component and devices; lighting, & signaling system circuits. (Prerequisite: LAUT1220.1 OR LAUT1320)

LAUT1230 GM Fuel and Emissions **CL2 L8 CR4**
This course prepares students to diagnose and repair engine fuel injection and electronic controls system concerns as they relate to driveability and emissions. It includes the study of fuel composition and quality, the use of specialized diagnostic tools including the Tech II diagnostic scan tool combined with General Motor's TIS2000 software, and extensive use of the digital multi-meter and lab scopes. (Prerequisites: LAUT1210, LAUT1220)

LAUT1240 GM Engine and Engine Related Electrical **CL2 L9 CR5**
This course provides the student with knowledge and skills necessary to diagnose, service, and repair the advanced engines used in GM vehicles today. The activities include engine disassembly, evaluation, repair, and reassembly of a variety of the latest world-class engines manufactured by General Motors and their industry partners. The student will also study GM ignition systems, starting and charging systems. (Prerequisites: LAUT1210, LAUT1220)

LAUT1750 Cooperative Education **CL0 L12 CR4**
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT1760 Cooperative Education **CL0 L6 CR2**
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT 2100 GM Heating, Ventilation & Air Conditioning **CL2 L8 CR3**
This course prepares students to safely diagnose and repair common performance concerns related to heating and AC systems. Emphasis is placed on electrical and electronic control of these systems. Electrical and Electronic theory studied previously is put to practical use in evaluating and diagnosing AC Control Systems and related Sub-Systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2110 GM Supplemental Inflatable Restraint & Accessories CL2 L8 CR3
Students study Supplemental Inflatable Restraint (SIR) Systems, Windshield Wiper Systems, Cruise Control, Body Controllers and Theft Deterrent Systems. This course builds on the electronic/electrical theory studied previously by applying that theory in evaluating and diagnosing these integrated systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2220 GM Drive Trains CL2 L9 CR5
In this course, the student studies GM automatic transmissions and transaxles, manual transmissions and transaxles, transfer cases and rear axles. The learning outcomes include the development of skills in the diagnosis, disassembly, evaluation and repair of these components and the related electronic control systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2250 GM Brakes, Steering and Suspension CL2 L8 CR4
This course prepares students to diagnose, repair and service GM antilock brakes, steering and suspension systems. Emphasis is placed on service of integrated systems and four-wheel alignment, as well as their related electrical and electronic sub-systems. (Prerequisites: LAUT1210, LAUT1220, LAUT1230, LAUT1240)

LAUT2750 Cooperative Education CL0 L12 CR4
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload, and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

LAUT2900 Cooperative Education CL0 L12 CR4
Provides the opportunity to receive hands-on experience in an automotive service environment. Student will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload, and duties of a professional automotive technician. (Prerequisites: Successful completion of ASEP coursework, 2.0 CGPA and a C or higher in their major area classes)

AUTOMOTIVE TECHNOLOGY

LAUT1200 Introduction to Automotive Service CL2 L4 CR3
This is the first of a series of courses that make up the Automotive Technology track. It provides instruction in career opportunities, safety, Oxy-Acetylene usage, measurement, proper tool usage and service operations and basic maintenance including tire service, safety inspections light engine repair and brake work. This course will use Chapters 1-17 and parts of other chapters throughout the text.

LAUT1300 Engine Mechanical CL3 L5 CR4
In this course, the student studies engine design and construction; engine mechanical diagnosis for performance, noise and leaks; engine disassembly procedures and best practices; engine evaluation and measurement; engine removal and installation techniques. (Prerequisite, may be taken concurrently: LAUT1200 with a grade of C- or better, or POI)

LAUT1320 Electrical/Electronics I CL3 L5 CR4
In this course, students study electrical and electronics theory including the application of Ohms Law and Kirchhoff's Law to the solution of electrical and electronic concerns; wiring schematics and symbols, series and parallel circuits; the use of multi-meters, logic probes, oscilloscopes and graphing multi-meters; wiring repair; electronic component and devices; battery, charging and starting systems.

LAUT1330 Electrical/Electronics II CL3 L5 CR4
This course builds on the material covered in Electrical/Electronics I and includes communication and networking, body control systems, security systems, occupant safety systems, entertainment and audio systems and driver information and navigations systems. Students will practice diagnosis and repair using scan tools, oscilloscopes and multi-meters.

LAUT1340 Braking Systems CL3 L4 CR4
This course prepares the students to diagnose, evaluate and service base brake systems, parking brake systems, antilock brake systems and traction control systems. Students will practice machining drums and rotors using both on-car and off-car lathes. Students will practice diagnosis, evaluation and repair using pressure gauges, measuring tools, scan tools, oscilloscopes and multi-meters. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1350 HVAC Systems **CL3 L7 CR4**
This course prepares the students to diagnose, evaluate and service heating ventilation and air conditioning systems using the latest equipment and technology. The course includes basic refrigeration theory and extensive study of the sub-systems that play a role in HVAC performance followed by hands-on practice evaluating and diagnosing HVAC issues. Students must pass the ASE EPA 609 test as part of completion of this course. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1351 HVAC Systems **CL3 L0 CR3**
This course prepares the students to diagnose, evaluate and service heating ventilation and air conditioning systems using the latest equipment and technology. The course includes basic refrigeration theory and extensive study of the sub-systems that play a role in the HVAC performance. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT1360 Steering and Suspension Systems **CL3 L7 CR4**
This course prepares the students to diagnose, evaluate and service base steering and suspension systems and electronically controlled steering and suspension systems. Students will practice replacing steering and suspension components. Students will practice 2 wheel and 4 wheel alignment. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2300 Automotive Service Management **CL3 L0 CR3**
This course is instructor led with classroom meetings that will use Andrew A. Rezin's text Automotive Service Management – Principles and Practice, 2009. The course will address such subjects as Service Operations; Management Styles and Strategies; Financial Management; Organization; Customer Relations; Employee Relations; marketing; Legal Issues and Responsibilities.

LAUT2400 Manual Drive Train **CL3 L4 CR4**
In this course, students study manual transmissions, transaxles, transfer cases and rear axle theory of operation, disassembly and reassembly procedures including set-up and endplay measurements. Students will also practice removal and replacement procedures for clutches, transmissions, transaxles, transfer cases and rear axle assemblies. (Prerequisite: LAUT1200 with a grade of C- or better or POI) (Updated 6/7/11)

LAUT2450 Engine Performance I **CL3 L5 CR4**
This course prepares the student with the skills they need to service, diagnose and repair fuel delivery, ignition and emission systems used on today's vehicles. Students will study four stroke theory and combustion theory for both spark ignited and compression ignited engines. Students will study the emission concerns related to internal combustion engines and the systems and strategies used to control these emissions. Students will practice testing and diagnostic routines on vehicles with faults using scan tools, multi-meters, signal generators, pressure gauges and oscilloscopes. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

LAUT2550 Engine Performance II **CL3 L5 CR4**
This course builds on Engine Performance I with more emphasis on performance systems such as turbo charging, super charging, variable cam timing, and variable valve lift and drivability diagnostics related to these systems. Extensive use of the scan tool, multi-meters and oscilloscope are employed in the diagnosis and evaluation of these systems as students determine the root cause of failures following a logical diagnostic process. There is more emphasis on the application of theory to solving drivability and performance concerns on vehicles with failures built into the systems. (Prerequisite: LAUT1200 and LAUT2450 with a grade of C- or better or POI)

LAUT2650 Automatic Transmissions and Transaxles **CL3 L6 CR4**
This course introduces students to automatic transmissions and transaxles with emphasis on identification of transmission type, mechanical components and power flow, hydraulic systems and operation and electronic controls. Lab activities will include on car diagnostic procedures; removal and installation of a transaxle; disassembly, evaluation and inspection and reassembly procedures.

LAUT2700 Advanced Technology Systems **CL3 L0 CR4**
This course introduces students to the latest technology in transportation including hybrid, electric and fuel cell vehicles. Students will learn about the different design hybrid systems and the components used in these systems. Students will learn about the personal protection equipment used and safe practices that are followed to service and repair the systems used on these vehicles. (Prerequisite: LAUT1200 with a grade of C- or better or POI)

BUSINESS MANAGEMENT

LBUS1150 Professional Development **CL1 L0 CR1**
This course is designed to improve professional growth in individuals. Topics include business etiquette, appearance, attitude, networking, decision-making, personal and professional growth plans.

LBUS1300 Introduction to Business **CL3 L0 CR3**
The study of business world operations including the wide range of occupational functions and the American economic system.

LBUS1350 Small Business Management **CL3 L0 CR3**
Problems of a small business operation: going into business, financing a business, the feasibility study, marketing, and management of business phases are covered.

LBUS1752 Cooperative Education **CL0 L9 CR3**
Provides the opportunity for the student to utilize learned course competencies in a real-life setting. Provides supplemental laboratory experience on an extensive array of equipment and processes. (Prerequisite: Approval of advisor and department chair)

LBUS2310 Principles of Management **CL3 L0 CR3**
A comprehensive survey of the principles and practices of management as they are currently being applied in the United States and abroad. The two continuing themes throughout the course are: (1) the never-ending effort by managers and organizations to meet or exceed customer needs and (2) the need for effective leadership in organizations. Emphasis is placed on determining the role of a manager through the leadership process. Individual and group-work dynamics are explored through case studies, research, and experiential exercises. (Prerequisite: LBUS1300 or permission of instructor)

LBUS2330 Supervision **CL3 L0 CR3**
Studies techniques and responsibilities involved in the supervision of employees in business management. Examines human behavior which encourages productive business relationships at all levels. Management of projects and customer service functions are studied. Students learn to work with minimal supervision and to effectively supervise the work of others.

LBUS2380 Business Law I **CL3 L0 CR3**
Origins of law, federal and state court systems, classification of criminal and tort law; a working knowledge of the law of contracts, and sales and consumer protection as applied to everyday usage.

LBUS2390 Business Law II **CL3 L0 CR3**
A study of the law of personal property and bailment; real property, wills, intestacy and trusts; commercial paper; insurance, secured transactions and bankruptcy; agency and employment; business organization and regulation and emerging trends and issues. In addition, the course is designed to enable students to better comprehend the rules of conduct they can reasonably expect from others, as well as the conduct others may expect from them in various business situations. (Prerequisite: LBUS2380)

LBUS2400 Introduction to Project Management **CL3 L0 CR3**
This course will provide students with basic skills to define, analyze and manage projects. By using a variety of automated tools and working with a hands-on case study, students will become familiar with project feasibility, cost benefit analysis, and the development of a project plan. Students will also become familiar with a systems development methodology (SDM) and structured business systems analysis. (Prerequisite: LCIS1320 or permission of instructor)

LBUS2410 Human Resource Management **CL3 L0 CR3**
The study of human resource issues affecting employees in present and future organizations.

LBUS2520 Introduction to International Business **CL3 L0 CR3**
Study of today's globalization process, international environment and management operations for a multilateral corporation. Particular focus on the organizational, marketing and production strategies employed by companies in a world market. (Prerequisites: LBUS1300, LSOC2310 or LSOC2320)

LBUS2600 Principles of Marketing **CL3 L0 CR3**
Product, pricing, promotion and channels of distribution. Marketing in retail, wholesale, service and manufacturing companies.

LBUS2650 Independent Study **CL3 L0 CR3**
Students in an independent study option will engage in learning about topics of special interest and/or need. Written reports on the topics of the independent study are required.

CAREER AND TECHNICAL EDUCATION

LEDU1200 Foundations of Education **CL3 L0 CR3**
This course investigates the philosophical, historical, and social/cultural character of education in the United States. It examines how schools function organizationally and the motivation for selecting teaching as a profession. Students will complete 20 hours of observation/participation in a public school.

LEDU1300 Introduction to Exceptionalities **CL3 L0 CR3**
This course will introduce the federal laws that regulate special education, the basic values that underlie supporting students who experience disabilities, and the roles of teacher assistants in supporting those individuals including: the value of inclusion in home, education, work and community life; respect for the inherent worth and dignity of each person. Through readings, in-class discussions, lectures, presentations and classroom discussions, teachers and teacher assistants will develop strategies on how to facilitate students' independence, learning, social connections and self-advocacy skills. Curriculum will emphasize the philosophical and practical applications of valuing students' abilities and diversity, collaborating with educators and families, supporting classroom teachers and curriculum modifications. Topical issues to be explored include: A History of Disability Law; Implementing IDEA's (IDEIA's) Principles in public education; the practical application of these laws in an inclusive instructional setting; effective instructional strategies for curriculum adaptation and delivery within the context planning under IDEA (IDEIA) and Section 504 of the 1973 Rehabilitation Act; rights of teachers, parents and students; inclusion and collaboration. Emphasis will be placed upon the most prevalent disabilities, such as learning disabilities, emotional disorders, cognitive impairment, and physical disabilities.

LEDU2000 Teaching and Learning **CL3 L0 CR3**
This course studies principles of curriculum, organizations, and teaching methods through supervised observation and participation in a public school. This course introduces the student to rubric evaluation and learning styles, lesson planning, and curriculum delivery. (Prerequisite: LEDU1200)

LEDU2100 Instructional Technology **CL3 L0 CR3**
This course presents theory and strategies for effective integration of technology resources and technology-based methods of instruction to enhance and extend student learning. The role of technology in the classroom with regard to student use, teacher productivity, and communication will be explored, including assistive technology designed for students with disabilities, to discover ways in which technology supports differentiated instruction. State and National technology standards will be addressed with respect to planning curricula and technology-based activities. (Prerequisite: LEDU 1200) (9/2012)

LEDU2300 Essentials of Career and Technical Curriculum and Instruction **CL3 L0 CR3**
This course will explore the history, philosophy, principles, organization and operation of career and technical education in the United States. Students will develop a functional understanding of the role and responsibilities of a professional career and technical educator. This course will provide the participant with the foundation and skills needed 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 learning outcomes, and the selection and development of activities and evaluation methods will be explored.

COMPUTER TECHNOLOGIES

LCIS0950 Computer Essential **CL1 L2 CR1**
This course is designed to give students the skills required for basic computer use. Students are given a brief overview of basic computer concepts and are provided basic information on hardware, memory, multimedia, storage, networks and application software. **Credits do not apply to degree requirement.**

LCIS1320 Software Applications **CL3 L2 CR4**
The emphasis of this course is hands-on applications of computer software including Windows, database, spreadsheets and word processing. Students will be exposed in-depth to business uses through simulated projects. Students are also introduced to PowerPoint and other business applications. An analysis of the impact of these programs on the business environment will also be studied. The fourth credit is an independent study/distance-learning format utilizing the Internet. Computer labs will be open for student use. (Prerequisite: competence demonstrated on computer placement exam)

LCIS1350 Word Processing CL2 L2 CR3
This course is designed to take the user beyond the basics of word processing. Topics such as edit tracking, forms, merges, macros and tables are just a few of the topics covered.

LCIS1360 Introduction to Computers CL2 L2 CR3
This course provides an introduction to computers and computer networking. The introduction to computers portion of the courses covers computer hardware, principles of computer operations, operating systems, representing data digitally, computer algorithms, the World Wide Web and digital security. The introduction to computer networking portion of the course is based on the Cisco Networking for Home and Small Business course. The focus is on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing and network standards.

LCIS1400 Introduction to Programming CL2 L2 CR3
This course provides an introduction to the process of problem solving as it relates to program design and development using Visual Basic.NET. The student will learn to use the top down approach to programming as well as learning to use the various techniques and tools which have been developed to aid in the process. The basic programming statement types (sequential, conditional, and iterative) will be covered as the student learns to use them in algorithms.

LCIS1770 Cooperative Education CL0 L9 CR3
Provides the opportunity for the student to utilize learned course competencies in a real life setting. Provides supplemental laboratory experience on an extensive array of equipment and processes. (Prerequisites: Approval of advisor and department chair)

LCIS1800 Intro to GIS CL2 L2 CR3
This course provides an introduction to the concepts and techniques used in Geographic Information Systems. The course includes the concepts digital representation and organization of geospatial data, data quality, raster and vector geoprocessing, digital modeling, spatial data analysis and mining, implementation and project management.

LCIS2230 Fundamentals of CADD CL2 L2 CR3
Introduction to computer aided drafting and design systems prepares the student to operate the systems and understand applications of computer graphics to industry standards. Topics include the use of interactive computer graphics systems to prepare drawings on a CRT, and storing, retrieving, and production using a computer driven plotter.

LCIS2240 Advanced CADD CL2 L2 CR3
This course supplements LCIS2230, Fundamentals of CADD, by building upon basic skills and presenting the more advanced functions and abilities of AutoCADD, such as layering, color, hatching, auto dimensioning, dynamic text, advanced blocking, isometrics, 3D, production drafting techniques and file and disk management. Class instruction is evenly complemented by hands-on experience using interactive color graphics systems equipped with high-resolution printing devices. (Prerequisite: LCIS2230)

LCIS2260 Advanced Office Applications CL2 L2 CR3
This course introduces the student to the Office Applications of OneNote, Publisher, and Expression Web. OneNote is an application that allows the user to organize, save and search notes. Publisher is a desktop publishing system that allows the user to work with text and graphics beyond the capabilities of word processors. Expression Web allows the user to create web pages easily and quickly.. This course is an alternative to LCIS1320 Software Applications for students who already have some familiarity with MS Office and wish to develop additional marketable skills. It is assumed that students already have basic software application and file manipulation skills. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2270 IT Developmental Applications CL2 L2 CR3
This course introduces the student to MS Visio and MS Project. Students will learn to work with various types of diagrams in Visio, as well as how to work with Project to plan and track projects using a variety of resources. This is a hands-on course where students will work extensively with the software to develop projects based on individual interests and course of study. It is designed for the IT industry, but the skills learned can translate to any industry. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2320 Website Development CL2 L2 CR3
This course offers an introduction to Website Development using tools such as Expression Web and various other software products available. The basics of good page and form design, graphics, mapping, lists and tables will be

discussed. An overview of integrating text, video, data, audio, graphics and animation will also be covered. (Prerequisite: LCIS1360 or equivalent)

LCIS2330 Introduction to Multimedia CL2 L2 CR3
This course offers an introduction to multimedia concepts with emphasis on web-based multimedia. Students will study the different multimedia elements to include text, images, video, sound and interactive content. Additionally, students will learn about the hardware and software used to produce multimedia, to include such applications as Maya, Macromedia Director and Flash. A number of projects will give students the opportunity to reinforce their learning by building computer applications that incorporate graphics, animation, audio and video. (Prerequisites: LCIS1360)

LCIS2350 Spreadsheets CL2 L2 CR3
This course provides extensive "hands-on" exposure to MS Excel, an industry-standard program. Topics covered include constructing a worksheet, entering and manipulating data, and extracting useful information from the worksheet. Graphs and charts of data will be constructed, and "what-if" projections will be developed. (Prerequisite: LCIS1320 or competence demonstrated on computer placement exam)

LCIS2370 Web Programming I CL2 L2 CR3
This course teaches web site programmers how to use component object model (COM) components on both the client and the server. Other topics include XML, ASP, CSS, ActiveX controls, data objects, simple SQL statements and queries. (Prerequisites: LCIS1360, LCIS1400, and LCIS2320 which may be taken concurrently)

LCIS2380 Web Programming II CL2 L2 CR3
This course is a companion to Web Programming I. Topics include PERL, CGI, Java and scripting in Visual Basic and Java. (Prerequisites: LCIS1360, LCIS1400, and LCIS2320 which may be taken concurrently)

LCIS2390 E-Commerce CL2 L2 CR3
This course provides students with an introduction to the technologies required for on-line business activities. Technologies will include security, databases, XML, shopping carts, as well as other current topics. This course also covers the issues concerning international trade, ethics, legal issues and taxes. (Prerequisite: LCIS1320 or permission of instructor or competence demonstrated on computer placement exam)

LCIS2400 Management with Computers CL2 L2 CR3
This is a project-based course where students are expected to utilize several software packages including MS Project. Students will study in depth how businesses use computers and software in day-to-day business. Make or buy decisions, artificial intelligence, decision support systems, the software development life cycle, data flow diagrams and CASE tools will also be studied. (Prerequisite: Senior status)

LCIS2420 Database Management and Design CL2 L2 CR3
This lab course introduces modern techniques of data management, especially with personal computers using MS Access. Students will learn the concepts of data normalization elements and their organization into proper schemata. Screen design and report generation will also be covered. Working with database management systems necessarily involves programming and sequential thinking skills, whereby students create and manipulate databases. (Prerequisite: LCIS1320 or equivalent)

LCIS2430 Database Application Development CL2 L2 CR3
This lab course is a continuation of Data Management and Design (LCIS2420), with emphasis placed on database application development. Students will be exposed to the more advanced feature aspects of report, form and query design. Students will be introduced to macros, menu design, SQL and modules to automate many aspects of a database application. This course requires familiarity with database design and normalization. (Prerequisites: LCIS1400, LCIS2420) (9/2013)

LCIS2440 SQL Server LC2 L2 CR3
This course provides students with the knowledge and skills required to install, configure, administer and troubleshoot MS SQL Server. Students will learn to write queries and perform a wide variety of tasks using both GUI and SQL code. (Prerequisites: LCIS1320, LCIS1360) (9/2013)

LCIS2450 Information Storage and Management CL2 L2 CR3
This course teaches students how to manage and secure information. This includes instruction and hands-on exercises in the installation, configuration and management of variety of technologies like RAID, SAN, and NAS used for storing, accessing, securing, sharing and optimizing information. (Prerequisites: LCIS1360)

LCIS2490 Network Security CL2 L2 CR3
This course covers basic security principles, cryptography, security baselines and current attack and defense techniques and technologies. It also covers the development of security policies and procedures and the management of security efforts. The course prepares students for the CompTIA Security+ certification exam. (Prerequisite: LCIS1360 or equivalent)

LCIS2500 Networking Fundamentals (CCNA 1 Cert Test) CL2 L2 CR3
This course is an introduction to networking. It is based on the Cisco CCNA 1 course – Networking for Home and Small Businesses. The focus is on network terminology and protocols, local-area networks (LANs), wide-area networks (WANs), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing and network standards. (Prerequisite: LCIS1360 or equivalent)

LCIS2510 Small Business Networking CL2 L2 CR3
This course is the second in a series of four courses designed to prepare students to earn the Cisco Certifed Newt work Associate (CCNA) certification. It is based on the Cisco CCNA 2 course-Working at a Small-to-Medium Business or ISP. This course focused on initial router configuration, Cisco IOS software management, routing protocol configuration, TCP/IP, and subnetting. (Prerequisites:LCIS21360) (9/2013)

LCIS2520 CompTIA A+ Essentials CL2 L2 CR3
This course is designed to prepare the student to pass the CompTIA A+ Essentials exam, the primary certification for IT Technicians. Students will gain an understanding of terminology and technology, as well as learn fundamental installation and upgrade tasks. Students will also learn basic Windows operating system support. (Prerequisite: LCIS1360 or equivalent)

LCIS2570 CompTIA A+ Support Technician CL2 L2 CR3
This course is designed to prepare the student to pass CompTIA's secondary exams of IT Technician, Help Desk Technician and Depot Technician. The student will learn advanced configuration and troubleshooting skills, including using the command line to accomplish technical tasks. Network and internet configuration is also covered. (Prerequisite: LCIS1360 or equivalent, LCIS2520) (Until Fall 2013)

LCIS2570 CompTIA Practical Applications CL2 L2 CR3
This course prepares students to pass CompTIA's A+ Practical Applications exam. The student will learn advanced configuration and troubleshooting skills, to include the use of the command line interface. Help desk concepts will also be covered to provide students with the technical and professional skills required to work at a help desk or technical support work environment. (Prerequisite: LCIS1360 or equivalent, LCIS2520) (Effective Fall 2013)

LCIS2580 Help Desk Concepts CL2 L2 CR3
This course provides students with the technical and professional skills required to work in a help desk or call center. Students will become familiar with the tools, techniques, processes and procedures required in the help desk and technical support work environment. (Prerequisites: LCIS1320, LCIS1360 or equivalent) (Unavailable Fall 2013)

LCIS2590 Designing and Supporting Networks CL2 L2 CR3
This course is the last in a series of four courses designed to prepare students to earn the Cisco Certifed Network Associates (CCNA) certification. It is based on Cisco CCNA 4 course-Designing and Supporting Computer Networks. This course focuses on network design methodologies, network characterization and prototyping tools, IPv4 and IPv6 addressing and WAN technologies to include Frame Relay (Prerequisites:LCIS2530) (9/2013)

LCIS2600 Windows OS Configuration CL2 L2 CR3
This course provides students with the skills required to install, configure and administer Windows operating systems. Topics include mobile computing, security, troubleshooting, and network connectivity. The course prepares the student for the Microsoft Certified Technology Specialist examination, 70-620. (Prerequisite: LCIS1360)

LCIS2610 Installing and Configuring Windows Servers CL2 L2 CR3

This course covers installing and configuring Microsoft Servers; managing directory services; implementing networking, file and print services; and server virtualization. (Prerequisites:LCIS1360) (9/2013)

LCIS2620 Intro to Linux CL2 L2 CR3
This course provides the introduction to UNIX operating system. Concepts such as file system, editors, program development, shell environment/programming, communication, data management, security and remote computing will be covered. In addition to laboratory exercises to enforce the concepts, students will also engage in a course project. Computer labs will be open for student use. (Prerequisite: LCIS1360, LCIS2500)

LCIS2650 Independent Study CL2 L2 CR3
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LCIS2670 Administering Windows Servers CL2 L2 CR3
This course covers implementing Group Policy; managing user and service accounts, maintaining directory services, configuring DNS and remote access; and optimizing file services and security. (Prerequisites: LCIS2610)) (9/2013)

LCIS2680 Advanced Windows Server Configuration CL2 L2 CR3
This course covers advanced network services, file services, dynamic access control, network load balancing, failover clustering and disaster recovery. (Prerequisites: LCIS2610) (9/2013)

LIS2690 Designing Network Services Infrastructure CL2 L2 CR3
This course prepares the student for designing a networking infrastructure based on an organization's needs. Topics include DHCP, IP address configuration, DNS, WINS, as well as current technologies. (Prerequisite: LCIS2600)

LCIS2710 Analyzing Software Requirements CL2 L2 CR3
This course teaches students to develop conceptual, logical and physical designs for a business software solution using modern software techniques and tools such as UML, SCRUM, etc. This course prepares the student for the Microsoft Certified Exam. (Prerequisites: LCIS1320, LCIS1360, LCIS1400) (9/2013)

LCIS2720 Object-Oriented Programming – Java CL2 L2 CR3
This course offers a study of the features of Java. Focus will be on the principles of software design and development specific to the object-oriented approach, including classes, objects, inheritance and error handling. (Prerequisite: LCIS1400 or equivalent) (9/2013)

LCIS2730 Distributed Applications with Visual Basic & XML CL2 L2 CR3
This course will teach students the skills necessary to build distributed applications in an n-tier client server environment using Visual Basic & XML. Additional topics include DLL's, COM, ADO and database access in a multi-tier environment. (Prerequisite: LCIS1400 or permission of department chair)

LCIS2750 Object-Oriented Programming – C++ CL2 L2 CR3
This course offers a study of the features of C++. Focus will be on the principles of software design and development specific to the object-oriented approach including classes, objects, inheritance and error handling. (Prerequisite: LCIS1400 or equivalent) (9/2013)

LCIS2760 Developing Web Applications CL2 L2 CR3
This course will teach students the skills necessary to develop and implement web applications using technologies such as PHP and MySQL or NET and IIS. Topics include creating user services, creating and managing components, data manipulation, debugging and security issues. (Prerequisite: LCIS1400 or permission of department chair) (9/2013)

LCIS2770 Programming for Games CL2 L2 CR3
This in an introductory computer-games programming class, which teaches the programming techniques needed to produce interactive graphical applications like computer games. The topics covered include: game design, storyboarding, animation techniques, game construction tools, artificial intelligence, input devices, sound and real time graphics. During the course, students produce a simple interactive graphical project. (Prerequisite: LCIS1400)

LCIS2780 Programming with DirectX CL2 L2 CR3
This course is designed to teach the student techniques needed to create games using DirectX technology. This is a hands-on course where students will be expected to complete several games. Topics include: sprites, bitmaps, DirectX game libraries, windows sockets, as well as game design. (Prerequisite: LCIS1400 or permission of instructor)

LCIS2800 Capstone Project CL2 L2 CR3
This course is intended to provide the vehicle for students to show overall competency in Computer Technologies and the specialties that have been a part of their particular degree program. Under supervision of a faculty advisor, the student will select an appropriate subject, perform the research and present results. Project will include the following components: project proposal, research and definition, and the project presentation. This course should be taken the semester prior to graduation.

LCIS2810 Enterprise Networking CL2 L2 CR3
This course is the third in a series of four courses designed to prepare students to earn the Cisco Certified Network Associate (CCNA) certification. It is based on the Cisco CCNA 3 course – Introducing Routing and Switching in the Enterprise. This course focuses on advanced IP addressing techniques (Variable Length Subnet Masking [VLSM]), intermediate routing protocols (RIP v2, single area OSPF, EIGRP), command line interface configuration of switches, Ethernet switching, Virtual LANSs (VLANs), Spanning Tree Protocol (STP) and VLAN Trunking Protocol (VTP) and Access Control Lists (ACLs). (Prerequisite: C- or better in LCIS2510) (9/2013)

LCIS2910 Intro to Artificial Intelligence CL2 L2 CR3
This is an introductory course to artificial intelligence. Topics include intelligent problem solving, agents, knowledge representation, search techniques, learning and logical reasoning. (Prerequisite: LCIS1400) (Unavailable Fall 2013)

LCIS2920 Mobile Application Development CL2 L2 CR3
This is an introductory course developing mobile applications for various platforms, including smart phones, Android devices and Apple IOS. Topics include device convergence, platform architecture, app life-cycles, design patterns, and cross-platform development, as well as the challenges of developing for mobile devices. Students will be exposed to different API and languages such as Objective C, Xcode and Java. (Available fall 2013)

CULINARY ARTS

LCUL1450 Breads and Rolls CL1 L4 CR3
Students will be introduced to the bakers scale and taught how to properly measure ingredients. Reading a formula and recipe conversions will also be covered. The history of bread making will be explored as well as the creating of many classical items from several cultures around the world. The milling process of flour will be discussed as well as the function of important ingredients in the dough. The class will largely focus on the organized process of preparing dough. Mixing, shaping, proofing, baking, and storing are critical steps that will be explored. The bread and roll productions that will be created in each class will be used in our dining room bakery case.

LCUL1460 Bakery Production CL1 L4 CR3
This course will focus on the common items found in any bakery/pastry shop. Muffins, quick breads, coffee cakes, and donuts will be explored. Pie dough, puff pastry, pâte à choux, short dough and Danish dough will be taught, and several items will be created from each. Classical European pastry will be touched upon and the “classics” of pastry will be introduced. Pies, tarts, cookies, and common bakery items will also be created. Students will be introduced to various ingredients such as nuts, chocolates, and fruits; they will be taught how, when, and why to use them.

LCUL1470 Hot and Cold Plated Desserts CL1 L4 CR3
The focus of this course is plated desserts that would be found in a restaurant setting. The critical components of a plated dessert will be explored along with detailed instructions of each. Various sauces and garnishes will be introduced, as well as various plate presentations. This course will include the production of slow-bake desserts (custards, cheesecakes), frozen desserts, traditional desserts (Baked Alaska, Bananas Foster, Cherries Jubilee), and creative ways to present simple desserts. Students will be required to use their creativity and create a plated dessert of their own for a project grade.

LCUL1480 Cake Decorating CL1 L4 CR3
This course will be concerned with creating various cakes, icings, fillings, frostings, and butter creams. Each student will learn the proper techniques for covering a cake, as well as ways to enhance the decoration on it. Making paper cones, writing on cakes, and making several types of butter cream flowers is covered. Classical cakes will also be covered

(Dobos, Sacher) along with their history. There will be a large concentration on using a piping bag, the function of various tips, and proper piping techniques. This course will also introduce the use of marzipan, fondant, airbrushing, and wedding cakes.

LCUL1490 Baking and Pastry Technologies CL3 L0 CR3
Baking & Pastry Technologies is a look into the scientific side of baking. Baking & Pastry Technologies is dedicated to teaching different scenarios, and reactions of ingredients, while baking. The lab element gives the experience of seeing different reactions of ingredients in baking; knowing, by looking at finished products, what works best and what may ruin the project. At the completion of this course, the student will have basic knowledge of the scientific breakdown that goes into the formulas of baking. This course will enable graduates to better be prepared to gain positions as a pastry chef or patissiere.

LCUL1510 Culinary Fundamentals CL1 L6 CR3
This course encompasses the basic fundamental principles for a career in Culinary Arts. Each subject will be discussed and practiced in detail. This class will emphasize the importance of such terms and procedures as “mise en place”, knife skills, proper use of tools and several other basic principals that are important to the culinary industry. This course will also emphasize the appropriate standard of behavior and uniform that is set by culinary professionals. At the end of this course, students will have a core knowledge and insight into the essential aspects of Culinary Arts.

LCUL1520 Sanitation & Safety CL3 L0 CR3
This course offers a look into the fundamentals of food service sanitation and safety. Students will demonstrate knowledge of proper hot and cold food handling procedures, cross contamination of ready-to-eat foods, proper receiving practices, proper storage guidelines, who is affected by improper food handling, and federal/state food service sanitation requirements. When this course is completed, the student will test for the ServSafe certification.

LCUL1580 Restaurant Facility & Menu Design CL3 L0 CR3
Both menu and facility design are important aspects of the restaurant industry. This course gives students realistic practice at mastering both. Students will practice proper menu layout as well as its design. Students will learn the importance of cross-utilization and how to optimize it. This course will give students the opportunity to see different writing styles of menus including a la carte, rotating, and institutional menus. Different types of culinary establishments will be discussed as well as the equipment needed for them. Students will be designing menus to match kitchen layouts through projects conducted one-on-one with the instructor.

LCUL1590 Cost Control CL3 L0 CR3
This course covers such subjects as pricing menus, food costing equations, weights and measurements, scaling, yield testing, food cost percentages, inventories, and recipe conversions. The student will be expected to cost out recipes to find per portion costs as well as multi-portion costs. This course discusses money saving techniques, waste control, and the importance of portion size as it relates to menu prices. Beverage costing, as well as alcohol procurement, will also be examined. The Food for Thought Café’s menus, inventories, and recipes will be exposed for practical use through projects or discussion conducted by the instructor.

LCUL2100 Nutritional & Alternative Baking CL1 L4 CR3
This course introduces student into not only the nutritional aspects of baking, but the alternative baking world. Alternative baking meaning such subjects as gluten free, sugar free, dairy free, and other allergy sensitive baking procedures. Nutritional aspects cover such subjects as low fat, low sodium, carbohydrate sensitive, as well as diabetic responsive dessert composition. Focus will revolve around techniques and alternative methods of producing health conscious pastries, product substitutions, ideas and concepts of creative alternative and nutritional desserts. (Available Fall 2011)

LCUL2200 Advanced Cake Decorating CL1 L4 CR3
This course is a continuation of our cake decorating course. Advanced cake decorating takes what has been learned in cake decorating and introduces new ingredients, techniques, and skill sets. Intriquet piping techniques are demonstrated and practiced. The uses of ingredients such as rolled fondant, gum paste, royal icing and molding chocolate will be established. Advanced cake styles and wedding cakes will be practiced. This is a fifteen week course that will provide students with the enhanced knowledge, techniques and proficiency of cake decorating. (Prerequisites: LCUL1480). (Available Fall 2011)

LCUL2250 Advanced Pastry and Confections CL1 L4 CR3
In this course the student will learn an array of international pastries and advanced pastry methods, techniques and showpieces. The student will be introduced to chocolate tempering, shaping, basic show piece construction and candy

making. Subjects such as pastiage, pouring sugar and confection artistry will also be confection artistry will also be covered, researched and practiced. Students will fine tune their skills and challenge themselves both technically and artistically. (Prerequisites: LCUL1460). (Available Fall 2011)

LCUL2300 Pastry Arts Co-op C0 L9 CR3
This course provides the opportunity for the student to utilize baking and pastry course competencies in a real-life setting along with supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LCUL2310 Pastry Arts Capstone C1 L0 CR1
This course provides the vehicle for students to demonstrate overall competency in baking and pastry and in the specific operations in which they have chosen to concentrate. Under the supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project which pertains directly to baking and pastry operations.

LCUL2320 Culinary Co-operative Education CL0 L9 CR3
Co-operative education provides the opportunity for students to utilize learned culinary course competencies in a real-life setting. This course provides supplemental laboratory experience on the extensive array of equipment, ingredients and processes. Students will gain valuable experience and first-hand knowledge as to what a career in the Culinary Arts field outside the classroom entails. Students are expected to complete 300 hours of co-op experience. Instructor's approval of workplace site required. (Prerequisites: LCUL1460, LCUL1510, LCUL1520, LCUL1580, LCUL1590, LHOS1130, LHOS1140)

LCUL2530 Introduction to Garde Manger CL1 L6 CR3
This course offers an insight into the "cold side" of the restaurant industry. The student during this course will be responsible for researching Garde Manger techniques as well as practicing those techniques. The student will be inspired to practice classic Garde Manger skills through a series of projects created by the instructor. Such skills and techniques include preparation of: Cured meats, aspic and chaud froid, terrines and pates, crudités platters, cheese displays, smoked foods, cold sauces and dressings, salads, hors d'oeuvres, and buffet design/layout. Presentations by guest speakers and visiting chefs as well as off-site demonstrations/applications will enhance student skill sets.

LCUL2540 Classical Cuisine CL1 L6 CR3
This course will explore the history of classical cuisine and its origins. The accomplishments of our forefathers will be explored and their impact on cooking discussed. Students will absorb these concepts and hone their techniques in order to apply them to modern day cooking. Historical chefs like Escoffier and Careme will be introduced and explored. Classical cuisine will be an overview of how cooking has evolved throughout time and will conclude with modern technology, equipment development, and the evolution of food products.

LCUL2550 Italian Cuisine CL1 L6 CR3
Students will enhance their cooking skills by studying cooking techniques and cultural aspects that deal in-depth with Italian cookery. Students will rotate through each station in preparing new menu items. Students will be expected to follow recipes in preparing dishes from each of the regions in Italy. This course will reinforce both classical and modern cooking techniques.

LCUL2560 U.S. Regional & Infusion Cuisine CL1 L6 CR3
This course will give an overview of food origins and how they have shaped our modern day cuisine. Students will focus on a variety of cultural and regional cuisines throughout the United States. The trend towards cross-cultural cuisines, and the eclectic foods they produce, will be discussed in depth. Students will learn how to create dishes using various cultural ingredients. Preparation, plating, and garnishing techniques will be addressed.

EARLY CHILDHOOD EDUCATION

LECE1210 Growth and Development of the Young Child CL3 L0 CR3
An introduction to the child, from birth to age eight, as a learner and family member with needs to explore and communicate, as well as to develop social competence. Explanation of current themes of child development is provided with special emphasis on understanding children's developmental levels through childhood. Topics covered include: conception, heredity and prenatal development, infant development, the child in the family, toddlerhood and early

childhood. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1220 Curriculum Development in Early Childhood CL3 L0 CR3
The design, implementation and evaluation of appropriate programs for young children through age six. Focuses on the concrete, practical application of various theories, philosophies and current research data in the field. Other topics include: the young child as explorer and learner, language, numbers, art and the world, and the effective teacher of young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1230 Foundations of Early Childhood Education CL3 L0 CR3
The history of early childhood education and child care, including the contributions of Froebel, Montessori and Wheelock. The course concentrates on a diversity of programs including childcare, Head Start, kindergarten and nursery. Profit and non-profit programs will be examined. Discussion includes historical perspectives, current trends, theories and approaches to the care, development and education of young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1240 Health, Nutrition and Safety in Child Care CL3 L0 CR3
Utilizing National Association for the Education of Young Children guidelines and all applicable local and state standards, this course provides the student with comprehensive concepts, guidelines, and practices needed to implement appropriate policies and procedures to insure proper nutrition and sanitary, healthy, and safe child care environments. It should be noted that CPR and First Aid training are NOT part of the course. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1260 Infant/Toddler Development CL3 L0 CR3
Focuses on developmentally appropriate practices for infant/toddler caregivers. Students will explore various theoretical perspectives on infant/toddler development and the pragmatics of caring for young children in early childhood settings. A study of important influences on infant and toddler development, with emphasis on the role and responsibilities of parents and caregivers in creating high quality, supportive environments with sensitivity to attachment and the importance of communication skills in nurturing positive parent/teacher/child relationships. Observation in a childcare center or preschool setting is a requirement of this course.

LECE1610 Early Childhood Education Practicum I CL2 L9 CR5
In order to develop appropriate attitudes and skills and to effectively apply knowledge to the care and education of young children, the student works in a licensed and approved setting under the supervision of a qualified professional. Periodic conferences between the supervisor and the practicum instructor evaluate the student's progress. At the close of the semester, the student submits documentation relating theory, practice and the student's practicum learning experiences. Work at the practicum site along with peer review, self-reflection and disclosure combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LENG 1200, LECE 1210 or LECE 1260, and LECE 1220) **Student Personal Professional Liability Insurance is mandatory for Practicum students.**

LECE2160 Young Children's Special Needs CL3 L0 CR3
This course will broaden the student's awareness of the theoretical and legal foundations for programs serving young children from infancy through age eight with a wide range of special education needs. Students will examine the causes, symptoms, social consequences and behavior characteristics of children with special needs. Emphasis will be on education for children and their families. Disabilities and special needs, theoretical foundations and practical implications, legal requirements, rights and procedures are discussed. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2240 Math and Science in Early Childhood CL3 L0 CR3
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 which 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. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2250 Art, Music, Drama and Movement in Early Childhood Education CL3 L0 CR3
This course focuses on nurturing creativity in young children through developmentally appropriate activities in the areas of art, music, drama, and movement. The various methods and materials used to stimulate a young child's creative impulses will be explored, as well as the developmental stages of artistic growth. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2300 Developing and Administering a Child Care and Education Program CL3 L0 CR3
This course will provide a comprehensive study of the operation of an early childhood education child care facility. Staffing and supervision, including orientation, training, and motivation and evaluating staff are explored as they relate to the business of child care. Students develop business and marketing plans according to accepted business standards. New Hampshire Child Care Standards and licensing requirements, Child Care Development Block Grant, and funding sources are included. Observation in a childcare center or preschool setting is a requirement of this course. (Summer 2010)

LECE2310 Early Literacy Development CL3 L0 CR3
Early Literacy Development involves listening, speaking, drawing, singing and acting, as well as reading. It includes all the ways children communicate ideas and receive those of others. This course will focus on concepts underlying early literacy development and using children's literature and creative activities to enable students to develop a repertoire of experiences and a portfolio of resources to enhance emergent literacy in young children. Observation in a childcare center or preschool setting is a requirement of this course.

LECE2610 Early Childhood Education Practicum II CL2 L9 CR5
The student works in a licensed and approved setting under the supervision of a qualified professional to acquire the advanced skills required for greater autonomy in the planning and implementation of activities for young children. Periodic conferences between the student, supervisor and the practicum instructor are held to evaluate the student's progress. At the close of the semester, the student submits detailed documentation relating theory, practice, and the student's learning experiences at the practicum site. Work at the practicum site along with peer review, self-reflection and disclosure combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LECE1610) **Student Personal Professional Liability Insurance is mandatory for Practicum students.**

ELECTRICAL POWER AND CONTROL TECHNOLOGIES

ELC1230 Wiring Theory and Techniques (Commercial) CL4 L6 CR6
This course covers commercial building wiring, blueprint reading, branch circuit installations, and service entrance installations based on the National Electrical Code. The following topics will be covered: interpretation of plans, branch circuit installations, feeder installations and calculations, service entrance calculations and installations, and low-voltage installations. (Prerequisite: LELC1260 or permission of instructor)

LELC1240 AC/DC Theory (9/2011) CL4 L3 CR5
This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits.

LELC1260 Residential Wiring and Electrical Blueprint Reading CL3 L0 CR3
This course covers electrical theory, circuit analysis, techniques used in residential wiring, and reading electrical blueprints. The following topics will be covered: electrical safety, tools of the trade, blueprint reading, branch circuit calculations, load calculations, wiring devices, GFCI and AFCI, lighting circuits, types of luminaire, installation of ranges and dryers, hot water tanks, and residential services.

LELC1270 Residential Wiring and Electrical Blueprint Reading Lab CL0 L6 CR2
This course covers the lab portion of electrical circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: safety in the lab, proper use of tools, soldering and splicing techniques, single pole switching, duplex receptacle wiring, 3-way switching, 4-way switching, GFCI and AFCI wiring, BX, AC, and MC installations, low voltage switching, range and dryer wiring, and hot water tank wiring, and residential services (main panel) and (subpanels).

LELC1280 Fundamentals of Electrical Controls CL2 L6 CR4
Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery (1/2012) CL2 L6 CR4
This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection. Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LELC1410 NEC-Residential **CL2 L0 CR2**
A study of NEC requirements as it applies to residential applications.

LELC1420 NEC-Multi-Family Unit **CL2 L0 CR2**
A study of NEC requirements as it applies to Multi-Family Units.

LELC1430 NEC-Commercial/Industrial Applications **CL2 L0 CR2**
A study of NEC requirements as it applies to commercial and industrial applications.

LELC2050 Industrial Electronics (not available after spring 2012) **CL2 L3 CR3**
This course provides the student with a solid grounding in the operation of solid state control devices including; but not limited to, diodes, rectifiers, silicon controlled rectifiers, phototransistors and LED's. (Prerequisite: LELC1240)

LELC2100 Introduction to Electrical Estimating and Design **CL2 L2 CR3**
This course uses computer-aided programs. The following topics will be covered: introduction to estimating concepts, computer-aided electrical estimating, and developing an estimate using an electrical blueprint.

LELC2150 Photovoltaics (9/2011) **CL2 L3 CR3**
This course introduces the principles of photovoltaics; including the basics of safety, the electrical basics of solar PV systems, and how modules are designed and combined with other system components. Participants will learn how to decide upon the size, electrical and mechanical design of a PV system, as well as how to analyze and troubleshoot problems. The lab portion of the course will include hands-on installation of PV systems on mock roofs and ground mounts. This PV Entry Level course ***will not earn students an installer-in-training credential***, but will serve as an important first step in preparing individuals to become highly skilled, qualified and experienced trades people in the PV industry. At the conclusion of the course, students will be eligible to take the examination for the NABCEP PV Entry Level Certificate of Knowledge. Students should have a basic understanding of electricity fundamentals before enrolling in this course. Credit will not be given for more than one of the following courses: LELC2150; LEST1500.
(Prerequisite: LELC1240)

LELC2240 Wiring Theory and Techniques (Industrial) **CL4 L6 CR6**
Industrial building wiring, blueprint reading, transformer connections, "high-voltage" installations, motor circuit theory and lighting designs are covered, as well as interpretations of plans, transformer connections, "high-voltage" installations, motor circuit theory, and lighting designs and applications. (Prerequisites: LELC1220, LELC1230 or permission of instructor)

LELC2280 AC Rotating Machinery (not available after spring 2012) **CL2 L6 CR4**
Covered in this course are the design and operational characteristics of single- and three-phase alternators, principles of operation for, and loading characteristics of, single- and poly-phase AC motors. (Prerequisites: LELC1240, LELC1300, LELC2400)

LELC2300 Electrical Motor Controls **CL2 L3 CR3**
The course covers control fundamentals incorporating control relays, contactors and motor starters, as well as an introduction to solid state motor controls. (Prerequisite: LELC1240 or permission of instructor)

LELC2350 Programmable Controllers **CL2 L4 CR3**
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)

LELC2400 Stationary Machinery **CL2 L6 CR4**
A review of magnetism and electromagnetism and the design and operational characteristics of single-phase, three-phase and specialty transformer connections are covered in this course. (Prerequisites: LELC1240, LELC1300)

ELECTRICAL SYSTEMS INSTALLATION AND MAINTENANCE

LELC1230 Wiring Theory and Techniques (Commercial) **CL4 L6 CR6**
This course covers commercial building wiring, blueprint reading, branch circuit installations, and service entrance

installations based on the National Electrical Code. The following topics will be covered: interpretation of plans, branch circuit installations, feeder installations and calculations, service entrance calculations and installations, and low-voltage installations. (Prerequisite: LELC1220 or permission of instructor)

LELC1240 AC/DC Theory (9/2011) CL4 L3 CR5
This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits.

LELC1260 Residential Wiring & Electrical Blueprint Reading CL3 L0 CR3
This course covers electrical theory circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: electrical safety, tools of the trade, blueprint reading, branch circuit calculations, load calculations, wiring devices, GFCI and AFCI, lighting circuits, types of luminaire, installation of ranges and dryers, hot water tanks, and residential services.

LELC1270 Residential Wiring & Electrical Blueprint Reading Lab CL0 L6 CR2
This course covers the lab portion of electrical circuit analysis techniques used in residential wiring and reading electrical blueprints. The following topics will be covered: safety in the lab, proper use of tools, soldering and splicing techniques, single pole switching, duplex receptacle wiring, 3-way switching, 4-way switching, GFCI and AFCI wiring, BX, AC, and MC installations, low voltage switching, range and dryer wiring, and hot water tank wiring, and residential services (main panel) and (subpanels).

LELC1280 Fundamentals of Electrical Controls CL2 L6 CR4
Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery (1/2012) CL2 L6 CR4
This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection. Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LELC1410 NEC-Residential CL2 L0 CR2
A study of NEC requirements as it applies to residential applications.

LELC1420 NEC-Multi-Family Unit CL2 L0 CR2
A study of NEC requirements as it applies to Multi-Family Units.

LELC1430 NEC-Commercial/Industrial Applications CL2 L0 CR2
A study of NEC requirements as it applies to commercial and industrial applications.

LELC2050 Industrial Electronics CL2 L3 CR3
This course provides the student with a solid grounding in the operation of solid state control devices including; but not limited to, diodes, rectifiers, silicon controlled rectifiers, phototransistors and LED's. (Prerequisite: LELC1240)

LELC2100 Introduction to Electrical Estimating and Design CL2 L2 CR3
This course uses computer-aided programs. The following topics will be covered: introduction to estimating concepts, computer-aided electrical estimating, and developing an estimate using an electrical blueprint.

LELC2240 Wiring Theory and Techniques (Industrial) CL3 L3 CR4
Industrial building wiring, blueprint reading, transformer connections, "high-voltage" installations, motor circuit theory and lighting designs are covered, as well as interpretations of plans, transformer connections, "high-voltage" installations, motor circuit theory, and lighting designs and applications. (Prerequisites: LELC1220, LELC1230 or permission of instructor) (9/2011)

LELC2300 Electrical Motor Controls (9/2012) CL2 L3 CR3
The course covers control fundamentals incorporating control relays, contactors and motor starters, as well as an introduction to solid state motor controls. (Prerequisite: LELC1240 or permission of instructor)

LELC2340 Construction Site Safety (9/2011) CL3 L0 CR3
This course provides students with training in OSHA regulations for safety and health in the construction industry, as well as safe working practices for electricians servicing electrically live installations mandated by NFPA 70E.

LELC2350 Programmable Controllers CL2 L4 CR3
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)

LELC2400 Stationary Machinery CL2 L6 CR4
A review of magnetism and electromagnetism and the design and operational characteristics of single-phase, three-phase and specialty transformer connections are covered in this course. (Prerequisites: LELC1240, LELC1300)

ELECTRO-MECHANICAL TECHNOLOGIES

LELC1240 AC/DC Theory CL4 L3 CR5
This course is designed to introduce concepts of electricity involving the behavior of both direct and alternating current circuits

LELM1200 Fluid Power Systems CL2 L6 CR4
Students will be introduced to the fundamentals of hydraulic and pneumatic power system safety, operation, basic circuit connections, and 3, 4, and 5-way cylinder circuit function. Hydraulic power system topics include basic hydraulic circuits, pumps, principles of pressure and flow, speed control, pressure control, sequence and reducing valves. Pneumatic power system coverage includes single acting cylinders, motor circuits, leverage, volume, pressure and flow, air flow resistance, flow control, and flow measurement.

LELC1280 Fundamentals of Electrical Controls CL2 L6 CR4
Industrial motor control fundamentals are covered, as well as the basic theory of magnetic controls, control components, pilot devices, control circuit diagrams and troubleshooting. (Prerequisite: LELC1240 or permission of instructor)

LELC1300 Rotating Machinery CL2 L6 CR4
This course covers the concepts of rotating electrical machinery beginning with magnetism and induction, conductor thrust and torque, and then progresses to motor basics such as nameplates, mechanical design, troubleshooting and protection. Each major classification of electric motor design and operation is studied in detail in the classroom and proven in the laboratory environment. (Prerequisite: LELC1240)

LMAN1500 CNC Machines I CL2 L6 CR4
Students will be introduced to the fundamentals of Computer Numerical Controlled (CNC) Milling machines and their programming. First covered in this course is the basic operation of CNC machines with topics such as safety, simulation, tooling with tool selection, and machine zeroing. Hands-on training via simulation will expose the student to absolute and incremental positioning, circular interpolation, program interpolation, and cycle pausing. CNC Machine safety will be stressed throughout this course. (Prerequisites: LMAN1200, LMAN1400).

LELM 2100 Mechanical Drive Systems CL2 L4 CR4
In this course, students will learn the concepts of mechanical power transmission through the many types of mechanical drive systems in modern machinery. Mechanical power system safety is focused on throughout this course. Topics include machine and electric motor mounting, motor shaft and keyway features, measuring speed, torque, power, and efficiency, mechanical shaft bearing, coupling, and alignment, as well as v-belt, chain, spur gear, and multiple shaft drives.

LMAN2300 CAD/CAM CL3 L0 CR3
This course covers Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM). The course includes demonstrations as well as hands-on of CAD/CAM software and hardware. An emphasis is placed on geometry creation and editing functions, process planning, proper cutter selection, speed and feed selection, and tool path generation along with post processing to CNC machines. Students need a basic knowledge in drafting/design, machine processes and procedures, and computer operating systems (MS Windows).

LMAN2100 CNC Machines II CL2 L6 CR4
In this course students will expand on knowledge gained from CNC Machines I as well as be introduced to Computer Aided Manufacturing. (CAM) CNC Machine Topics will include machine speeds and feeds, feed rate, and cycle time optimization. Students will also learn alternative drilling cycles, subprograms, cutter compensation, and scaling/mirroring. CNC Machine safety will be stressed throughout this course. Students will also be introduced to CAT/CAM with topics to include part geometry, CAM-Mill processes, contouring, cycle time estimation, tool selection, material selection, cutter compensation, parameter pages, contour applications, roughing, finishing, and tool paths. (Prerequisites: LMAN1500)

LELC2350 Programmable Logic Controllers CL2 L3 CR3
This course covers industrial programmable controllers and program writing including; but not limited to, basic relay logic programming, program control instructions, sequence instructions, data manipulation, math instructions, program editing and troubleshooting. (Prerequisites: LELC1280, LMAT1310 or permission of instructor)
(Updated 6/2011)

LELM2700 Electro-Mechanical Capstone CL3 L0 CR3
This course provides the vehicle for students to demonstrate overall competency in advanced manufacturing and in the specific operations in which they have chosen to concentrate Under the supervision of a faculty advisor, working individually or as part of a team, the students will select and successfully carry out a major project which pertains directly to electro-mechanical technologies.

LELM2800 Electro-Mechanical Internship CL0 L9 CR3
This course provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a manufacturing job related environment. Cumulative GPA 2.0 minimum required.

ENERGY SERVICES AND TECHNOLOGY

LEST1100 Introduction to Energy Management Principles CL3 L0 CR3
This course introduces the principles of energy management and provides an overview of the energy industry. Students will learn about the history of energy production and costs, the dynamics of worldwide energy consumption and growth, the principle methods by which energy is used, and its environmental and financial impacts and consequences. Objectives and components of an effective energy management program are discussed. The concepts presented in this course will serve as the foundation for the core courses in the Energy Services & Technology model curriculum. The course is designed for students already working in or training for a variety of occupations such as facility managers, technicians, engineers, contractors, suppliers, and consultants, as well as students who are not vocationally oriented but are interested in energy usage.

LEST1150 Renewable Energy Sources CL2 L2 CR3
This course provides a comprehensive overview of renewable energies, including solar energy, wind power, hydropower, fuel cells, biomass, and alternative transportation options. Students will be taught the principles of solar home design, solar hot water, pool and space heating, and solar cooling for both new and existing construction. Students will learn how to assess the viability of wind power, hydropower or biomass systems for a given site. Students will also learn about the impact of government regulations on the use of renewable energies. Students will analyze these renewable energy systems and will calculate savings, backup energy needs, financing options, and economic analyses. The student will investigate the potentials of renewable energy technologies to help solve environmental and economic problems within society.

LEST1175 Introduction to Residential Energy CL2 L2 CR3
This course examines basic energy principles from a residential perspective. The course is designed to teach students a theoretical and practical approach to understanding residential energy problems and their solutions. Residential buildings are fairly complex systems. Students will get an introductory look at these systems and the way they interact. Effective energy conservation requires an integrated approach that identifies the biggest sources of energy waste and mitigates them in order of severity. Students will evaluate priorities for energy conservation, analyzing cost-effectiveness and practical feasibility without creating unfavorable effects on the home's safety, health, and comfort of visual appeal.

Students will be introduced to a residential building's parts, functions and flaws as well as possibilities for energy conservation.

LEST1250 Energy Efficiency and Conservation Methods CL3 L0 CR3
The student will identify and explain all of the energy efficiency/conservation methods available for energy use reduction. Energy-consuming facilities, both domestic and commercial, will be analyzed by the students for energy efficiency opportunities. The student will calculate energy savings and environmental impacts for most energy efficiency methods in order to identify and assess energy conservation opportunities. In addition, the student will demonstrate the appropriate usage of energy monitoring and measuring equipment commonly used by energy specialists and energy auditors.

LEST1300 Spreadsheets, Reading Drawings and Blueprints CL3 L0 CR3
This course examines the power of computerized spreadsheets and uses MS Excel as the instructional tool. Much of the coursework will be the construction and utilization of energy related spreadsheets and graphs. The second part of this course introduces the students to blueprints, technical drawings, one-line diagrams, and technical flow charts. It also provides instruction and guidance to the student in their efforts to communicate with a basic drawing or technical sketch. The course is designed for students who may enter into management positions wherein reading a drawing is a key requirement for employment.

LEST1400 Basic Electricity CL3 L0 CR3
This course provides an overview of electricity, circuits, wiring, and grounding. It approaches the subject from a facility operator's point of view. Modeled after BOC 107 Facility Electrical Systems, participants develop an understanding of how electricity is distributed in a facility and common electrical distribution problems.

LEST1500 Introduction to Photovoltaics CL3 L0 CR3
This course introduces the principles of photovoltaics; including the basics of safety, the electrical basics of solar PV systems, how modules are designed and combined with other system components. Participants will learn how to decide upon the size, electrical and mechanical design of a PV system, as well as how to analyze and troubleshoot problems. At the conclusion of this course, students will be eligible to take the examination for the NABCEP PV Entry Level Certificate of Knowledge. Students should have a basic understanding of electricity fundamentals before enrolling in this class. (Prerequisites: LELC1240 or POI)

LEST1600 Building Materials Overview CL3 L0 CR3
Building Materials Overview provides an overview of the common and traditional materials used in construction and renovation of homes, buildings, and industrial sites. It examines the background of building construction practices, serving as a foundation for subsequent topics. It examines the environmental and health impact of the usage of various materials utilized in construction and renovation.

LEST2100 Heating Systems CL2 L2 CR3
This course covers gas, fuel oil, and electric furnaces, as well as heat pumps. Temperature, humidity, air filtering, air movement, and energy efficiency for a complete home conditioning system is also covered. Steam and hot water systems for residential and commercial applications will also be described, including energy conservation and efficiency options, potential savings for new and existing systems, and environmental impacts.

LEST2200 Cooling Systems CL2 L2 CR3
This course covers residential and commercial cooling systems, including temperature, humidity, air filtering, and air movement. Descriptions of new products, and maintenance and operations for residential and commercial cooling systems are also covered, emphasizing energy conservation and efficiency options for new and existing equipment.

LEST2250 Indoor Air Quality CL3 L0 CR3
Introduces the basic causes of indoor air quality (IAQ) in commercial and institutional buildings and outlines prevention strategies. Emphasis is placed on IAQ dynamics, building system interactions, and the importance of education and communications with building occupants. Practical and effective control strategies will be discussed along with basic IAQ equipment and measurement demonstrations. Discussion and case studies provide the learner with an essential understanding of the key elements of a preventive IAQ program.

LEST2350 Lighting and Energy Economics CL3 L0 CR3
This course covers the components of lighting systems. The students will be exposed to current lighting systems found in existing residential, commercial, and industrial application. Energy efficiency opportunities will be discussed with the newest advances in lighting technologies, such as LED lighting for buildings and occupancies, and controls such as "Smart Home" controlling technology. This course will also give students the tools to prioritize potential energy efficiency

measures based on cost effectiveness and impact on environment. Topics include: utility rate analysis, simple payback analysis, compound interest, time value of money, return on investment, life cycle cost analysis, cost estimating, validity and reliability of energy efficiency measures' costs and savings, environmental and pollutant analysis, financing options and effects and simulation tolls and associated software. Also discussed are presentation techniques for energy savings proposals to business leaders and residential customers. (Prerequisites: LEST1400)

LEST2400 Water Conservation and Hot Water **CL3 L0 CR3**
The course covers the components of water conservation and domestic hot water. It identifies, examines and analyzes energy efficiency opportunities and environmental impacts in these areas.

LEST2550 Electric Motors and Control Strategies **CL3 L0 CR3**
This course covers motor theory and operation and how motors convert electrical energy into mechanical energy. DC and AC motors will be discussed along with single and three phase AC motors. Motor efficiencies and the effects of motors on the overall electrical system will be discussed to understand energy efficiency opportunities relative to motor electrical loads. Also covered are all devices used to regulate and control energy used in a building including motor loads. Topics include pneumatic, electric, and electronic controls; from simple switching to microprocessors. An emphasis is placed on identifying and solving control/calibration problems and improving energy efficiency through redesign and energy control strategies. (Prerequisites: LEST1400)

LEST2600 Overview of NH Utilities and Energy **CL3 L0 CR3**
This course will familiarize the student with regional utilities and the programs they offer. It will be a series of guest speakers and field trips. The second part of this course explores energy production and consumption in New Hampshire from the early beginnings to, as best we can predict, into next century. It will discuss electric, natural gas, fuel oil, propane, nuclear, wind, hydroelectric, solar and all other feasible energy sources. This will be an open forum with hopefully, numerous guest speakers. (Prerequisites: LEST1250)

LEST2750 Energy Analysis Capstone (2013) **CL3 L0 CR3**
The student will perform critical examinations of energy consuming facilities, both domestic and commercial, for the purpose of identifying energy conservation opportunities. In addition, the student will identify various energy conservation measures, including equipment that can be installed to further conserve energy. Energy audits will be performed at various commercial facilities, selected by the student and approved by the instructor. The student will create a final energy audit report and energy management plan, and will present the plan to both the class and to the energy management team at the facility. (Prerequisites: LEST1250)

LEST2800 Internship **CL2 L2 CR3**
Students will work in the field with a job related to some segment of the Energy Industry. The internship may be substituted for LEST2750 Energy Analysis Capstone.

FINE ARTS

LART1100 Drawing I **CL2 L4 CR3**
An introduction to the materials, techniques and subject matter of observational drawing in pencil, pen and ink, charcoal, conte and brush, as well as using experimental tools and techniques. Subject matter includes the still life and landscape. One and two point perspective is introduced. The student will gain mastery of the fundamental techniques of drawing as the primary means of documentation, communication and self-expression.

LART1150 Drawing II **CL2 L4 CR3**
A continuation of the principles, media and techniques of drawing established in Drawing I. Emphasis is placed on the exploration of creative visual expression through observational and imaginary drawing from the human figure, still life and landscape. Concepts and media of drawing in color are introduced and emphasis is placed on the use of drawing as a means of personal self-expression. (Prerequisite: LART1100)

LART1200 2-D Design **CL2 L4 CR3**
An introduction to the basic two-dimensional design concepts of color, composition and the organization of pictorial space. A variety of design media will be explored which includes drawing, painting and collage.

LART1250 3-D Design **CL2 L4 CR3**
An introduction to three-dimensional concepts and sculptural materials that are involved in the creation and appreciation of functional and non-functional sculptural form. A variety of sculptural media, materials and techniques will be explored including clay, plaster, wire, cardboard and mixed media.

LART1300 History of Art I **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the pre-historic period through the Middle Ages. Lectures will be supplemented by slides, film, video, and/or computer presentations.

LART1350 History of Art II **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the Renaissance through the 19th Century. Lectures will be supplemented by slides, film, video, and/or computer presentations. (Prerequisite: LART1300)

LART1400 Exploration in the Visual Arts **CL3 L0 CR3**
This course is designed to provide an overview of the visual arts, its traditions, history and techniques as part of our general education offerings. This course will fulfill a Liberal Arts elective requirement, but will not be appropriate for students pursuing the Associate Degree in Fine Arts.

LART1450 The Clay Experience I **CL2 L4 CR3**
An overview of the basic techniques and processes of working with clay. Topics include hand-building and wheel-throwing methods, glazes and firing. This course will fulfill a humanities or liberal arts requirement for all majors.

LART1500 Introduction to Art Education **CL3 L0 CR3**
An introduction to the art teaching profession. Provides an overview of issues concerning the theory and practice of art education, as well as possible career paths in art education. Topics include, but are not limited to: history of art education in American schools; theory and practice in art education; child development in art; life in the art classroom; and career paths in art education. Twenty hours of classroom observation in an art(s) program is required.

LART1630 Screen Printing **CL2 L2 CR3**
This course introduces the student to screen printing techniques. Areas of emphasis include: types of frames; terminology; fabric selection; stencil preparation; fabric stretching techniques; screen printing inks; and squeegee selection. Projects are selected and designed by each student. Classroom theory will be supported by lab demonstrations. Credit will not be given for more than one of the following courses: LART1630 & LGRA2710

LART2100 Introduction to 35mm Photography **CL2 L2 CR3**
This course will provide the inexperienced photographer with instruction in basic 35mm camera techniques, types of cameras, lens and exposure controls. Particular attention will be given to various types of films, their exposure and development, followed by print development and darkroom techniques. Understanding technical terminology as it applies to photography will be stressed. Each student must provide film, print paper and his/her own 35mm manual camera.

LART2120 Digital Photography **CL2 L2 CR3**
This course is the digital complement to Introduction to 35mm Photography (LART2100). It covers differences between film and digital cameras, the benefits and pitfalls of taking digital photographs, how to move your images from camera to computer, to a printer, or the web. Students will also learn how to use photographic techniques such as lighting and composition, and how to use the cameras automatic and manual settings. Finally, the student will produce a PowerPoint presentation using all of the skills they have learned.

LART2150 Drawing III **CL2 L4 CR3**
This course introduces the student to drawing the human figure. Clothed and nude models will be the subjects of this course. Students will study the structure of the figure with an introduction to anatomy for artists, and will continue their exploration of a variety of materials that began in Drawing I and II. Gesture and pose, spatial constructions and the foreshortening of the figure will be discussed. (Prerequisites: LART1100 & LART1150 or permission of instructor)

LART2200 Drawing IV **CL2 L4 CR3**
This course continues the inquiry from Drawing III into the representation of the human form. Students will be expected to expand upon and refine their observation skills and conceptual knowledge of the figure. The use of color will be introduced to the subject at this time. (Prerequisites: LART1100, LART1150 & LART2150 or permission of instructor)

LART2350 20th Century Art **CL3 L0 CR3**
This course provides an introductory survey of the styles and conventions of the principle artistic movements and trends of the late 19th through 20th century. (Prerequisite: LART1300, LART1350)

LART2400 Painting I **CL2 L4 CR3**
An introduction to the basic principles, media and techniques of painting in oils and acrylics. The development of understanding color mixing, exploration of form, content and space is emphasized while working from abstract and realistic subject matters. The course synthesizes composition, creative thought and critical thinking. (Prerequisite: LART1100)

LART2450 The Clay Experience II **CL2 L4 CR3**
A continuation and expansion of concepts and skills established in LART1450. This course will explore both functional and non-functional forms in clay, introducing the students to more sculptural and conceptual methods of producing clay objects and to thinking of clay as a personally expressive medium. (Prerequisite: LART1450 or POI)

LART2510 Issues in Contemporary Art **CL1 L0 CR1**
An exploration of current topics, trends, issues, and artists in the contemporary art world. This course will be taught in a seminar format, supplemented with slides, film and video, computer presentations, and visiting artists. When possible, field trips to area galleries, museums, exhibitions, arts events, or studios may be taken. (Prerequisite: LART1300 & LART1350)

LART2550 Printmaking **CL2 L4 CR3**
An introductory studio course in the methods and materials of printmaking, building on principles and concepts of design established in 2-D Design (LART1200). A variety of printmaking techniques will be introduced including woodblock printing, etching, lino-printing, embossing and collograph. (Prerequisite: LART1200)

LART2600 Sculpture **CL2 L4 CR3**
Introduction to three-dimensional sculpture processes in a variety of media, which include clay, plaster, metals and wood. The course builds upon concepts and skills established in 3-D Design (LART1250), with emphasis on creative expression and critical thinking. Students will work from a variety of subject matter in both additive and subtractive sculptural methods. (Prerequisite: LART1250)

LART2650 Senior Portfolio **CL0 L4 CR1**
An introduction to portfolio presentation techniques to provide students with the skills and knowledge essential for the preparation for further education and a career in the visual arts. The course focuses on preparation of artwork, portfolio development, slide production, matting and the care of art works. Through the portfolio development process, students will gain an understanding of the skills essential to the effective transfer to a four-year institution for study of fine arts.

LART2700 Painting II **CL2 L4 CR3**
Further development of skills introduced in Painting I (LART2400). Primary focus on observational painting from landscape, still-life, and an introduction to painting the figure. The course will include analysis of the painting styles of the past and emphasis upon the role of the artist in contemporary society. (Prerequisite: LART2400)

LART2750 Independent Study in Fine Arts **CL0 L6 CR3**
The Independent Study in Fine Arts is designed for those students who either want to delve more deeply into a particular aspect of art, or who have a personal project they would like to explore. Students are expected to have enough art experience to formulate their own interests and goals, as well as work independently to completion. (Prerequisite: Permission of instructor)

FINANCE

LFIN1800 Personal Financial Management **CL3 L0 CR3**
This course studies the fundamental financial planning procedures and controls for personal finances to include managing assets, credit, insurance needs, budgets, retirement, and estate planning. Students will also be introduced to the concepts of investment as part of the planning procedures, as well as career planning.

FIRE TECHNOLOGY

LFIR1240 Principles of Emergency Services **CL3 L0 CR3**
This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fore protection systems, introduction to fire strategy and tactics; life safety initiatives

LFIR1270 Fire Behavior and Combustion CL3 L0 CR3
This course explores the theories and fundamentals of how and why fires start, spread and are controlled.

LFIR1310 Fire Protection Systems CL3 L0 CR3
This course provide information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

LFIR1360 Fireground Procedures CL2 L12 CR6
This course teaches the student basic fireground procedures including fire department organization, forcible entry, fire behavior, personal protective equipment, and other related subjects necessary for entry-level firefighters. Successful completion of this course certifies the student in Firefighter I through the State of NH Fire Standards and Training.

LFIR1400 Building Construction for Fire Protection CL3 L0 CR3
This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting building, preplanning fire operations, and operating at emergencies.

LFIR1600 Fire Prevention CL3 L0 CR3
This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; an fire investigation.

LFIR2000 Advanced Fireground Procedures CL1 L6 CR3
Teaches the student advanced fireground procedures, incident command system, vehicle rescue and extrication, water supply, foam streams, detection systems, and other related subjects necessary for entry-level firefighters. Successful completion of this course certifies the student in Firefighter II through the State of NH Fire Standards and Training. (Prerequisite: LFIR1360).

LFIR2100 Fire Inspector I CL3 L0 CR3
This course provides the student with than in-depth review of the skills attendant to the duties of a Fire Inspector. The student will learn the minimum tasks required of a Fire Inspector. Included in this course are research, interpretation of codes, implementing policy, testifying at legal proceedings, creating forms and job aids, code enforcement inspections and analysis of new and existing structures of this course certifies the student in Fire Inspector I through the state of NH Fire and Standards and Training. (Prerequisite: LFIR1310, LFIR1400, and LFIR1600).

LFIR2240 Strategy and Tactics CL3 L0 CR3
This course provides the principles of fire ground control through utilization of personal, equipment, and extinguishing agents. (Prerequisite: LFIR1270 and LFIR1400).

LFIR2250 Emergency Medical Technician – Basic CL1 L6 CR3
This course covers all emergency medical techniques required of the Emergency Medical Technicians in the provision of emergency care with an ambulance/fire service. Successful completion of the course allows the student to sit for the National Registry of Emergency Technicians' written and practical examination. (Prerequisite: Approval of department chair for non-Fire Science students)

LFIR2255 Hazardous Material Chemistry CL3 L0 CR3
This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.

LFIR2270 Anatomy & Physiology for Emergency Medical Services (A&P for EMS) CL3 L0 CR3
This course covers an introduction to Anatomy & Physiology geared specifically to set the foundation for advanced life support (ALS) certification within the EMS discipline of medicine. The course includes an introduction to medical terminology, the human body and explores each system within the body with a focus on relating each system to the EMS field. (Prerequisites: LFIR2250 with a C- or better; Approval of department chair for non-Fire Science Students; Criminal Record free of felony conviction (proof required); Current NREMT certification, or EMT certification with Instructor approval.) (Fall 2012)

LFIR2290 Advanced Emergency Medical Technician CL1 L6 CR3
This course covers the knowledge and skills required of the Advanced Emergency Medical Technician to prepare the student for a career in the field of Emergency Medical Services. Successful completion of this course and related clinical requirements enables the student to become eligible for the National Registry of Emergency Medical Technicians (NREMT) cognitive and psychomotor examinations. (Prerequisites: LFIR2250 AND LFIR2270 OR LSCI 1450, all with a C- or better; Nationally Registered EMT (NREMT), or EMT-Basic (NREMT-B), or State EMT with instructor approval; American Heart Association BLS for the Healthcare Provider Certification (or approved equivalent); Criminal record free of felony convictions; Department chair approval for non-Fire Science students) (Fall 2012)

LFIR2300 Advanced Fire Codes & Standards CL3 L0 CR3
This course prepares the student to use fire codes and standards at an advanced level. An in-depth study of common fire codes provides the student with the knowledge needed to perform fire inspections and fire investigations, review fire protection system designs, understand electrical installations and have the resources to answer code related questions pertaining to fire protection. (Prerequisite: LFIR2100)

LFIR2340 Fire & Emergency Services Safety & Survival CL3 L0 CR3
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. (Prerequisite: LFIR2240) (Fall 2012)

LFIR2360 Fire Investigation I CL3 L0 CR3
This course is intended to provide the students with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. (Prerequisite: LIFR1270 and LFIR1400).

LFIR2365 Fire Investigation II CL3 L0 CR3
This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony. (Prerequisite: LFIR2360).

LFIR2420 Fire Instructor I CL3 L0 CR3
This course provides the fire, EMS or emergency services instructor with the basic knowledge to prepare and deliver modern training programs. Successful completion of this course certifies the student in Fire Instructor I through the State of NH Fire Standards and Training. (Prerequisite: LFIR1360)

LFIR2450 Fire & Life Safety Education CL3 L0 CR3
This course provides information relating to the field of fire and life safety education.

LFIR2500 Fire Protection Hydraulics and Water Supply CL3 L0 CR3
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. .(Prerequisite: LMAT0931 or required math elective).

LFIR2502 Fire Protection Hydraulics and Water Supply Unit 2 CL2 L0 CR2
Study of fire protection hydraulics including fire flow and friction loss calculations for fire streams using mobile fire pumps. (Prerequisite: DC approval).

LFIR2503 Fire Protection and Water Supply Unit 3 CL1 L0 CR1
Study of fire protection hydraulics including fire flow and friction loss calculation for underground and above ground water distribution systems. (Prerequisite: LFIR2502).

LFIR2550 Occupational Health and Safety CL3 L0 CR3
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluations and control procedures for emergency service organizations.

LFIR2560 Community Fire and Risk Analysis CL3 L0 CR3
This course provides training in analyzing data, identifying problems, formulating objectives, analyzing casual factors, developing selection criteria, identifying alternative solutions, developing implementation strategies, and designing an evaluation plan. Upon completion, the student will be able to evaluate the community needs associated with all hazards, to select and evaluate the most efficient system in developing community fire protection programs, and to define and design a fire and life safety system for a jurisdiction.

LFIR2690 Legal Aspects of Emergency Services CL3 L0 CR3
This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.

LFIR2790 Fire Prevention Internship CL0 L9 CR3
In a supervised internship with a fire department, the student will work directly with the office that provides fire prevention for its jurisdiction. (Prerequisites: Approval of department chair, Fire Department and 3.0 GPA or better).

LFIR2810 Fire and Emergency Services Administration CL3 L0 CR3
This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics and leadership from perspective of the company officer. (Prerequisite: LFIR1240).

GRAPHIC DESIGN

LGRA1340 Typography and Layout with Adobe® InDesign® CL2 L3 CR3
A study of typography and type, its form, anatomy, races, design and measurement. A focused study of digital typesetting and Adobe® InDesign® essentials; working with documents, text, pictures, type, color, page elements and printing. Tutorials, lab exercises and hands-on projects will be assigned.

LGRA1350 Introduction to Graphic Design with Adobe® Illustrator® CL2 L3 CR3
This course introduces the student to graphic design: proportion, balance, sequence, emphasis (contrast), unity and color theory. The student will use creative thinking and experimentation to solve visual communication problems. Adobe® Illustrator® is introduced through tutorials, theory classes, demonstrations and hands-on projects. (Prerequisite: LGRA1340 or permission of instructor)

LGRA1760 Cooperative/Internship Education CL0 L9 CR3
Provides the opportunity for the student to utilize learned course competencies in a real-life setting. A supplemental laboratory experience on an extensive array of equipment and processes may be provided. Resume, cover letter, weekly journal, and employer evaluation are required. Student needs to work a minimum of 300 hours in a Graphic Design job-related environment. Cumulative GPA 2.0 minimum required.

LGRA2230 Graphic Design I CL2 L3 CR3
A focused study of graphic design including; but not limited to, logo design, business package design and advertising design. The student will be given the opportunity to work on a project of their choice. Pre-flighting and digital mechanicals will be addressed. Adobe® Illustrator® and Adobe® InDesign® will be explored. (Prerequisite: LGRA1350 or permission of instructor)

LGRA2240 Publication Design CL2 L3 CR3
Students will learn publication design theory, which they demonstrate through the integration of Adobe® Photoshop®, Adobe® Illustrator®, and Adobe® InDesign® to produce a unique magazine. Advanced typesetting and computer techniques will be addressed. (Prerequisite: LGRA1340 and LGRA1460)

LGRA2250 Designing for the Web I (Effective Fall 2009) CL2 L3 CR3
This course introduces Web Design using uses Adobe® Dreamweaver® to develop a website using tables. This course covers Adobe® Dreamweaver® interface, workflow process, site management, linking; cascading style sheets (CSS); typography; tables; rollovers; behaviors; and optimizing images for the web. The fundamentals of graphic design and typography will be addressed during weekly critiques.

LGRA2420 Digital Imaging I with Adobe Photoshop CL2 L3 CR3
Building on the baseline knowledge from Design Software Essentials, this course focuses in on Photoshop as a tool for production and design. The course approaches Photoshop from the standpoint of two related areas; print design & production, and web design. The course covers the general skill set for both print and web design, and the techniques which are most useful in each. (Prerequisites:LMMA1200 Design Software Essentials)

LGRA2430 Digital Imaging II with Adobe Photoshop CL2 L3 CR3
Extending the skills of Digital Imaging I, this course teaches advanced Photoshop techniques for print and web design. It provides a palette of abilities and skills to get the most out of Photoshop, as a crucial tool for production and design. Students will learn techniques such as advanced layering and blending modes, adjustment layers, and specialized

selection & photo-retouching tools. Lab assignments focus on effectively working with Photoshop to accomplish complex tasks, plus "tips and tricks" to enhance efficiency and creativity. (Prerequisites: LGRA2420 Digital Imaging I with Adobe Photoshop)

LGRA2450 Designing for the Web II **CL2 L3 CR3**
This course develops student's web design skills further using Adobe® Dreamweaver®. The course covers: tableless design; forms; accessibility; inserting media objects; and how to get your site online using spry tools. Design and typography will be addressed during weekly critiques. (Prerequisite: LGRA2250)

LGRA2653 Independent Study with Lab **CL2 L3 CR3**
Students in an independent study option will engage in learning about a topic of special interest and/or need. This course has a 48-hour lab requirement. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

LGRA2660 Independent Study **CL3 L0 CR3**
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

LGRA2710 Screen Process Printing **CL2 L3 CR3**
This course introduces the student to commercial screen printing techniques. Areas of emphasis include types of frames, terminology, fabric selection, photo mechanical stencil preparation, fabric stretching techniques, screen printing inks, squeegee selection, and substrates. Projects are selected and designed by each student and must be printed on predetermined substrates. Classroom theory will be supported by lab demonstrations. (Prerequisite: LGRA 1350)

LMMA1200 Design Software Essentials **CL2 L3 LCR3**
In Design Software Essentials, students cover the necessary functions of Photoshop and Illustrator. These are the two major 2D image creation and editing softwares. These programs form the foundation of digital imaging in both print screen and video graphics. Students will learn through several lab assignments that cover pixel manipulation, composing, adjusting, and resizing in Photoshop. In Illustrator, students will learn how to properly and efficiently manipulate vectors; how to create and use color properly, and finally how to efficiently output vector images for screen or print. Concepts learned in this course carry over into animation, motion graphics, 3D design, and more. This course is a prerequisite to most core Media Arts courses.

HUMAN SERVICES

LHUS1100 Professional Seminar **CL3 L0 CR3**
This course covers the basic steps to becoming a Human Services professional. Self-evaluations and aptitude testing will be a part of the curriculum. Students will acquire an understanding of the responsibility of working with others and how confidentiality and ethics play a major role in the field. Other topics will include; cultural diversity, domestic violence, community awareness, and communication skills, both verbal and written. (Prerequisite: Interview with Instructor)

LHUS1120 Overview of Developmental Disabilities **CL3 L0 CR3**
This course will cover the broad range of developmental disabilities; including what is a developmental disability, an overview of specific developmental disabilities, what are the best ways to support a person with a specific disability. Included in this course will be the history of the provision of services to people with developmental disabilities, nationally and specifically in New Hampshire.

LHUS1130 Community Inclusion **CL3 L0 CR3**
This course will cover how as a society we have come from segregation to integration to full inclusion. How does this impact someone through their lifespan, what are some specific strategies and tools one can use when working with individuals with disabilities and their families. (Prerequisite: LHUS1120) (2011)

LHUS1200 Introduction to the Human Services Profession **CL3 L0 CR3**
This course provides the full range of human service topics for the student to become familiar with the profession in all its diversity. Topics include: administration, assessment, diversity, gerontology, mental health, and direct care. Students will understand the theory and practice of the services available for disabled and disadvantaged people in the community. Information and concepts are drawn from history, sociology, and psychology.

LHUS1220 Supportive Communication Skills CL3 L0 CR3
This course provides an overview of theory, process, and the practice of primary interpersonal communication skills. Students are assisted in developing skills to supportively communicate with a variety of people in a range of environments.

LHUS1260 Learning and Behavior CL3 L0 CR3
This course discusses the history and principles of behaviorism and presents learning theories and teaching techniques based on positive behavior principles. Presentation and discussion focus on the ethical and client rights issues of understanding and promoting effective behavior. Recent trends and techniques for applying learning principles in a variety of settings will be included.

LHUS1280 Individual Assessment and Planning CL3 L0 CR3
In this course we address the question of how human potential can be recognized and enhanced. To answer this question, we will critically examine the perspectives and tools that are commonly used. Our focus will be to build on strengths and develop ways of supporting continued growth and personal goals of people who choose to participate in human services.

HUS1300 Gerontology CL3 L0 CR3
This survey course in gerontology includes a history of the changing demographics of aging, social and economic factors, potential impact of stress, housing, and retirement. Legal issues, as well as protection, safety, community services, and care are discussed.

LHUS1310 Psychosocial Aspects of Aging CL3 L0 CR3
This course examines the growth and development of older persons from both psychological and sociological perspectives. The interaction of the individual with the social environment provides a framework for this course with special attention given to societal valuing and devaluing of older persons. The growth and development of older adults, social roles, expectations, opportunities, and new perspectives on aging are discussed.

LHUS1400 Justice and the Community CL3 L0 CR3
This course will provide a comprehensive overview of emerging trends in community justice and support services, with an emphasis on community integration of service delivery, juvenile justice, and violence in society. Changing societal, judicial, and community values will be explored within a historical context; with regard to their impact on the evolution of emerging community-based juvenile justice models and responses to violence through the development of community justice models.

LHUS1450 Foundations of Conflict Resolution CL3 L0 CR3
This course is designed to provide students with the essential foundations of Conflict Resolution. This is a theory based course that will enhance students' awareness of violence in society as well as bullying and conflict related issues that arise in the workplace and personal environment. Students will study, research, and analyze various theoretical models of conflict resolution to realize that there are a variety of concepts that can be used to create a peaceable environment. Students will participate in role-plays to further enhance their understanding of each model and its impact on the field of conflict resolution. The research component will be the foundation in which the student can build a plan/program for the practicum experience that follows.

LHUS1480 Marketing Management for Non-Profit Organizations CL3 L0 CR3
Marketing Management for Non-Profit Organizations combines conceptual learning of the marketing function, the marketing communications process, consumer behavior, and marketing strategy development with a practical hands-on project in which students develop an integrated marketing communications plan for a non-profit organization. Students will learn how to design, manage, and implement marketing function into their agency mission and operations. (Prerequisite: LHUS1200)

LHUS1500 Introduction to the Practicum CL1 L0 CR1
Designed to prepare students for human services practicum experiences, this course provides opportunities to identify and practice skills in the areas of interviewing, communications, human relations, research, ethics, and management of time and work. This course is required for all Human Services students.

LHUS1610 Human Services Practicum I CL2 L9 CR5
A course combining: supervised human services work at a community agency, with instructor-facilitated student peer review. This is an individualized learning experience that enables the student to develop and apply attitudes, skills, and

knowledge in a real work setting. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LHUS1200, 1500 or POI)

LHUS1710 Gerontology Practicum I CL2 L9 CR5
This course combines supervised human services work at a community agency with instructor facilitated student peer review. This is an individualized learning experience that enables the student to develop and apply attitudes, skills, and knowledge in a real work setting. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports personal and professional growth. (Prerequisites: LHUS1300, 1500 or POI)

LHUS2140 Meaningful Supports CL3 L0 CR3
We all find meaning in how we spend our days- where we choose to go, work, recreate. People with disabilities have gone from a time of segregation to inclusion in their community. This course will look at how to bring meaning to one's day, so that community members with disabilities are contributing members of their community. This course will also examine barriers to full participation and strategies to overcome perceived barriers. (Prerequisite: LHUS1120) (2011)

LHUS2150 Families and Support Networks CL3 L0 CR3
In this course, the student will learn about the importance of relationships, social networks, family support and individualized support for people with disabilities.(Prerequisite: LHUS1120) (2011)

LHUS2210 Mental Health and Developmental Disabilities CL3 L0 CR3
This course introduces students to human services within the fields of mental health and developmental disabilities. Recent developments in the delivery of services that enhance the self-determination of individuals and families will be examined. Students will also be introduced to concepts and methods of family support, community membership, school inclusion, supported employment, stigma, peer support, and recovery. With guidance, students will be responsible to develop and present an individual learning project.

LHUS2280 Political/Social Issues of Human Services CL3 L0 CR3
This course presents students an opportunity to study and present on topics related to social and political trends and forces that profoundly influence service recipients and service systems. An analysis of historical issues with regard to their impact on current service system trends is conducted. Issues that are expected to have a significant impact on service delivery in the future are discussed.

LHUS2230 Social Biology of Behavior CL3 L0 CR3
This course sill help human service and other students with the actual types of behavior that they may encounter in their real world experiences in future careers. The course will explore the relevant biological structures, processes, and social influences that result in behaviors and issues commonly encountered by human services workers.

LHUS2300 The Aging Process CL3 L0 CR3
This course provides an overview of the processes underlying the phenomena of aging across the lifespan. An overview of genetics and the cellular bases of living and dying as factors of growing older are provided. The effects of aging on organs and bodily system functioning, as well as the impact of life style on health and longevity are reviewed.

LHUS2320 Political/Social Issues in Gerontology CL3 L0 CR3
This is an opportunity for students to study and present on topics related to social and political trends and forces profoundly affecting aging individuals and their families. Issues are evaluated in a historical context with regard to their impact on current service system trends. Issues that are expected to have a significant impact on service delivery in the future are discussed.

LHUS2620 Human Services Practicum II CL2 L9 CR5
Building on skills and knowledge gained in Human Services Practicum I (LHUS1610), students develop more advanced competencies as the basis for the learning experience and will be evaluated using criteria appropriate for second year students. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports a deeper level of personal and professional growth. (Prerequisite: LHUS1610 or POI)

LHUS2710 Gerontology Practicum II CL2 L9 CR5
Building upon attitudes, skills, and knowledge acquired in Gerontology Practicum I (LHUS1710), the student will develop more advanced competencies as a basis for the learning contract and will be evaluated by criteria appropriate for a

second year student. Work at the practicum site, along with peer review, self-reflection, and disclosure, combine to create a structure that promotes and supports a deeper level of personal and professional growth. (Prerequisite: LHUS1710 or POI)

LIBERAL ARTS

FINE ARTS

LART1100 Drawing I **CL2 L4 CR3**
An introduction to the materials, techniques and subject matter of observational drawing in pencil, pen and ink, charcoal, conte and brush, as well as using experimental tools and techniques. Subject matter includes the still life and landscape. One and two point perspective is introduced. The student will gain mastery of the fundamental techniques of drawing as the primary means of documentation, communication and self-expression.

LART1150 Drawing II **CL2 L4 CR3**
A continuation of the principles, media and techniques of drawing established in Drawing I. Emphasis is placed on the exploration of creative visual expression through observational and imaginary drawing from the human figure, still life and landscape. Concepts and media of drawing in color are introduced and emphasis is placed on the use of drawing as a means of personal self-expression. (Prerequisite: LART1100)

LART1200 2-D Design **CL2 L4 CR3**
An introduction to the basic two-dimensional design concepts of color, composition and the organization of pictorial space. A variety of design media will be explored which includes drawing, painting and collage.

LART1250 3-D Design **CL2 L4 CR3**
An introduction to three-dimensional concepts and sculptural materials that are involved in the creation and appreciation of functional and non-functional sculptural form. A variety of sculptural media, materials and techniques will be explored including clay, plaster, wire, cardboard and mixed media.

LART1300 History of Art I **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the pre-historic period through the Middle Ages. Lectures will be supplemented by slides, film, video, and/or computer presentations.

LART1350 History of Art II **CL3 L0 CR3**
An introductory survey of the principle movements and trends in painting, sculpture, and architecture from the Renaissance through the 19th Century. Lectures will be supplemented by slides, film, video, and/or computer presentations. (Prerequisite: LART1300)

LART1400 Exploration in the Visual Arts **CL3 L0 CR3**
This course is designed to provide an overview of the visual arts, its traditions, history and techniques as part of our general education offerings. This course will fulfill a Liberal Arts elective requirement, but will not be appropriate for students pursuing the Associate Degree in Fine Arts.

LART1450 The Clay Experience I **CL2 L4 CR3**
An overview of basic techniques and processes of working with clay. Topics include hand-building and wheel-throwing methods, glazes and firing. This course will fulfill a humanities or liberal arts requirement for all majors. Fine Arts majors are directed to LART450 as their elective.

LART1500 Introduction to Art Education **CL3 L0 CR3**
An introduction to the art teaching profession. Provides an overview of issues concerning the theory and practice of art education, as well as possible career paths in art education. Topics include, but are not limited to: history of art education in American schools; theory and practice in art education; child development in art; life in the art classroom; and career paths in art education.

LART1630 Screen Printing **CL2 L2 CR3**
This course introduces the student to screen printing techniques. Areas of emphasis include: types of frames; terminology; fabric selection; stencil preparation; fabric stretching techniques; screen printing inks; and squeegee selection. Projects are selected and designed by each student. Classroom theory will be supported by lab demonstrations. Credit will not be given for more than one of the following courses: LART1630, LGRA2710

LART2100 Introduction to 35mm Photography **CL2 L2 CR3**
This course will provide the inexperienced photographer with instruction in basic 35mm camera techniques, types of cameras, lens and exposure controls. Particular attention will be given to various types of films, their exposure and development, followed by print development and darkroom techniques. Understanding technical terminology as it applies to photography will be stressed. Each student must provide film, print paper and his/her own 35mm manual camera.

LART2120 Digital Photography **CL2 L2 CR3**
This course is the digital complement to Introduction to 35mm Photography (LART2100). It covers differences between film and digital cameras, the benefits and pitfalls of taking digital photographs, how to move your images from camera to computer, to a printer, or the web. Students will also learn how to use photographic techniques such as lighting and composition, and how to use the cameras automatic and manual settings. Finally, the student will produce a PowerPoint presentation using all of the skills they have learned.

LART2150 Drawing III **CL2 L4 CR3**
This course introduces the student to drawing the human figure. Clothed and nude models will be the subjects of this course. Students will study the structure of the figure with an introduction to anatomy for artists, and will continue their exploration of a variety of materials that began in Drawing I and II. Gesture and pose, spatial constructions and the foreshortening of the figure will be discussed. (Prerequisites: LART1100, LART1150 or permission of instructor)

LART2200 Drawing IV **CL2 L4 CR3**
This course continues the inquiry from Drawing III into the representation of the human form. Students will be expected to expand upon and refine their observation skills and conceptual knowledge of the figure. The use of color will be introduced to the subject at this time. (Prerequisites: LART1100, LART1150, LART2150 or permission of instructor)

LART2350 20th Century Art **CL3 L0 CR3**
This course provides an introductory survey of the styles and conventions of the principle artistic movements and trends of the late 19th through 20th century. (Prerequisite: LART1300, LART1350)

LART2400 Painting I **CL2 L4 CR3**
An introduction to the basic principles, media and techniques of painting in oils and acrylics. The development of understanding color mixing, exploration of form, content and space is emphasized while working from abstract and realistic subject matters. The course synthesizes composition, creative thought and critical thinking. (Prerequisite: LART1200)

LART2450 The Clay Experience II **CL2 L4 CR3**
An introduction to the media, techniques and processes of clay in both functional and non-functional methods which builds on the skills and experiences of 3-D Design (LART1250). Students will gain an understanding of wheel-throwing and hand-forming methods, as well as glazing and firing. (Prerequisite: LART1450)

LART2510 Issues in Contemporary Art **CL1 L0 CR1**
An exploration of current topics, trends, issues, and artists in the contemporary art world. This course will be taught in a seminar format, supplemented with slides, film and video, computer presentations, and visiting artists. When possible, field trips to area galleries, museums, exhibitions, arts events, or studios may be taken. (Prerequisite: LART1300, LART1350)

LART2550 Printmaking **CL2 L4 CR3**
An introductory studio course in the methods and materials of printmaking, building on principles and concepts of design established in 2-D Design (LART1200). A variety of printmaking techniques will be introduced including woodblock printing, etching, lino-printing, embossing and collograph. (Prerequisite: LART1200)

LART2600 Sculpture **CL2 L4 CR3**
Introduction to three-dimensional sculpture processes in a variety of media, which include clay, plaster, metals and wood. The course builds upon concepts and skills established in 3-D Design (LART1250), with emphasis on creative expression and critical thinking. Students will work from a variety of subject matter in both additive and subtractive sculptural methods. (Prerequisite: LART1250)

LART2650 Senior Portfolio **CL0 L4 CR1**
An introduction to portfolio presentation techniques to provide students with the skills and knowledge essential for the preparation for further education and a career in the visual arts. The course focuses on preparation of artwork, portfolio development, slide production, matting and the care of art works. Through the portfolio development process, students will gain an understanding of the skills essential to the effective transfer to a four-year institution for study of fine arts.

LART2700 Painting II **CL2 L4 CR3**
Further development of skills introduced in Painting I (LART2400). Primary focus on observational painting from landscape, still-life, and an introduction to painting the figure. The course will include analysis of the painting styles of the past and emphasis upon the role of the artist in contemporary society. (Prerequisite: LART2400)

LART2750 Independent Study in Fine Arts **CL0 L6 CR3**
The Independent Study in Fine Arts is designed for those students who either want to delve more deeply into a particular aspect of art, or who have a personal project they would like to explore. Students are expected to have enough art experience to formulate their own interests and goals, as well as work independently to completion. (Prerequisite: Permission of instructor)

ENGLISH

LENG0900 Foundations of Writing* **CL3 L0 CR3**
Strategies for strengthening and developing writing skills, sentence structure, paragraph organization and essay development, as well as spelling, punctuation and grammar usage are emphasized. Critical thinking and library research skills are also included. **Credits do not apply to degree requirements.**

LENG0951 Reading/Basic Skills* **CL1 L0 CR1**
Students work on improving reading skills, emphasizing word attack skills and vocabulary development. **Credits do not apply to degree requirements.**

LENG0952 Reading/Comprehension* **CL1 L0 CR1**
Students work on improving reading skills, identifying main idea and supporting details, and inferential comprehension. **Credits do not apply to degree requirements.**

LENG0953 Reading/Organization* **CL1 L0 CR1**
Students work on patterns of organization, apply critical and analytical thinking skills, and improve study skills. **Credits do not apply to degree requirements.**

LENG1200 College Composition **CL3 L0 CR3**
In this course students learn to write clearly and effectively for defined audiences through a variety of strategies. Emphasis is on the writing process from prewriting through drafting, revising and editing. Formal essays and a research paper are required. (Prerequisite: Placement or successful completion of competency assessment)

LENG1204 College Composition/Portfolio **CL1 L0 CR1**
Students write additional essays to add to their portfolio. The writing process is emphasized. (Prerequisite: LENG1200, may be taken concurrently)

LENG1220 Technical Communications **CL3 L0 CR3**
The focus in this course is on the principles of, and practice in, clear and accurate presentation of information as directed to specific audiences. This includes planning, composing and editing resumes, reports, descriptions of mechanisms,

instructions and critiques, and incorporation of graphics. The oral component includes interview strategies, informal and formal presentations. (Prerequisite: LENG1200 or POI)

LENG1230 Business Communications **CL3 L0 CR3**
Efficient techniques of written and oral communication emphasizing both process and product in the modern business environment are examined. Students gain an understanding of the theory of the communication process and then prepare reports in direct, indirect and persuasive order. (Prerequisite: LENG1200 or POI)

LENG2230 Survey of American Literature **CL3 L0 CR3**
An overview of how America's best-known thinkers, authors and poets have reflected and influenced culture, this course takes an historical approach to studying literature from colonial to contemporary times. (Prerequisite: LENG1200 or POI)

LENG2240 The American Short Story **CL3 L0 CR3**
Early, modern and contemporary short stories are read closely and analyzed for theme, plot development, character study and author's style. Stories are placed in their historical context. (Prerequisite: LENG1200 or POI)

LENG2300 Creative Writing Workshop CL3 L0 CR3
Techniques, practice and feedback help access creative writing skills and develop an understanding of different creative writing genres through weekly writing, revision and a final portfolio. Students compose a short story, five pieces of poetry and two dramatic scenes. Focus is on characterization, plot, imagery and theme. (Prerequisite: LENG1200 or POI)

LENG2310 Fiction Workshop CL3 L0 CR3
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. Principal, traditional forms of fictional narrative writing are explored, including the short story, novella and novel. Students are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on character, plot and thematic development. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2320 Poetry Workshop CL3 L0 CR3
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course emphasizes the analysis and writing of poetry. Students study the idea of creativity and the poetic use of language, and are encouraged to discover and reflect their own voice. Attention is focused on tone, style, voice and thematic development. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2330 Playwriting Workshop CL3 L0 CR3
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course includes the analysis and writing of dramatic scripts designed for the theater. Students study and write one- and multiple-act plays and are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on conflict, character and thematic development. Emphasis is placed on effective dialogue. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2340 Scriptwriting for Film and Television CL3 L0 CR3
Students involve themselves in the process of imaginative writing. Instruction is guided by the student's individual interests, strengths and needs. The course includes the analysis and writing of dramatic scripts designed for television and/or large screen production. Students are encouraged to discover and reflect their own voice in the form most suitable. Attention is focused on conflict, character and thematic development, as well as logistics. Students submit a portfolio for publication. (Prerequisite: LENG2300 or POI)

LENG2460 Tolkien and The Ring of Power **CL3 L0 CR3**
The Hobbit and The Lord of the Rings by J.R.R. Tolkien are studied and analyzed. Tolkien's biography, his writing life, the origins of the stories, and their publication history, as well as his construction of a mythological world and its peoples and languages, his characters and their development, and his thematic concerns are researched. Finally, Tolkien's influence on 20th century fantasy literature is considered. (Prerequisite: LENG1200)

LENG2500 Introduction to Literature **CL3 L0 CR3**
Various literary types are defined and compared. Representative examples of short stories, plays, poems and novels are read and critically analyzed. (Prerequisite: LENG1200 or POI)

LENG2540 The Nature Writers CL3 L0 CR3
The course introduces students to the prose and poetry of British and American nature writers. It also helps them understand the historical, social and intellectual background of various literary periods. (Prerequisite: LENG1200 or POI)

LENG2550 Popular Fiction CL3 L0 CR3
Elements of horror fiction and popular fiction are studied and researched. Representative samples are read and analyzed for techniques and themes. Writers include Poe, Hawthorne, Faulkner, Oates and Conrad. The evolution of imaginative literature from the gothic through contemporary horror, science fiction and fantasy is studied using various critical approaches. (Prerequisite: LENG1200 or POI)

LENG2560 Introduction to Drama CL3 L0 CR3
The basis of this course is the reading and discussion of significant plays in Western literature, from the Greeks to the present with related writing assignments. The plays are viewed within their historical and social contexts, with an emphasis on the relationship between their literary and theatrical forms. (Prerequisite: LENG1200 or POI)

LENG2570 The Myth of the Hero CL3 L0 CR3
The character of the hero, as he or she appears in the myths of different societies, is studied and analyzed. Students explore the meanings of mythological figures, motifs, and references from a variety of perspectives. Creation and fertility myths of the world, as they impact understanding the role of the hero, are considered as well. (Prerequisite: LENG1200)

LENG2600 Public Speaking CL3 L0 CR3
This course provides an introduction to the fundamentals of public speaking and offers students the opportunity to practice these skills through a variety of in-class speeches. Students research, develop, prepare and deliver oral presentations. In addition, class members serve as an audience and provide feedback to their fellow classmates. (Prerequisite: LENG1200 or permission of instructor)

FRENCH

LFRE1200 Elementary French I CL3 L0 CR3
This course is open to students with little or no prior experience in the language. It stresses the four basic skills of listening, speaking, reading and writing, as well as the language in a cultural setting. (Prerequisite: LENG1200 may be taken concurrently)

LFRE1210 Elementary French II CL3 L0 CR3
A continuation of LFRE1200 with the same emphasis on listening, speaking, reading and writing. (Prerequisite: LFRE1200)

HISTORY

LHIS1310 American History and Civilization I CL3 L0 CR3
This survey, from the "Age of Exploration" until approximately 1865, examines the development of American civilization, institutions and cultures during this period. The course's approach to American history is a "holistic" one that explores the social, cultural, philosophical, political and economic aspects of that history.

LHIS1320 American History and Civilization II CL3 L0 CR3
This survey, from approximately 1865 to the present, examines the development of American civilization, institutions and culture during this period. The course's approach to American history is a "holistic" one that explores the social, cultural, philosophical, political and economic aspects of that history.

LHIS1380 Women in U.S. History – 1600 to the Present CL3 L0 CR3
This course is a multicultural survey of women's roles, experiences and contributions to American society and culture from 1600 to the present. Topics included will be colonial women and domestic work; witchcraft persecutions; women as masters and slaves; women reformers; the suffrage and woman's rights movement; women and war; women's physical and mental health; women and political power; immigrant women; women as Other – lesbians and gender rebels; women in the Civil Rights and peace movements; women and political power; contemporary feminism. (09/2009)

LHIS1500 Latin American History and Civilization CL3 L0 CR3
This course covers the historical development of Latin American/Hispanic culture and civilization from the Pre-Columbian period until the present. Topics will include: the geography and culture of Latin America; Native American cultures and civilizations in the region; the Spanish and Portuguese conquests; the Spanish colonial economy, society, and politics;

Latin American independence movements and wars; the early independent republics in Latin America; U.S./Latin American relations, human rights issues, and modern developments in the region.

LHIS2100 World History I **CL3 L0 CR3**
This survey course covers the historical development of various representative world cultures and civilizations until approximately 1500. Areas covered include: human evolution and migration out of Africa, prehistoric human cultures, the Agricultural Revolutions in the Old and New Worlds, the major "Cradles of Civilization": Mesopotamia, Egypt, India, China, MesoAmerica, and the Andes, human technical developments, the development of political and legal systems, Ancient Europe, Medieval Europe, contact between Asia and Europe, and other topics. Students will understand history as not only WHO, WHAT, WHERE, and WHEN but will also understand the "WHY". (1/2014)

LHIS2200 World History II **CL3 L0 CR3**
This survey course covers the historical development of various representative world cultures and civilizations from approximately 1500 to the present. Areas covered include: European expansion and conquest; the development of the "modern" political and economic systems; the rise and fall of "empires"; the Industrial Revolution; the Enlightenment and its influence; the development of the modern nation-state; imperialism, colonialism, and nationalism. Students will understand history as not only WHO, WHAT, WHERE, and WHEN but will understand the "WHY". (1/2014)

LHIS2250 History of the Twentieth Century **CL3 L0 CR3**
The course examines major social, cultural, political and technological events, trends and movements in the world during the twentieth century. Topics covered include: Russian Revolution, Communism, World Wars I and II, industrial and technological advances and trends, the demise of colonialism, the Cold War, the Middle East, Vietnam, social and cultural trends in the 1950's and 1960's, and the downfall of the Soviet Union. It is hoped that class members will go beyond an understanding of history as simply "who, where and when," and begin to understand why.

LHIS2350 US Labor and Reform Movements **CL3 L0 CR3**
The focus of the course is on those trends, movements and leaders that have sought to give voice and power to the traditionally voiceless and powerless segments of American society. Movements that have fought to eliminate or reduce inequality based on class, gender and race and to realize the "American Dream" are studied. The history and development of organized labor and its effect on American life and culture and such related movements and trends as the Civil Rights and Women's Rights movements are discussed. The music, art, literature and other elements of "popular culture" associated with these movements are examined. (Prerequisites: LHIS1310 or LHIS1320 or LHIS2250 or LHUM2500 or LHUM2520 or LPOL2310 or POI)

HUMANITIES

LHUM1310 Cultural Anthropology **CL3 L0 CR3**
This survey course involves the study of human beings and their cultures, customs, origins and development. Specific topics examined and discussed include human origins and evolution, human cultures, race and ethnicity, religions, taboos, political systems, economic systems, kinship, sexual norms and mores, gender roles, marriage, educational systems, art, and the effects of globalization on local cultures.

LHUM1500 Arabic Language and Culture **CL3 L0 CR3**
This course is designed to teach the students the Arabic alphabet, numbers and their sounds accurately. Also, to teach basic vocabulary words of conversation in the form of politeness, social greetings, etc. Also, the course touches on different Arabic culture, such as education, politics, women's roles, dress code, food, etc.

LHUM1510 Chinese Language and Culture **CL3 L0 CR3**
This course is intended for non-Chinese background students with no previous knowledge of Chinese. Emphasis is placed on developing conversational and reading skills, while some relevant cultural background is also integrated with the language training. The Chinese phonetic system "Pinyin" is introduced at the beginning of the course. Vocabularies of 120 words plus approximately 30 sentence patterns are covered in this course.

LHUM1550 Music Appreciation **CL3 L0 CR3**
This course is designed to see and understand the connection of music to human life and living in order to demonstrate its importance in the world. Throughout this course, music of different cultures and styles will be explored in our societies.

LHUM1600 Introduction to Theatre **CL3 L0 CR3**
This overview of theater through the production process combines a history of theater with elements of stage craft, acting technique, play analysis and script writing. (Prerequisite: LENG1200 or POI)

LHUM1610 Acting and Scene Study I **CL3 L0 CR3**
A workshop-style, basic acting and scene study, this course is based on the Sanford Meisner approach, and an overview of the great theater practitioners from Thespis to Stanislavski. Students participate in vocal and movement activities, as well as theater exercises, and they analyze characters through scene studies of playwrights' texts. (Prerequisite: LHUM1600)

LHUM2000 Introduction to Canadian Studies **CL3 L0 CR3**
Students acquire an understanding of a nation that is becoming increasingly important to the United States. Why two countries instead of one? Free trade? A unified North American economic zone? Quebec separatism? National health care? These and other pertinent issues are studied and discussed. By comparing the United States with Canada, students gain a better understanding of their own culture.

LHUM2500 Humanities in Western Civilization I **CL3 L0 CR3**
This interdisciplinary course examines evolutions of western culture from its classical origins up through 1550 A.D. This is accomplished through the examination of multiple perspectives including literature, art, music, philosophy, politics and theater. Classes consist of lectures, group seminars on readings and student projects.

LHUM2520 Humanities in Western Civilization II **CL3 L0 CR3**
This interdisciplinary course examines the ideological, economic, political, religious, psychological, artistic, social, philosophical, and military components involved in the cause and effect relationships which have molded the western cultural heritage from 1650 to the present. Classes consist of informal lectures, readings, quizzes, seminars on readings, and student presentations.

MATHEMATICS

LMAT0610* Math Prep **CL3 L0 CR3**
This course provides an extensive review of basic arithmetic and algebra concepts. Topics covered include operations with whole numbers, fractions, and decimals; percent; properties of real numbers; solving linear equations and inequalities; interpreting and solving application problems; graphing linear equations and inequalities; exponents, scientific notation; polynomials, factoring; and measurement in both the U.S. customary and the metric systems. **Credits do not apply to degree requirements**.(9/2013)

LMAT1280 Topics in Applied College Math **CL4 L0 CR4**
This course is designed to expose the student to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved solving applied problems. Topics to be covered include: Number Theory and Systems, Functions and Modeling, Finance, Geometry and Measurement, Probability and Statistics, and selected subtopics related to the student's major field of study. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam.)

LMAT1310 Boolean Algebra **CL1 L0 CR1**
This course relates principles of Boolean Algebra directly to elementary circuit analysis. It includes an examination of the decimal, octal, binary, and hexadecimal number systems. The use of NOT, AND, OR, XOR, NAND, and NOR in logic statements, as well as in simple circuit analysis, is covered. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LMAT1370 Technical Algebra & Geometry **CL4 L0 CR4**
This course is intended for technical students and introduces concepts from algebra, geometry, and trigonometry that will facilitate the solution of applied problems which could be encountered in technical fields. Topics include measurement, absolute and relative error, linear equations, roots, plane and solid geometric figures and their areas/volumes, finding missing dimensions of plane and solid figures, inscribed and circumscribed angles, radian measure, right triangle trigonometry, and an introduction to personal finance. (Prerequisite Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LMAT1420 Essentials of Algebra **CL3 L0 CR3**
This course includes a study of linear equations and their graphs, linear inequalities, an introduction to functions and their graphs, absolute value equations and inequalities, systems of equations in 2 and 3 variables, operations with polynomials, rational expressions, rational exponents, and an introduction to solving quadratic equations. Also included is basic

competency on the T183 graphing calculator. A grade of C or better must be achieved in this class to use it as a prerequisite for a subsequent class. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam.)

LMAT2110 College Algebra CL4 L0 CR4
This is a comprehensive course that includes the graphs and solutions of linear, radical and quadratic functions; graphs and solutions of linear, compound, absolute value, and nonlinear inequalities; exponential and logarithmic functions and their graphs; systems of equations in 2 and 3 variables, including solutions using matrices; rational exponents; and an introduction to trigonometry. A grade of C or better must be achieved in this class to use it as a prerequisite for a subsequent class. (Prerequisite LMAT1420 or equivalent with a grade of C or better or competence demonstrated on math placement exam).

LMAT2160 Statistics CL4 L0 CR4
This is a first course in statistics and probability. Analysis of single and bivariate data, algebraic and graphical analysis, sample statistics, probability, probability distributions, sample variability, sample distributions, the Central Limit Theorem, estimation and hypothesis testing, correlation and regression are covered. Emphasis is on applications throughout the course. (Prerequisite: LMAT1230 or LMAT1420 with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2250 Finite Math CL4 L0 CR4
Topics in this course include linear, quadratic, exponential and logarithmic functions; financial formulas such as rate of change, growth, compounding, etc.; the use of matrices and linear programming techniques in solving multi-variable problems; basic set and probability theory with Venn diagrams, and permutation/ combination formula analysis. (Prerequisite: LMAT1420 or LMAT2100 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2350 Pre-Calculus CL4 L0 CR4
Topics in this course include polynomial, rational, trigonometric, logarithmic, and exponential functions and their graphs; trigonometry and the unit circle; trigonometric identities; composite and inverse functions; logarithmic and exponential equations; solution of higher degree equations; quadratic, rational, and absolute value inequalities. (Prerequisite: LMAT2100 or LMAT2110 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2700 Calculus I CL4 L0 CR4
This course is designed for the student who has a strong math background. Included is a brief review of topics from Pre-Calculus. Calculus topics include functions, limits, continuity, slope/rate of change and the derivative, rules for and applications of the derivative, derivatives of trigonometric and logarithmic functions, and an introduction to integrals. (Prerequisite: LMAT2350 or equivalent with a grade of C or better or competence demonstrated on math placement exam.)

LMAT2710 Calculus II CL4 L0 CR4
This course is designed for the student who has a working knowledge of differentiation. Topics include integration techniques and applications, introduction to multi-variable functions, integrals of transcendental functions, calculus in probability, and an introduction to series and sequences. (Prerequisite: LMAT2700 or equivalent with a grade of C or better.)

PHILOSOPHY

LPHI1290 Introduction to Philosophy CL3 L0 CR3
This course is an introduction to the major areas of philosophical thought including metaphysics, the investigation and analysis of what is real; epistemology; ethics, the investigation into how we can live a “good life”; and esthetics.

LPHI2250 Comparative World Religions CL3 L0 CR3
The course examines the major “question” or “issues” addressed by religion in general. It then examines major, representative systems of religious belief and practice, as well as their historical and sociological development. These religious systems are analyzed using a “world view outline” which addresses different aspects of religious belief and practice, such as the Absolute, the Human Problem, the Human Solution, Rituals, the Meaning of History, Life After Death, Community and Ethics, and Attitudes Toward Other Religions.

LPHI2270 Ethical Issues CL3 L0 CR3
This course examines standards of professional conduct, values identification, moral development and the process of making moral decisions. Major contemporary ethical issues are examined. The emphasis is on acquiring the skills necessary to be able to guide oneself and others in the process of ethical decision-making.

LPHI2300 Introduction to Eastern Philosophy CL3 L0 CR3
This introductory survey covers various components of Eastern Philosophy, including Jainism, Hinduism, Theraveda Buddhism, Mahayana Buddhism, Taoism, Confucianism and Shintoism. (Prerequisite: LPHI1290 or LPHI2250 or POI)

POLITICS

LPOL2220 Current Social and Political Issues CL3 L0 CR3
Students learn to understand and analyze important and current events, as well as social, cultural and political issues. Due to the rapid rate of change in our society, specific issues vary depending on what is currently "newsworthy." General topics, however, include foreign affairs and policy, civil rights and liberties, crime and punishment, economic and welfare issues, political and social reform, gender issues, racial and ethnic disharmony, and other current "hot" issues in American life. Class members not only learn how to understand "both sides of an issue" they also learn how to better articulate their own positions.

LPOL2310 American Government CL3 L0 CR3
This introductory course in government examines the relationship between government, politics and power. Students discuss how people in a representative democracy can effect change in government to address current and future needs.

PSYCHOLOGY

LPSY1250 Introduction to Psychology CL3 L0 CR3
Various areas of psychology, including scientific investigation, motivation, personality, psychological testing, behavioral deviation, perception, learning and human development are studied.

LPSY1260 Human Growth and Development CL3 L0 CR3
This course surveys physiological, mental and emotional development over the human life span. Using the central concepts of epigenetic stages and interaction with the environment, the course identifies the main trends of human development and explores the needs and typical responses of persons at each stage.

LPSY2000 Educational Psychology CL3 L0 CR3
Psychological principles are applied to the learning environment. Theories of learning, memory, cognition, and behavior management are discussed in relation to formal education. (Prerequisites: LPSY1250 and LPSY1260 which may be taken concurrently)

LPSY2200 Abnormal Psychology CL3 L0 CR3
This course is an introduction to the categories, causes and methods of treatment of the major forms of psychopathology: neurosis, psychosis, personality disorders, addictions, sexual deviations, psychophysiological problems. (Prerequisite: LPSY1250) (Fall 2011)

LPSY2240 Crisis Psychology CL3 L0 CR3
This course covers the basic concepts and theories of human behavior with emphasis on the neurological and biological effects of stress. Traumatic situations such as death and dying, suicide, drug abuse, assaults, and large scale disasters are covered. (Prerequisite: LPSY1250)

SCIENCE

LSCI1040 Astronomy and Space CL3 L2 CR4
An introductory course designed to acquaint students with the wonders and complexity of the universe. Topics covered include Earth's place in the universe, the day and night skies, the origins of modern astronomy, gravity and orbits, telescopes, the solar system, newly discovered planets around other stars, types of stars, the birth and death of stars, the Milky Way and other galaxies, the Big Bang, Dark Matter and Dark Energy, and the fate of the universe. The lab

component consists of outdoor observations, use of telescopes, (weather permitting), computer simulations, and scheduled trips to planetariums. (Prerequisite: a C- or better in LMAT1230 or a C or better in LMAT0931 or equivalent)

LSCI1210 Chemistry I CL2 L2 CR3

This course provides an introduction to chemistry on a qualitative level. The major topics covered include measurement, energy, chemical terminology, classification of matter, atomic models, the Periodic Table, sources and types of chemical bonds, chemical reactions, acids and bases, phases of matter and the properties of common gases. This course is not recommended for students in Liberal Arts or Fine Arts, or for pre-nursing students. **Credit will not be given for more than one of the following courses: LSCI1210, LSCI1360.** (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LSCI1250 Technical Physics (09/2011) CL2 L2 CR3

This course is an introduction to the principles and concepts of physics. Math review, vectors, motion, Newton's laws, work, power, energy, friction, equilibrium, torque, concurrent forces, mechanical advantage, simple machines, and the properties of matter are covered. (Prerequisite: C or better in LMAT1280 or LMAT1370 or LMAT2110 or equivalent)

LSCI1280 Introduction to Physical Sciences CL3 L2 CR4

This fast-paced course covers the major concepts of physics and uses them in explaining how our world actually works. These concepts are developed through demonstrations and experiments, and require a minimum of mathematics. What is required is the ability to conceptualize the big underlying ideas, the ability to overcome notions about what we think we see versus what is actually happening, and the ability to combine and apply previously learned concepts to explain technology. The physics content covers motion, mechanics, work and energy, thermodynamics, waves, electricity, magnetism, light, and radioactivity. Amongst the course topics covered are the workings of air conditioners, electric motors, musical instruments, rockets, hot air balloons, four-stroke automobile engines, and radios. (Prerequisite: Successful completion of LMAT0610 or competence as demonstrated on math placement exam)

LSCI1290 Nutrition for Health and Fitness CL3 L0 CR3

This course is a study of the nutrients and how the body handles the nutrients throughout the life cycle. Topics include metabolism of macro- and micro-nutrients; physiological benefits of an optimal diet with exercise; behavioral issues related to eating; energy balance and weight control; and disease prevention strategies related to diet. Life style behaviors, which optimize nutritional health and wellness, are also emphasized.

LSCI1310 Nutrition for Health and Fitness Lab CL0 L2 CR1

This lab course is designed to reinforce selected topics covered in the lecture portion of Nutrition for Health and Fitness including energy requirements and ideal weight, chemical composition of common foods, chemical aspects of digestion, and several other topics. (Prerequisite: Math: Successful completion of LMAT0610 or competence as demonstrated on math placement exam; a B or better in LSCI1290 which may be taken concurrently.)

LSCI1360 Principles of Chemistry CL3 L2 CR4

This algebra-based course with integrated laboratory component provides a college-level introduction to the core concepts of chemistry for students new to, or reviewing, the subject. Beginning with the basic concepts of measurement, energy, classification of substances, and chemical terminology, it examines how the history of atomic models leads to the development of the wave mechanics model of the atom and the modern Periodic Table. These are then used in explaining chemical bonding and the nature of ionic, metallic, and covalent substances. Chemical reactions and the mole concept are then introduced leading to stoichiometry problems. Finally, the kinetic theory of particles is used in explaining the behavior of the phases of matter. **Credit will not be given for more than one of the following courses: LSCI1210, LSCI1360.** (Prerequisite: C or better in LMAT 1370 or LMAT 1420 or equivalent. Math prerequisite may be fulfilled by competence as demonstrated on math placement exam.)

LSCI1380 General Chemistry I (Fall 2011) **CL3 L2 CR4**

This is the first course in a full-year sequence examining the core concepts of chemistry. Students considering this course must have previous exposure to chemistry concepts, and must be prepared to work to develop their problem solving skills. Topics include atomic and molecular structure, stoichiometry, types of reactions, thermochemistry, gases, chemical bonding, molecular structures, intermolecular forces and solutions. The laboratory component is strongly connected to the subject material and promotes student experience with experimental techniques. (Prerequisites: C or better in LSCI1360 or equivalent AND a C or better in LMAT2110 or equivalent OR permission of instructor. Math prerequisite may be fulfilled by competence as demonstrated in math placement exam.)

LSCI1390 General Chemistry II (Fall 2011) **CL3 L2 CR4**

This is the second course in a full-year sequence examining the core concepts of chemistry, further expanding upon the

content in General Chemistry I. Topics include kinetics, chemical equilibrium, acids and bases, thermodynamics, electrochemistry, nuclear chemistry, properties of representative elements and transition elements, and an introduction to organic chemistry. The laboratory component is strongly connected to the subject material and promotes student experience with experimental techniques. (Prerequisites: C or better in LSCI1380 General Chemistry I OR permission of instructor).

LSCI1440 Human Biology with Lab CL3 L2 CR4

This course is a study of the human anatomical structure and physiological systems. It is designed to provide the student with knowledge and perspectives necessary to work cooperatively with professionals in medicine and other human service disciplines. Background topics include chemistry for human biology, cell structure and function, and human organization. Major topics include the digestive, circulatory, lymphatic, respiratory, urinary, skeletal, muscular, nervous, reproductive systems, the senses and genetics. Lab activities are designed to enhance and reinforce selected lecture topics. (Prerequisite: Math: Successful completion of LMAT0610 or competence as demonstrated on math placement exam or POI. Math prerequisite may be taken concurrently.)

LSCI1450 Anatomy & Physiology I CL3 L2 CR4

An introduction to the structure and function of the human body. Includes a review of the chemical and biological basis of living organisms and the anatomy and physiology of the integumentary, musculoskeletal and nervous systems. Integrated lab experience is provided using anatomical models and dissection of selected specimens, as well as observation of histologic preparations. (Prerequisite: LSCI1440 or successful completion of high school biology with lab within 5 years)

LSCI1460 Anatomy & Physiology II CL3 L2 CR4

Sequential study of the structure and function of the human body. Includes the anatomy and physiology of the blood and lymphatic systems, respiratory system, circulatory system, excretory system, fluid and electrolyte balance and reproductive system. Laboratory work parallels lecture topics, and consists of selected exercises in the study of anatomical models, dissection and physiological experimentation. (Prerequisite: C or better in LSCI1450)

LSCI1470 Music and the Brain CL3 L2 CR4

This course is an introduction to the structure and function of the special sense of hearing and its relationship to music, including the neurological functions involved in processing sounds and music. We will also examine the relationship between music and the cognitive functions of memory, movement, emotion and identity. Case studies involving music and its effect on humans will be examined. Labs will examine the anatomy and physiology of the ear, auditory nerve and associated brain structures. Subjective assessments of various types of music will also be studied.

LSCI1500 Environmental Science CL3 L2 CR4

This course provides an introduction to environmental science as a complex, interdisciplinary, scientific area of study. The focus of this course is on the scientific and ecological principles basic to understanding environmental issues. Major themes examined include water quality, human population, sustainability, biodiversity, and the relationship between human society and the natural world. Coursework will include lecture, laboratory exercises, field trips and in-class discussions. (Prerequisite: Successful completion of LMAT0610 or math competence as demonstrated on math placement exam.)

LSCI1520 Ecology CL2 L3 CR4

Students will study the general ecological principles regarding the relationships between organisms and their physical and biological environments in both lecture and the laboratory. These principles will be used to interpret patterns in the distribution, abundance, and characteristics of organisms over space and time. Students will study the differences among the various segments of ecology including individuals, populations, communities and biomes. The focus of this course is on the scientific and ecological principles basic to understanding environmental issues. Coursework will include lecture, laboratory exercises, field trips and in-class discussions. (Prerequisite: LENG1200 College Composition with a C or better or POI) (09/2009)

LSCI1530 Intro. to Plant Biology CL3 L2 CR4

This course is an introduction to the structure, function and diversity of plants. Covered topics include plant structure and function, growth and development, reproduction and genetics, and ecology, identification, classification and naming of plants. Laboratory activities are designed to enhance selected topics. (Available 9/2012)

LSCI1540 Plants & Man CL3 L2 CR4

People have depended on plants for food, shelter, clothing, warmth, communication and medicines. This course will present the major processes of biological sciences as applies to topics in the lecture material including plant anatomy & physiology review, plants as food, drink derived from plants, plants and health, and impact of other plant forms on society. Lab activities will be selected to enhance specific topics. (Prerequisite: LSCI1530 with a C or better) (Available 1/2013)

LSCI1550 Biology of AIDS CL3 L0 CR3

This course provides the student with an opportunity to explore the biology, immunology, epidemiology and treatment of acquired immune deficiency syndrome, or AIDS. This course includes: 1) the emergence of AIDS and the HIV-AIDS connection; 2) viruses and the human immunodeficiency virus (HIV); 3) the immunology of HIV-AIDS; 4) clinical progression of HIV disease and AIDS; 5) the epidemiology of AIDS; 6) transmission of the HIV virus and preventing HIV transmission; 7) HIV testing and diagnosis; 8) treatment of HIV infection and AIDS; 9) possible HIV vaccines; 10) prevalence of HIV and AIDS in various populations; and 11) the social and political aspects of AIDS worldwide.

LSCI1560 Biology of AIDS Lab CL0 L2 CR1

This lab serves as an introduction to the more advanced concepts in biological laboratory science. The course includes: 1) basics of laboratory safety; 2) use, care and handling of the compound microscope; 3) basic lab skills in pipetting, weighing and measuring; 4) preparing and running agarose gel electrophoresis; 5) staining gels and reading DNA "fingerprints"; 6) preparing and running polymerase chain reactions to amplify DNA; 7) learning to avoid DNA contamination; 8) using PCR to diagnose infectious diseases (including detection of the HIV) and other interesting DNA lab work.

LSCI1600 Introduction to Geology CL3 L2 CR4

This course provides an introduction to the geologic processes that make the Earth a very dynamic and active planet. The focus of this course is on discovering why processes such as volcanoes, landslides and earthquakes occur and how these processes shape the Earth's surface on a daily basis. Major themes examined include understanding the Earth's age, the rock cycle, identification of rock types and geologic features, and the interactions of atmosphere and ocean with the geological environment. Coursework will include lecture, homework, oral presentations, laboratory exercises, field trips and in-class discussions. (Prerequisites: Successful completion of LMAT0610 or competence as demonstrated on math placement exam or POI.)

LSCI2200 College Physics I CL3 L2 CR4

This algebra-based course with integrated laboratory component is a standard first-semester college physics course. This course is designed to help students develop thoughtful problem solving strategies in tandem with the coverage of the course material. Topics include mechanics, static and dynamic equilibrium, gravitation, rigid-body motion, conservation laws, energy transformations, and thermodynamics. (Prerequisite: C or better in LMAT 1370 or LMAT2110 or equivalent or POI)

LSCI2210 College Physics II CL3 L2 CR4

This algebra-based course completes the sequence for a year-long physics course having an integrated laboratory. Continuing the approach used in its prerequisite course, one major emphasis of this course is to promote student development of thoughtful problem-solving strategies by explicitly identifying and consistently applying methods to obtain solutions while considering a broad variety of problems. Course topics include the thermal properties of matter, fluids, waves, optics, electricity and magnetism, and electromagnetic waves. (Prerequisite: C or better in LSCI2200 or equivalent.) (09/2011)

LSCI2410 Microbiology CL3 L2 CR4

Modern principles and concepts of microbiology. The morphology, physiology, genetics and classification of bacteria, viruses and other organisms are studied. Their relationships to sanitation and infectious diseases are emphasized. The course, nature, incidence and control of communicable diseases, especially those of man, are included. (Prerequisite: LSCI1450 with a C or better)

LSCI2460 Introduction to Genetics CL3 L2 CR4

The study of human genetics and its application in various disciplines. It is designed to help students gain knowledge of this subject area and to be able to apply this knowledge in cooperative work with medical, research, criminal justice and many other science-related disciplines. Major topics include introduction and history of genetics, cell reproduction (meiosis and mitosis), genetic pedigrees and inheritance patterns, tools used in genetic testing, mutations and cancer. Lab activities are designed and used to reinforce selected topics. (Prerequisites: LSCI1440 with a C or better AND

LMAT2100 or LMAT2110. Math prerequisite may also be fulfilled by competence demonstrated on math placement exam.)

LSCI2610 Independent Study in Science CL3 L2 CR4
Independent Study in Science is an opportunity for a student to enroll in a higher-level science class to explore focused topics in science. Some suggested topics might be the Biology of Cancer, Neuroscience or Environmental Microbiology. This course includes a lab component. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0, two or more courses in the sciences with a grade of B or better).

SOCIOLOGY

LSOC1240 Introduction to Sociology CL3 L0 CR3
Our daily lives are affected, consciously and unconsciously, by social forces and influences of which we are largely unaware. This introductory course to sociology, the scientific study of society, explores and uncovers these hidden factors behind the behaviors and attitudes of individuals, groups and societies.

LSOC1280 Chemical Dependency CL3 L0 CR3
This course examines chemical dependency and substance abuse issues including etiology, diagnosis and treatment, the effect of alcohol and drugs on the body, family dynamics of addiction, and special topics selected by students.

LSOC1420 Introduction to World Geography CL3 L0 CR3
An introduction to the physical, cultural and cartographic aspects of the earth's regions, this course is designed to assist students in their understanding of social, political and economic development. Topics covered are location, movement, connection and interaction of populations in Europe, Australia, Pacific areas, South Asia, North, Central and South America, Middle East and Africa.

LSOC2210 Organizational Behavior CL3 L0 CR3
Coursework involves the students developing an understanding of how working together and leading people in organizations leads to the maintenance of healthy future organizations. It includes the challenges of leadership.

LSOC2250 Critical Thinking and Decision Making CL3 L0 CR3
This course focuses on the development of critical thinking skills through analysis and critique. Influences and problems associated with reason and the thinking process are explored, while strategies to develop reason-based decision making are also covered.

SOC2280 Human Sexuality CL3 L0 CR3
Students learn about sexuality from a developmental perspective, focusing on stages of growth and development. Personal attitudes, values and controversial social issues related to sexuality are examined and discussed. Upon completion of this course, students will better understand the individual and social impact of human sexuality on thought, feeling and behavior.

LSOC2310 Microeconomics CL3 L0 CR3
The focus of this course is on examination of the functional operation of the economy from a unit analysis perspective. Topics covered include perfect and imperfect competition, factors of consumer demand and elasticity, measurement and principles of international trade, and the individual firm and costs of production.

LSOC2320 Macroeconomics CL3 L0 CR3
Major macroeconomic issues such as world trade, the role of unions, cause of inflation, the role of productivity, supply and demand, the nature of money, as well as the costs and causes of unemployment are surveyed. Special emphasis is placed upon the role government plays through resource allocation and taxation.

LSOC2350 Children, Youth and Families CL3 L0 CR3
Students are provided an introduction to families from a sociological and systems perspective. The interplay between families and the larger society is the background against which the phenomena of childhood, adolescence and parenting are examined. Topics include, but are not limited to, poverty, delinquency, disability, aging, self-determination, community supports and interventions.

LSPA1200 Elementary Spanish I CL3 L0 CR3
This course is open to students with little or no prior experience with the language. It stresses the four basic skills of

listening, speaking, reading and writing, as well as the language in a cultural setting. (Prerequisite: LENG1200 may be taken concurrently)

LSPA1210 Elementary Spanish II **CL3 L0 CR3**
A continuation of LSPA1200 with the same emphasis on listening, speaking, reading and writing. (Prerequisite: LSPA1200)

MARINE TECHNOLOGY

LMAR1200 Fundamentals of Electricity and Electronics **CL3 L3 CR4**
Theory, principles and measurements of DC and AC electricity and electronics are covered. Schematic and conventional wiring diagram interpretation allows the student to become familiar with common 12-volt marine electrical systems. Hands-on troubleshooting includes various gauge, trim, battery, lighting, ignition feed, dash, engine, accessory, lanyard, relay and other systems found in small craft.

LMAR1220 Basic Service Operations **CL3 L3 CR4**
This course covers basic service shop operations including safety, use of hand and power tools, use of marine hardware, service literature, identification and operating principles of marine power packages, and common maintenance procedures. Topics included; but not limited to, are shop practices and safety, minor service procedures, engine model identification, service literature, fuel systems and steering systems. Students are responsible for the additional fee associated with the NH Marine Patrol Boater Safety Course as part of Basic Service Operations. See instructor for details.

LMAR1230 Outboard Engine Service I **CL3 L3 CR4**
Entry level fundamentals of recreational marine industry operations to include; but not limited to, model identification, service support literature, rigging and maintenance procedures for warranty support. (Prerequisite: A grade of C or better in LMAR1220 or permission of instructor)

LMAR1240 Starting, Ignition, and Charging Systems **CL3 L3 CR4**
This course will concentrate on theory, setup, maintenance and diagnostic procedures for common inboard and stern drive, starting, charging and ignition systems. Diagnostic exercises include battery point, Delco EST, Thunderbolt IV & V, MEFI and PCM EFI, Wastefire and other common marine ignition systems. (Prerequisite: A grade of C or better in LMAR1200 or permission of instructor)

LMAR1250 Marine Technician Fundamentals **CL3 L0 CR3**
Materials in this course are offered to the student in various formats including video, CD-Rom and printed text. This course also provides basic theoretical and foundational principles of 2- and 4-stroke engines and other marine propulsion systems. Setup and service literature are stressed. This is a required course for all Marine Technology students.

LMAR1703 Independent Study **CL3 L0 CR3**
Students in an independent study option will engage in learning about a topic of special interest and/or need. (Prerequisite: Approval of instructor, advisor, and department chair)

LMAR2220 Marina Operations **CL4 L0 CR4**
Marina operations will prepare entry-level technicians to use the Mercury Marine's Midas System including; but no limited to, warranty claims, product registration, product history, parts and insurance estimation. (Prerequisite: LMAR2310 or permission of instructor)

LMAR2230 Inboard Engine Service **CL3 L6 CR5**
Internal engine repair, as well as carburetor, fuel injection, ignition, cooling, alignment, maintenance and winterization are covered in this course. Diagnostic methodology is a major strongpoint. (Prerequisite: LMAR1220 or permission of instructor)

LMAR2250 Marine Drive Systems and Service **CL3 L6 CR5**
This course involves identification, maintenance, setup and repair procedures for common marine stern drive, transom and trim systems including, but not limited to, MerCruiser, R, Alpha and Bravo systems. A section of inboard transmission setup, alignment and diagnostic procedures are included. (Prerequisite: LMAR1220 or permission of instructor)

LMAR2310 Outboard Engine Service II CL3 L4 CR4
This course covers two- and four-cycle engine theory, ignition system theory function and diagnostics, fuel system theory function and diagnostics, cooling system theory function and diagnostics, and power transfer systems theory function and diagnostics. (Prerequisite: LMAR1230 or permission of instructor)

LMAR2350 Advanced Diagnostics CL3 L0 CR3
This highly specialized course is specifically tailored for technicians who require or seek advanced levels of expertise on MerCruiser and Mercury Outboard EFI Systems technology. The research activities of this course are designed to further improve the working knowledge/skills of experienced technicians on EFI Systems technology, diagnosis and repair procedures. (Prerequisites: LMAR2310, LMAR2230)

MEDIA ARTS AND TECHNOLOGY

LMMA1100 Communicating through Storyboards CL2 L3 CR3
Communicating through storyboards plays a major roll in visual storytelling. The ability to visually communicate directions to others in the production process is imperative. Storyboards simplify set-up times, delegate production teams, create shot lists and most importantly, keep everyone on track. In this course, students are not required to be accomplished artists; instead this course teaches students how to sketch in a clear and understandable way. Scene staging, perspective, proportion, lighting, and camera direction are some of the concepts covered in this course. In the final project, students will create a 10+ panel storyboard with all the concepts covered in the course. (09/2009)

LMMA1200 Design Software Essentials CL2 L3 LCR3
In Design Software Essentials, students cover the necessary functions of Photoshop and Illustrator. These are the two major 2D image creation and editing softwares. These programs form the foundation of digital imaging in both print screen and video graphics. Students will learn through several lab assignments that cover pixel manipulation, composing, adjusting, and resizing in Photoshop. In Illustrator, students will learn how to properly and efficiently manipulate vectors; how to create and use color properly, and finally how to efficiently output vector images for screen or print. Concepts learned in this course carry over into animation, motion graphics, 3D design, and more. This course is a prerequisite to most core Media Arts courses.

LMMA1300 Movie Making I (documentary) CL2 L3 LCR3
Students dive into visual storytelling in Movie Making I. Key software concepts are covered as students learn the Non-Linear Editing interface. Students learn through a series of lab-based tutorials and discussions, creating short documentaries that introduce essential editing functions. Students are tasked with creating a one-minute documentary about themselves and a short five-minute documentary (or mockumentary) about a chosen subject of their own concept and design. The final product is a self-produced DVD with the two documentaries.

LMMA1350 Movie Making II (narrative) CL2 L3 LCR3
In Movie Making II, students continue their technical journey exploring more nuances of Final Cut Pro and strengthening their skill behind the camera. This is achieved by the development of a short story. Students may use their own short or cull from years of student shorts written in the college's annual literary book, P.H.A.S.Tracks. The majority of this course is instructor-lead hands-on lab work. Students will also be encouraged to work on their own as this is the first of many time consuming courses. (Prerequisite: LMMA1300)

LMMA1360 Introduction to Cinematography CL2 L3 LCR3
Introduction to Cinematography is the companion course to LMMA1300 Movie Making I. While Introduction to Movie Making covers computer related editing concepts, this course covers camera mechanics, lighting, staging, sound, and more. What happens in front of the lens is essential to the success of the finished assignment. Students will complete a series of different camera experiments both in the lab and in the field, then transfer files to Final Cut and make evaluations on their shots. Students are currently shooting with Panasonic HVX200 High Definition cameras. (09/2009)

LMMA1500 Intro to Motion Graphics CL2 L3 CR3
This is a very exciting course built to compliment the movie making core of the program. This course explores Adobe's motion graphics software, After Effects. With this program students can create dynamic title sequences, composite clips and images, make color corrects and/or enhancements, remap time, in general make Hollywood-style special effects. This course concentrates on the software and developing organized work habits while learning how to within a production pipeline. Students will use a series of small video clips throughout the course to develop their skills and understanding of the program. (Prerequisite: LMMA1200 Digital Software Essentials)

LMMA2100 Introduction to 3D Design CL2 L3 CR3
This exciting course is an introduction in working with 3D. Students learn how to navigate virtual three-dimensional space while building and texturing polygonal models. This course is meant to enhance the filmmaking aspects of the curriculum. We use Maxon's Cinema 4D to model, texture, light, animate and render elements into After Effects, Premiere and Final Cut Pro for compositing. This software is extremely powerful while being completely accessible to beginners. (Prerequisite: LMMA1200 Design Software Essentials)

LMMA2350 Movie Making III (music video) CL2 L3 CR3
In Movie Making III, students work in groups to design and produce a music video. The focus is on planning and organization, multi-camera shoots and editing, and most importantly, working with deadlines. Students will work in groups and rotate duties as they work through each video. During pre and post production, instructors will reinforce principles, techniques, and technical applications. The shoot itself will take the students on location. This is a working semester, meaning large amounts of lab time will be concentrated on completing the project. Grading is based on benchmarks and deadlines set by the instructor. (Prerequisites: LMMA1300 Movie Making I, LMMA 1350 Movie Making II) (09/2009)

LMMA2400 Studio I CL1 L10 CR6
Studio I is part one of a portfolio program designed to develop and nurture a senior's cumulative skill set in digital film production. Students will work with real clients to develop broadcast compliant short-form narratives and advertisements. This class may require a significant amount of outside lab work. This class is not open to non-majors. (Prerequisite: LMMA1350 Movie Making II) (Updated 9/2013)

LMMA2450 Studio II (short film) CL1 L10 CR6
Studio II is part two of a senior's portfolio development. Students will crew together and work with real clients to develop family-friendly viral videos. This class makes an in-depth study in video for social media and broadcast markets. Students research the psychology and methodology behind creating cleaver viral videos. This class may require a significant amount of outside lab work. This class is not open to non-majors. (Prerequisite: LMMA2400 Studio I) (Available Spring 2014)

LMMA2500 Portfolio CL0 L2 CR1
This course prepares the individual student for their next step. Whether they want to go on to a four-year school or start working in their field, a good portfolio will help promote the student. Students will learn to package their work and present them in an engaging manor that will allow them to stand out and be noticed.

LMMA2600 Intro to Post Production CL2 L3 CR3
This course focuses on some of the finishing software that give your film/video a professional presentation. Some topics covered will be color correction using Apple's Color program, and creating a custom DVD menu using Apple's DVD Studio Pro. Students will also use this course to compile all their works over the past four semesters into one DVD portfolio. (Prerequisites: LMMA1200 Design Software Essentials, LMMA1300 Movie Making I) (09/2009)

LMMA2653 Independent Study with Lab CL2 L3 CR3
Students in an independent study option will engage in learning about a topic of special interest and/or need. This course has a 48-hour lab requirement. A written report on the topic of the independent study is required. (Prerequisites: Approval of advisor and department chair)

NURSING

LNUR1000 Licensed Nursing Assistant CL2 L9 CR5
A 106-hour program with 40 hours of classroom instruction, 60 hours of group clinical instruction, and 6 hours of lab. The State Board of Nursing regulates attendance. The classroom instruction portion is delivered at the College in three-hour sessions, one night a week during the semester. The lab is held two evenings during the semester either at the college or at the Huot Vocational Training Center at the Laconia High School. The group clinical instruction is arranged at a care facility and can entail Saturday and Sunday participation. At the conclusion of the program, all students are administered a written and a clinical assessment of skills to certify that they have achieved required competencies. This final evaluation is required by the NH Board of Nursing. (This course is not part of the A.S. in Nursing program).

LNUR1010 Medication Nurse Assistant CL4L2 CR5
The Medication Nurse Assistant is prepared to maintain and promote a safe environment to provide medications to stable patients within health care facilities or individual homes. The Medication Nurse Assistant cares for the patients under the

direct supervision of a licensed nurse. As a provider of medications, the Medication Nurse Assistant is prepared with basic intellectual, interpersonal, and psychomotor skills needed to meet common independence in a health care facility or home through the administration of medications. (This course is not part of the A.S. in Nursing program). Prerequisite: LNUR1000 and three years experience as a Licensed Nursing Assistant.

LNUR1300 Fundamentals of Nursing **CL5 L0 CR5**
This course introduces the student to the role of the nurse and the basic concepts of nursing practice, including the nursing process and therapeutic communication. Legal, ethical and cultural considerations in nursing practice are presented. Basic physiologic and psychosocial needs of the individual and adaptive responses to health and illness are addressed. Principles of pharmacology and medication administration, fluid and electrolyte balance, nutrition and oxygenation are introduced. (Corequisite: LSCI1450) (Fall 2012)

LNUR1310 Clinical I **CL0 L15 CR5**
The clinical consist of two 7.5 hour days each week in which students will be expected to master basic nursing skills. The settings will include a college based lab and a long term care facility. (Corequisites: LNUR1300 and LSCI1450)

LNUR1400 Nursing Care of Families **CL4 L0 CR4**
In this course the nursing process provides a framework for nursing care of the family across the life cycle. The course continues to examine the physiologic, psychosocial and cultural factors which influence the individual's and family's response to health and illness. Common health deviations and associated nursing interventions that affect growth and development over the life cycle are presented. Evidenced based practice is introduced. (Prerequisites: LNUR1300 with a C+ or better, LNUR1310; Corequisite: LSCI1460) (Fall 2012)

LNUR1410 Clinical II **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will gain experience in nursing assessment and care of pediatric, obstetric, and medical surgical patients. (Prerequisites: LNUR1300, LNUR1310; Corequisites: LNUR1400, LSCI1460)

LNUR1450 Bridge to Nursing **CL2 L0 CR2**
Bridge to Nursing is a foundation course for paramedics entering the nursing program. Students will be introduced to the concepts of the nursing model rather than the medical model. Nursing process, nursing theorists, nursing diagnosis and the difference between medicine and nursing will be discussed. (Prerequisite: Interview and acceptance by Nursing Admissions Committee)

LNUR2200 Psychiatric/Medical/Surgical Nursing **CL4 L0 CR4**
This evidence-based nursing course examines the theoretical concepts of leadership, delegation and patient education. Students use the nursing process to conceptualize nursing care that is used to support and promote effective adaptation in individuals and families experiencing multiple physical and mental health problems. (Prerequisites: LNUR1400 with a C+ or better, LNUR1410, LSCI1460 with a C or better, and LPSY1250; Corequisite: LSCI2410) (Fall 2013)

LNUR2210 Clinical III **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will increase their skills in critical thinking, prioritizing, and advanced care of the medical surgical/psychiatric patient. (Prerequisites: LNUR1400, LNUR1410; Corequisites: LNUR2200 and LSCI2410)

LNUR2300 Advanced Psychiatric/Medical/Surgical Nursing **CL4 L0 CR4**
This course continues to focus on the delivery of comprehensive care to those experiencing multiple health problems. Current health care trends, issues and evidence based research are integrated into course work. A capstone project is completed and presented to faculty, students and professional nurses. (Prerequisites: LNUR2200 with a C+ or better, LNUR2210, LSCI2410 with a C or better) (Fall 2013)

LNUR2310 Clinical IV **CL0 L15 CR5**
The clinical consists of two 7.5 hour days in which students will incorporate expanded roles in professional practice. These will include medical surgical, psychiatric, and school/community nursing. (Prerequisites: LNUR2200, LNUR2210; Co requisite: LNUR2300)

Certificate Pre-requisite: First Aid/CPR
This is a basic adult CPR and standard first aid class. Students will learn basic principles and skills of CPR and fist aid including: bandaging, splinting and CPR, as well as how to manage sudden illness, wounds and burns. Students must have current certification in CPR and first aid upon graduation

OFFICE TECHNOLOGY MANAGEMENT

LOTM1210 Business Documentation I **CL2 L2 CR3**
This course provides training in keyboard skills and document formatting using a word-processing application program. Students participate in simulated office projects to develop competencies in language art skills and document production.

LOTM1250 Administrative Office Management **CL3 L0 CR3**
The theory and practice of office management, concepts and applications of personnel, system interactions, and information technology are covered. Keyboarding skills are required.

LOTM1310 Medical Terminology **CL3 L0 CR3**
This course establishes the foundation for the medical courses offered in the program. The parts, definitions, applications, and spelling of medical terms will be covered.

LOTM1400 Principles of Records Management **CL2 L0 CR2**
A comprehensive course designed to develop proficiency and competency in managing paper and computer records based on ARMA rules.

LOTM1560 Law and Ethics for the Medical Professional **CL3 L0 CR3**
Students will gain a working knowledge of the complex legal, moral, and ethical issues pertaining to the health profession.

LOTM1600 Orientation to Health Care (HUC) **CL3 L0 CR3**
A lecture course providing an overview of health care today including current health care professionals and health care delivery systems and services. Third party payers, facility ownership, health organization structure, communications and communication devices, workplace behavior, teamwork, definitions and importance of values, ethics, legalities, patient rights and quality care are a focus, as well as intercultural understanding and communication. Also covered are the history of the health unit coordinating profession, National Association of Health Unit Coordinators (NAHUC) and the certification process, management techniques, and problem solving skills for health unit coordinators. (Prerequisites: LOTM1210, LOTM1310)

LOTM1610 Health Unit Coordinating Procedures I **CL3 L0 CR3**
A lecture course on the principles necessary for the student to comprehend and perform health unit coordinating skills and procedures. (Prerequisite: LOTM1600)

LOTM1620 Health Unit Coordinating Procedures II **CL1 L4 CR3**
A laboratory course during which the student practices health unit coordinating skills and procedures in a simulated work environment; applies knowledge acquired in Health Unit Coordinating Procedures I. (Prerequisites: LOTM1600, LOTM1610)

LOTM1630 Health Unit Coordinator Internship **CL0 L6 CR2**
Practice of health unit coordinating skills and procedures on the nursing unit in a health care facility. The student applies knowledge and skills acquired in Health Unit Coordinating courses. (Prerequisites: LOTM1620 and permission of instructor)

LOTM1640 HUC Certification Test Review **CL1 L0 CR1**
This course will prepare students for the HUC certification examination. (Prerequisites: Minimum grade of C in LOTM1620 and permission of instructor)

LOTM2210 Business Documentation II **CL2 L2 CR3**
This course focuses on the production of business documents by integrating software applications including word processing, spreadsheets and data management, as well as Windows and desktop publishing. Prerequisites: LOTM1210, LCIS1320 or permission of instructor)

LOTM2250 Administrative Office Procedures **CL2 L2 CR3**
A systematic simulation-related approach to the increasing complexities of tasks and technology faced by office support personnel. (Prerequisites: LOTM2210, LCIS1320 or permission of instructor)

LOTM2260 Legal Office Procedures **CL3 L0 CR3**
This course provides a task-related approach to basic law office procedures, as well as general legal research, law office ethics, the court system, etc. (Prerequisites: LOTM1250, LCIS1320 or permission of instructor)

LOTM2270 Medical Office Procedures **CL2 L2 CR3**
This course provides a realistic approach for students to learn the skills required in a medical office including communications, records management, telecommunications, billing, scheduling and terminology. (Prerequisites: LOTM1250, LOTM1310, LCIS1320 or permission of instructor)

LOTM2300 Administrative Machine Transcription **CL2 L2 CR3**
This course provides intensive instruction and practice in listening and transcribing from recorded and direct dictation. Emphasis is on accuracy, formatting skills and language arts skills. (Prerequisites: LOTM2210, type a minimum of 50 wpm, or permission of instructor)

LOTM2320 Medical Machine Transcription I **CL2 L2 CR3**
This course provides intensive instruction and practice in listening and transcribing medical terminology and recorded dictation. Emphasis is on accuracy, formatting skills and language arts skills. (Prerequisites: LOTM1310, LOTM2210, type a minimum of 50 wpm, or permission of instructor)

LOTM2330 Medical Machine Transcription II **CL2 L2 CR3**
Medical Machine Transcription II continues building professional medical transcription skills. Students will transcribe chart notes, patient histories, letters, memos and medical reports using computerized dictation methods. Developing accuracy in transcribing dictated materials will be emphasized. Students will be expected to complete timed writings to increase typing speeds to 70+ wpm. (Prerequisite: LOTM2320)

LOTM2520 Medical Insurance Billing **CL3 L0 CR3**
This course develops the skills to apply information using proper coding and billing procedures. (Prerequisites: LOTM1210, LOTM1310 or permission of instructor)

LOTM2550 Computerized Accounting **CL2 L2 CR3**
This course will introduce the student to computerized accounting systems using QuickBooks Pro. The accounting procedures that were done manually in Accounting I will now be performed on the computer using accounting software that is currently being used in business and industry. These procedures include setting up a chart of accounts, entering transactions, summarizing data, generating financial reports, payroll, and banking transactions. The course will cover the accounting cycle for service and merchandising sole proprietorships. (Prerequisites: LACC1310, LCIS1320)

RESTAURANT MANAGEMENT

LCUL2560 U.S. Regional and Infusion Cuisine **CL1 L6 CR3**
This course will give an overview of food origins and how they have shaped our modern day cuisine. Students will focus on a variety of cultural and regional cuisines throughout the United States. The trend towards cross-cultural cuisines, and the eclectic foods they produce, will be discussed in depth. Students will learn how to create dishes using various cultural ingredients. Preparation, plating and garnishing techniques will be addressed.

LHOS1010 Bartending I **CL1 L0 CR1**
This course includes a basic overview of mixology, serving mixed drinks, equipping, maintaining and service in a bar setting. Serving liquor outside the regular bar settings, and beverage systems will be covered.

LHOS1030 Bartending II **CL1 L0 CR1**
This course includes an more in-depth overview of wine, spirits, liquors, beer types, mixology, serving mixed drinks, managing a bar, and New Hampshire State Laws and T.E.A.M. Certification. Students will be eligible to test for the T.E.A.M. Certification. Upon successful completion of course requirements, students will be awarded a certificate in bartending. (Prerequisite: LHOS1010 or permission of instructor)

LHOS1090 Independent Study **CL1 L0 CR1**
Students in an independent study option will engage in learning about a topic of special interest and/or need. A written report on the topic of the independent study is required. Subject matter must be approved by the instructor and the department chair. (Prerequisite: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LHOS1130 Introduction to Worldwide Cuisine CL1 L6 CR3
The student will apply concepts and skills learned in Introduction to Hot Foods (LHOS1120) and expand knowledge of the restaurant setting. A six-hour lab will focus on international cuisine. Costing, purchasing, menu terminology, quality recipe production and kitchen organization are stressed. Students will continue to operate a restaurant that is open to the public. (Prerequisite: LCUL1510 or LHOS1120, equivalent or permission of instructor)

LHOS1140 Dining Room Management I CL0 L6 CR3
This course presents an in-depth analysis of dining room personnel as well as menu planning, styles of service, and customer service responsibilities. A six-hour working lab will take place where students will set and serve in a student-run restaurant that is open to the public. A discussion of wines and wine service is included.

LHOS1150 Dining Room Management II CL0 L6 CR3
This class is an extension of the management aspects of the front of the house. A six-hour lab will take place where students set and serve in a student-run restaurant that is open to the public. A discussion of tableside service, scheduling, customer relations and staff supervision is included.

LHOS1160 Independent Study II CL0 L3 CR1
Individual courses will vary. This course provides the vehicle for students to demonstrate overall competency in specific concentration areas. Under supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a series of projects that pertain directly to their area of interest. Projects will be designed on a case-by-case basis. (Prerequisites: Permission of department chair, matriculated with a minimum cumulative GPA of 2.0)

LHOS1170 Institutional Dining Services Management CL0 L2 CR1
This course describes the options available to the institutional dining services managers, including scheduling, settings, servicing your clientele, training and orientation, as well as a clear understanding of the requirements that would present a smooth and efficient operation from the angle of the dining room.

LHOS1180 Institutional Dining Services Management Lab CL0 L3 CR1
This course will act as a follow-up to the lecture course by providing the hands-on support of dining services in an institutional setting. This will provide interaction with clients and the experience of serving and setting up the dining room. This experience will reinforce the need for professionalism, provide a variety of dining settings, and expand on the different training methods used in the industry.

LHOS1190 Institutional Cooking CL1 L6 CR3
Discussion of procedures of selecting, handling and cooking meats, poultry, fish, vegetables, fruits, salads and pasta products in a manner that will be appropriate for large groups, including holding and delivery of food product to remote locations. Included in this course is the preparation of various dietary textures, ground, puree and low salt, the presentation of these textures, and nutritional portions. Cooking in an institutional situation will be emphasized. This course is a one-hour lecture and a six-hour lab where students prepare and serve food in an institutional setting. Provides students with knowledge to organize, plan, cook, and deliver food.

LHOS1200 Introduction to Hospitality Management CL3 L0 CR3
This course is an introduction to the field of hospitality, emphasizing the development of the hotel, restaurant and resort industries. It will examine differences and similarities of each of these operations and their relationships to each other. Management styles, skills and functions will be examined as part of the decision-making process with an emphasis on teamwork.

LHOS1230 Food and Beverage Management CL3 L0 CR3
This course examines the structure and management of a food and beverage operation. Special attention is given to the cost flow within the operation, basic menu design, purchasing, receiving, storeroom operations and production planning and control. Students will also be introduced to the concept of food cost, issues in menu pricing, and elements of food service facility layout and design. During the course, each student will complete a project that includes planning and developing a food service concept.

LHOS1240 Sanitation and Safety **CL1 L0 CR1**
This course covers sanitation and safety concepts, regulations, and procedures for food service and other sectors of the hospitality industry. Certificate may be issued.

LHOS1761 Restaurant Management Cooperative Education **CL0 L3 CR1**
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1762 Restaurant Management Cooperative Education **CL0 L6 CR2**
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1763 Restaurant Management Cooperative Education **CL0 L9 CR3**
Provides the opportunity for the student to utilize learned restaurant course competencies in the real-life setting, and also provides supplemental laboratory experience on the extensive array of equipment and processes. (Prerequisite: Permission of instructor)

LHOS1770 Institutional Cooperative Education **CL0 L12 CR2**
This course provides the student the opportunity to utilize learned course competencies in the real-life setting. It also provides supplemental laboratory experience on the extensive array of equipment and processes. Site selection is to be determined by instructor. (Prerequisite: Permission of instructor)

LHOS2010 Banquet and Buffet Cooking Techniques **CL1 L6 CR3**
Discussion of procedures for selecting, handling and cooking meats, poultry, fish and shellfish, appetizers, vegetables, fruits, salads and salad dressings, and pasta products in a manner that will be appropriate for buffets and banquets. Cooking for large groups in a banquet situation will be emphasized. A six-hour lab will take place where students prepare and serve food in the student-run restaurant that is open to the public. Provides students with the knowledge to organize, plan and present buffets and banquets.

LHOS2020 Banquet Dining Room Techniques **CL0 L6 CR3**
This course presents in-depth analysis of banquet dining room personnel including banquet menu planning, styles of banquet service and customer service responsibilities. A six-hour lab will take place where students set and serve in a student-run restaurant that is open to the public. Students will attain knowledge in all aspects of organizing banquet personnel including hiring, firing and scheduling.

LHOS2040 Therapeutic Nutritional Foodservice **CL2 L0 CR2**
This course will familiarize students with the USDA and other professional organizations guidelines, along with applicable local and state standards on nutrition. The course provides the student with comprehensive concepts, guidelines and practices needed to implement appropriate policies and procedures to ensure proper nutrition to the customer.

LHOS2050 Institutional Foodservice Management **CL3 L0 CR3**
This course will discuss all aspects of institutional foodservice management, including ethics, scheduling, sexual harassment, employee motivation, management styles, labor costing, training and orientation, hiring and firing, multi-ethnic services and legal issues.

LHOS2070 Institutional Foodservice Computer Skills **CL1 L0 CR1**
This course will familiarize the student with basic software applications needed in the operation of an institutional setting. This will include databases, spreadsheets and word processing. The student will be introduced to the process of collecting information to be used in institutional foodservice. There will be an overview of programs used to develop tray tickets and a hardware application to assist in this process.

LHOS2100 Hospitality Law **CL3 L0 CR3**
Laws and legislation which apply to hotels and inn-keeping, restaurants and related hospitality operations are the focus of this course, with emphasis on management policies to minimize the risks of liability. State and federal statutes governing liability, alcoholic beverage controls, safety and responsibility to guests are topics. Personnel and labor laws pertaining to employees are also included.

LHOS2160 Catering **CL1 L0 CR1**
This self-directed course provides students with opportunities to learn the catering business. It includes culinary and business skills, licensing and insurance requirements, menu and pricing, developing a marketing plan and contracts.

LHOS2170 Creative Menu and Plate Design **CL1 L0 CR1**
The ability to design and artfully create menus and plate presentation is the basis to successful food and beverage management. This course will outline color, design and layout as they pertain to a selection of establishments to contrast their different needs. It will also expand on general food and garnishing techniques.

LHOS2190 Employee Motivation-Team Strategies **CL1 L0 CR1**
Helpful motivational techniques to assist managers with the difficult task of keeping employees excited about their jobs and specifics on how to assist hospitality employees with teamwork strategies that will increase both profits and customer satisfaction levels.

LHOS2220 Quantity Food Purchasing **CL3 L0 CR3**
This course covers the duties of stewardship and all related functions including specifications, centralized procurement and container sizes. Emphasis is given to the examination and establishment of the various grades and types of categories of produce, meats, poultry, and fish. Comparisons are made between canned products as well as scrutinizing their pros and cons. The importance of inventory control methods, product loss management and vendor selection are stressed.

LHOS2230 Accounting Applications for Hotels and Restaurants **CL3 L0 CR3**
This course emphasizes the operation and integration of accounting applications with an emphasis on managerial accounting and its adaptation to industry standards. Point of sale, payroll, inventory, front desk and general ledger functions will be discussed, and hands-on applications will be explored. Budgeting, purchasing and staffing will be the topics of project simulation. Topics covered reinforce the concepts of Accounting I (LACC1310) and their applications to the hotel and restaurant industry. Course projects will specifically deal with cost controls within the hospitality industry. (Prerequisite: LACC1310 or permission of instructor)

LHOS2240 Restaurant Capstone Project **CL3 L0 CR3**
This course provides the vehicle for students to demonstrate overall competency in Restaurant Management and in the specific operations in which they have chosen to concentrate. Under supervision of a faculty advisor, working individually or as part of a team, the student will select and successfully carry out a major project that pertains directly to restaurant operations and food and beverage management.

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The Lakes Region Community College is one of seven colleges including six community technical colleges and one technical institute in the Community College System of New Hampshire.

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Human Services
B.A., University of New Hampshire
M.S.S.W., Kent School of Social Work

Mary Lee Sargent (2010)
Liberal Arts
A.B.D., University of Texas
B.A., Southern Methodist University
M.A., University of Texas

Elizabeth Scholbe, R.N. (2012)
Nursing B.A., Framingham State College
A.S., New Hampshire Technical Institute

Kathleen Seigle (2011)
Liberal Arts
B.A., Villanova University
M.Ed., Plymouth State University

James N. Shepherd, Esq. (1988)
Business Management, Legal Studies, Fire Investigation
B.A., University of New Hampshire
J.D., University of Maine School of Law

Laura Smith (2009)
Computer Technology
A,S, Lakes Region Community College
B.S., Granite State College

Jason Stelmach (2012)
Computer Technologies A.S., Lakes Region Community College
MCIT-P, Server Administrator Certification
CompTIA (Security+, Linux+, A+ Certified IT Technician)
MCTS - Vista Configuration
Cisco Certified Network Administrator

Carol Taylor (2012) *Computer Technologies*
M.B.A., Southern New Hampshire University
M.S., Southern New Hampshire University

Wayne Thayer (2011)
Automotive Technology
A.A.S., New Hampshire Vocational-Technical College- Manchester
A.S.E. Certified Master Automobile Technician
Toyota Master Technician
NH SI License

Michelle Therrien (2010)
Computer Technologies
B.S., University of Maine
NASA Space Grant Fellowship

Corinne Wait (2005)
English
B.A., Salem State College
M.Ed., Notre Dame College

Dianne Wasmuth (2007)
Liberal Arts
B.A., Notre Dame College
M.Ed., Plymouth State College

M. Cathy Weigel (2010)
LNA Program, Office Technologies
B.S.N., University of Lowell
M. Ed.., Plymouth State College

Nancy Weston (2003)
LNA Program
Graduate, Concord Hospital School of Nursing
Certified in Gerontological Nursing Practice
Certified in Intravenous Therapy
Certified Legal Nurse Consultant

David Wheeler (2009)
Fire Technologies A.S., New Hampshire Technical Institute
A.S., Lakes Region Community College

Sarah Whelley (2009)
Nursing
A.S.N. – Shepherd College
B.A., University of Massachusetts
M.S.N., University of New Hampshire

Elizabeth Wilson (2013)
Fine Arts
B.S., Skidmore College
M.F.A., University of New Hampshire

Dawn Hanson-Winters (2012)
Human Services
B.A., Vermont College
Autism Spectrum Disorder Certification, Antioch College
M.Ed., Goddard College

SUPPORT SERVICES

ADMISSIONS

Wayne D. Fraser (1998)
Director of Admissions
B.A., University of New Hampshire
Graduate Studies, Plymouth State College

Jessica Dade (2013)
Alumni Outreach and Retention Specialist
B.A., Colby-Sawyer College
A.S., Pine Manor College

Kathryn Plummer (2007)
Admissions Secretary
A.A. Granite State College

Cathy Raymond (2001)
Admissions Secretary
A.S., New Hampshire Community Technical College-Laconia

ACADEMIC AFFAIRS
Day, Evening, Online, Outreach

Teresa Hughes (2003)
Administrative Secretary

Andrée Thibault (2008)
Administrative Secretary
A.A.S., New Hampshire Community Technical College-Berlin

Kathy Mather (2007)
Academic Affairs Secretary
A.S., Lakes Region Community College

Holly Danby (2013)
Academic Affairs Secretary
A.A.S. Business Administration, New Hampshire Technical Institute

Kalene M. Barney (1996)
Running Start Coordinator
A.A.S., New Hampshire Community Technical College-Laconia
B.S., New Hampshire College

AUTOMOTIVE SERVICE EDUCATION PROGRAM

Nancy Marcoux (2003)
ASEP Secretary

BANNER COORDINATOR

Marsha Bourdon (2010)
A.A.S., New Hampshire Technical Institute

BOOKSTORE
Debbie Laramie (1996)
Bookstore Manager

BUSINESS OFFICE

Carol Dudley (1991)
Account Technician

TBA (2013)
Chief Financial Officer

Wendy Parent (1990)
Accountant
A.A.S., New Hampshire Technical Institute

CAFETERIA

B & C Hodder Catering and Concessions
Robert J. Hodder, Owner

CENTER FOR WORKFORCE DEVELOPMENT

COUNSELING

Ralph Dixon (2009)
Outreach Counselor
B.A., American International College
M.Ed., Plymouth State University

William Miller (1997)
College Counselor
B.S., Plymouth State College
B.S., Hawthorne College
M.A.T.; Certificate of Advanced Graduate Studies
C.A.G.S.; Grand Canyon University
Doctoral Candidate, Northcentral University

FINANCIAL AID

Kimberly Bean (2005)
Financial Aid Assistant

Melissa Daigle (2013)
Financial Aid Secretary

Kristen M. Purrington (2009)
Financial Aid Director
B.A., Lyndonville State College, VT

HUMAN RESOURCES

Karen Kurz (1970)
Human Resources Officer
Certificate, Pierce College for Women

INSTITUTIONAL RESEARCHER

LIBRARY

Cynthia D. Davis (2002)
Director of Learning Resources
B.A., University of North Carolina
M.A., University of Wisconsin

Penelope Garrett (2008)
Library Assistant
B.A. Human Services, Granite State College

MAINTENANCE

Roger Lajoie (2005)
Plant Maintenance Engineer

John Bernard (2006)
Maintenance Mechanic

Thomas Crilly (2013)
Maintenance Mechanic Foreman

Jeff Harrison (2005)
Building Service Worker

Lisa Moulton (2012)
Building Service Worker Supervisor

Jason Graves
Building Service Worker

Casey Morgan
Building Service Worker

David Vermillion
Building Service Worker

PRESIDENT'S OFFICE

Tonia Dow (2014)
Administrative Assistant
A.S., Business Science, Hesser College

PUBLIC RELATIONS

Max S. Brown (1987)
Public Information Officer
A.A., Tallahassee Community College
B.S., Indiana University
M.S., University of Tennessee

RECEPTION

Jean MacFarland (1999)
Receptionist/Secretary

REGISTRAR

Laura LeMien (2013)
Registrar
A.A.S., Lakes Region Community College
B.S., Southern New Hampshire University

Jennifer Aiken (2005)
Registrar's Assistant
B.A., Sociology, Keene State College

Barbara Dionne (2009)
Registrar's Office Secretary

RUNNING START

Kalene M. Barney (1996)
Running Start Coordinator
A.A.S., New Hampshire Community Technical College-Laconia
B.S., New Hampshire College

SECURITY

Mary Berry (2011)

STOCK CONTROL

Scott Bryant (1994)
Stock Clerk

STUDENT ACTIVITIES

William Miller
Dave Pollak

STUDENT AFFAIRS

Randi Provencal (2005)
Secretary to Vice President of Student Affairs

TEACHING, LEARNING AND CAREER CENTER

Maureen J. Baldwin-Lamper (2000)
Director
B.A., Rhode Island College
M.Ed., Rhode Island College
Specialist in the Assessment of Intellectual Functioning, Rivier College

Deborah Fifield (2006)
Master Tutor
B.A., Tufts University
M.Ed., Notre Dame College

Gloria Moulton (2006)
Master Tutor
B.A., Plymouth State College

Cathy Raymond (2001)
Teaching, Learning & Career Center Secretary
A.S., New Hampshire Community Technical College-Laconia

TECHNICAL SUPPORT

Christopher J. Crowley (1999)
Technical Support Specialist
B.S., Northeastern University

Kristina Guignard (2008)
Technical Support Specialist
A.S., New Hampshire Technical Institute

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LAKES REGION COMMUNITY COLLEGE
2013-2014 STUDENT ACADEMIC CALENDARS

FALL SEMESTER 2013

Bolded		**Days of Responsibility/No Classes**
August	20	Faculty Return
September	**2**	**Labor Day/Holiday-College Closed**
	3	Fall Day, Evening, 7-Week Hybrid I, and Distance Learning classes begin
	3	ASEP Co-Op Session I class begins
	9	Last day to add a class
	9	**Last day to drop with refund 7-Week Hybrid and ASEP Co-Op Session I class*
	16	**Last day to drop with refund Fall, Day, Evening, and Distance Learning classes*
	20	*Last Day to Resolve "I"(Incomplete) from Summer*
	30	*Last day to drop 7-Week Hybrid classes with a "W" (60%)*
October	4	Curriculum Committee deadline for submission for October 25 meeting
	7	Registration for ASEP Co-Op Session II class
	14	Columbus Day – All classes will be held as scheduled
	16	*Last day to drop ASEP Co-Op Session I class with a "W" (60%)*
	18	7-Week Hybrid classes end
	21	8-Week Hybrid classes begin
	25	Curriculum Committee Meeting
	28	**Last day to drop with refund 8-Week Hybrid classes*
November	*4*	*Last day to drop Day, Evening, and Distance Learning classes with a "W" (60%)*
	11	**Veteran's Day/Holiday-College Closed**
	15	Advance Online Spring Registration for returning students
	15	Curriculum Committee deadline for submission for December 6 meeting
	15	ASEP Co-Op Session I class ends (tentative)
	18	ASEP Co-Op Session II class begins (tentative)
	24	*Last day to drop 8-Week Session II classes with a "W" (60%)*
	25	**Last day to drop with refund ASEP Co-Op Session II class*
	27	**No Evening Classes –** Day classes will meet as scheduled
	28-29	**Thanksgiving/Holiday-College Closed**
December	2	Registration begins for Spring and Winterim classes
	6	Curriculum Committee Meeting
	13	Curriculum Committee deadline for submission for January In-Service Week meeting
	16	Fall Day, Evening, 8-Week Session II, and Distance Learning classes end
	17	**Grades Due 24 hours after last class.**
	17	**Winter Break Begins**
	20	**Last Day of Faculty Responsibility for Fall Semester**

***Effective Fall 2011 System Drop with refund policy is 14 calendar days (7 calendar days for shorter format classes). If the 7th or 14th calendar day falls on a weekend or holiday, the drop refund date will be the first business day following the weekend or holiday.**

SPRING SEMESTER 2014

	6	Faculty Return
January	6-17	WINTERIM
	6	*WINTERIM SESSION BEGINS – Last day to drop with refund WINTERIM classes*
	6	ASEP Co-Op Session II class resumes
	14	*Last day to drop ASEP Co-Op Session II class with a "W" (60%)*
	14	Registration begins for ASEP Co-Op Session III class
	17	Winterim Session ends
	20	**Martin Luther King Jr. Day/Holiday-College Closed**
	21	Spring Day, Evening, 8-Week Hybrid and Distance Learning classes begin
	27	**Last day to drop with refund 8-Week Hybrid classes*
	27	*Last Day to Add Classes*
February	*3*	**Last day to drop with refund Spring, Day, Evening, and Distance Learning classes*
	7	*Last Day to Resolve "I" (Incomplete) Grades from Fall Semester*
	7	Curriculum Committee deadline for submission for February 21 meeting
	17	**President's Day/Holiday-College Closed**
	21	*Last day to drop 8-Week Session I classes with a "W" (60%)*
	21	ASEP Co-Op Session II class ends
	21	Curriculum Committee Meeting
	24	ASEP Co-Op Session III class begins
March	*3*	**Last day to drop with refund ASEP Co-Op Session III class*
	14	8-Week Hybrid classes end
	17-21	**Spring Break - No Day or Evening Classes**
		ASEP Co-Op Session III meets through Spring Break
	24	7-Week Hybrid classes begin
	28	Advance Online Summer & Fall Registration for returning students
	31	**Last day to drop with refund 7-Week Hybrid classes*
April	*1*	*Last day to drop Day, Evening, and Distance Learning classes with a "W" (60%)*
	11	Curriculum Committee deadline for submission for April 25 meeting
	11	Registration begins for Summer and Fall day and evening classes
	14	*Last day to drop ASEP Co-Op Session III class with a "W" (60%)*
	22	*Last day to drop7-Week Hybrid classes with a "W" (60%)*
	25	Curriculum Committee Meeting
May	12	7-Week Hybrid classes ends
	12	Spring Day, Evening, and Distance Learning classes end
	16	ASEP Co-Op Session III class ends
	17	Commencement - 11:00 a.m.
	26	Summer Day Session I, 6-Week Hybrid Session I, Evening, and Distance Learning classes begin
	26	ASEP Co-Op Session IV class begins
	23	**Last Day of responsibility for 180 Faculty**
	26	**Memorial Day/Holiday-College Closed**
July	**21**	**Last Day of Faculty Responsibility for A216 Faculty**

***Effective Fall 2011 System Drop with refund policy is 14 calendar days (7 calendar days for shorter format terms). If the 7th or 14th calendar day of the term falls on a weekend or holiday, the drop refund date will be the first business day following the weekend or holiday.**