# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate</td>
<td>1</td>
</tr>
<tr>
<td>General Information</td>
<td>1</td>
</tr>
<tr>
<td>Policies</td>
<td>24</td>
</tr>
<tr>
<td>Graduate School of Education</td>
<td>39</td>
</tr>
<tr>
<td>Education</td>
<td>39</td>
</tr>
<tr>
<td>General Information</td>
<td>39</td>
</tr>
<tr>
<td>Courses</td>
<td>45</td>
</tr>
</tbody>
</table>
Programs, Policies & Courses

This online academic catalog provides the latest information on all graduate areas of study and degree programs at the University of Massachusetts Lowell and supersedes all previous versions of the catalog.

Bachelor’s to Master’s Programs

Earn Two Degrees in as Little as Five Years

- Eligibility
- Course Credits
- How to Apply

In order to encourage outstanding UMass Lowell undergraduate degree students to continue their studies towards an advanced degree, qualified students may apply for the Bachelors to Masters Degree Option (Bachelor’s to Master’s programs include the Fast Track to Teaching and Plus 1 programs.)

This option carries distinct benefits. Graduate Record Examination (GRE) scores are not required (except in the Graduate School of Education), GMAT is waived for applicants for the Masters in Business Administration (MBA) with a 3.2 or higher GPA and the application fee is waived. In addition, many departments offer course credit benefits. (For detailed information regarding specific course credit benefits, please see the Graduate Coordinator in the respective masters degree granting department.)

- Information on the GRE / GMAT / MAT Waivers (https://www.uml.edu/Grad/gre-mat-waivers.aspx)

Eligibility

Any UMass Lowell undergraduate junior or senior with a grade point average of 3.0 or better may apply to a Masters degree program at UMass Lowell under the Accelerated Bachelors to Masters Degree Option. However, to be accepted into this option the following minimum conditions must be met (individual departments may have more stringent requirements):

1. The student must have a cumulative grade point average of 3.0 or above at the time the baccalaureate degree is conferred in order to maintain eligibility for this option.
2. The student must apply for and receive his/her baccalaureate degree before matriculating into the graduate program.

3. Once accepted a student is expected to begin his/her graduate studies in the semester immediately following conferral of the baccalaureate degree unless the student submits a written request for deferral. A student is allowed to defer for a maximum of one year from the date of acceptance. For example, if accepted for the Spring 2015 semester, an individual can defer to either the Fall 2015 or Spring 2016 semesters. A student defers acceptance by submitting a written request to the Office of Graduate Admissions (mailto:Graduate_Admissions@uml.edu). All deferral requests must specify which semester the student wishes to enroll. Any applicant accepted to the Bachelors to Masters Degree Option who opts not to enroll in at least one course within the graduate department to which they have been accepted in the semester immediately following conferral of the bachelors degree and who does not submit a deferral request forfeits his/her rights to benefits under this program. Should the student decide to begin his/her studies at a later time he/she will be required to take the GRE, pay an application fee, and have his/her application reassessed.

Course Credits

The graduate degree granting department may allow course credit benefits; however, the following requirements apply:

1. Any graduate courses taken by a baccalaureate degree student that are credited towards the Masters degree must have been obtained with a grade of B or better.
2. Only courses of 500 level or higher may count toward the Masters degree.
3. As defined by the graduate degree granting department, a maximum of 12 graduate credits (5000 level or above) may be used for the masters degree provided these graduate credits were taken in excess of the university minimum of 120 baccalaureate degree credits, or, for programs requiring fewer than 33 credits, a maximum of up to six credits of graduate (5000 level or higher) courses may be used by a student in the Accelerated
Bachelor’s to Master’s Degree Option for both the graduate and undergraduate degrees; or, for program requiring 33-35 credits, at the discretion of the affected department, a maximum of up to nine credits of graduate (5000 level or higher) courses may be used by a student in the Accelerated Bachelor’s to Master’s Degree Option for both the graduate and undergraduate degrees; or, for programs requiring 36 or more credits, at the discretion of the affected department, a maximum of up to twelve credits of graduate (5000 level or higher) courses may be used by a student in the Accelerated Bachelor’s to Master’s Degree Option for both the graduate and undergraduate degrees.

4. Students must petition to have specific courses (5000 level or above) taken during their undergraduate career apply towards their graduate degree via an Academic Petition.

How to Apply

Applicants are requested to use the standard paper application form (https://www.uml.edu/docs/July%202014%20Bachelor's-Master%20Application_tcm18-159702.pdf)(pdf) and submit requisite materials to the Office of Graduate Admissions (https://www.uml.edu/Grad/default.aspx) (Cumnock Hall - North Campus), normally in the second semester of their third year as an undergraduate (up until the last day of classes in their final semester before graduation). Application forms and details on applying may also be obtained by contacting the Graduate Admissions Office at 978-934-2390.

Master's Programs Offered

Listed by Degree Earned

- Master of Arts
- Master of Business Administration
- Master of Education
- Master of Music
- Master of Public Health
- Master of Science
- Master of Science in Engineering
- Education Specialist

Master of Arts (MA)

- Community Social Psychology
- Criminal Justice
- Economic & Social Development of Regions - This program is no longer accepting students.
- Peace & Conflict Resolution
- Security Studies

Master of Business Administration (MBA)

- General Business
- Accounting
- Finance
- Information Technology
- Marketing
- International Business

Master of Education (M.Ed.)

- Curriculum & Instruction: Autism Studies
- Curriculum & Instruction: Initial Certification
- Curriculum & Instruction: Science Education, beyond initial
- Curriculum & Instruction: Math Education, beyond initial
- Teaching English to Speakers of Other Languages
- Educational Administration
- Higher Education
- Reading & Language

Master of Music (MM)

- Music Education
- Community Music
- Sound Recording Technology

Master of Public Health (MPH)

- Public Health (https://www.uml.edu/catalog-AY16/pdf/Graduate.pdf)
- Epidemiology
- Global Environmental Sustainability & Health
- Healthcare Management
- Nutrition
- Population Health
Master of Science (MS)

- Accounting
- Autism Studies
- Biological Sciences: Applied Biotechnology (PSM), Biotechnology Biosafety (PSM), Environmental Biotechnology (PSM), Project Management for Life Sciences (PSM)
- Biomedical Engineering & Biotechnology: Biomedical & Biotechnology (PSM)
- Business Analytics
- Chemistry: Chemical & Polymer Science (PSM), Pharmaceutical Biochemistry (PSM)
- Clinical Laboratory Sciences: Clinical Lab Science (PSM)
- Computer Science: Bio/Chemical Informatics Software Entrepreneurship (PSM)
- Engineering Management
- Environmental Studies: Atmospheric Sciences (PSM), Environmental Engineering Sciences (PSM), Environmental Geoscience (PSM)
- Finance (http://www.uml.edu/Catalog/Graduate/Business/master-s/MSFinance.aspx)
- Health Informatics & Management: Health Informatics Health Management
- Information Technology
- Innovation & Technological Entrepreneurship
- Marine Sciences & Technology: Coast & Ocean Admin. Science (PSM)
- Nursing
  - Adult / Gerontological Nursing
  - Adult Psychiatric & Mental Health Nursing
  - Family Health Nursing
- Pharmaceutical Science (http://www.uml.edu/Catalog/Graduate/Health-Sciences/Pharmaceutical-Sciences/Master-)
- Physics: Phototonics
- Public Health (http://www.uml.edu/Catalog/Graduate/Health-Sciences/Public-Health/Default.aspx)
- Radiological Science & Protection: Radiological Science and Protection (PSM), Medical Physics
  - CBRNE Security
  - Critical Infrastructure Protection
  - Cybersecurity
- Work Environment: Cleaner Production & Pollution Prevention (MS, PSM), Ergonomics & Safety (MS, PSM), Epidemiology (MS, PSM), Occupational & Environmental Hygiene (MS, PSM)

Master of Science in Engineering (M.S.E.)

- Chemical Engineering: Leadership
- Civil Engineering: Leadership, Environmental Geotechnical Structural Transportation
- Computer Engineering: Leadership
- Electrical Engineering: Leadership, Optics
- Energy Engineering: Leadership, Nuclear Solar
- Mechanical Engineering: Leadership
- Plastics Engineering: Leadership, Coatings & Adhesives, Fibers & Composites, Synthetic Fibers

Education Specialist (EdS)

- Administration, Planning & Policy
- Curriculum & Instruction: Education of Diverse Populations
- Reading & Language

About Graduate Certificates

Most graduate certificates are comprised of four courses designed to provide specific knowledge and expertise vital to
today’s changing and complex needs in the work place. In most cases courses may be applied toward a degree program.

Requirements to Complete a Graduate Certificate

The courses to complete the certificate must be completed within a five year period with a minimum 3.0 grade point average, and with no more than 3 credits below B. Courses completed for one certificate may not be used for another certificate.

Certificate Application Process

Individuals must complete a simplified application and provide an official undergraduate transcript indicating that a baccalaureate degree has been awarded. GRE’s are not required. NOTE: If your bachelor’s degree is from outside of the U.S., you may be required to take the TOEFL examination.

- Graduate Certificate Application Form
  (https://www.uml.edu/docs/Post%20Bachelor%20Certificate%20Application_tcm18-229777.pdf) (pdf)

Gainful Employment Disclosure Information

Completion rates, median loan debts and program costs are outlined for each certificate program and available in PDF format.

- Graduate Programs

Doctoral Programs Offered

Listed by Degree Earned

- Doctor of Education
- Doctor of Engineering
- Doctor of Nursing Practice
- Doctor of Philosophy
- Doctor of Physical Therapy
- Doctor of Science

Doctor of Education

- Leadership in Schooling
- Language Arts & Literacy

- Mathematics & Science Education
- Doctor of Engineering (D.Eng./Ph.D.)
  - Business Management Curriculum
  - Chemical Engineering
  - Civil Engineering
  - Electrical Engineering
  - Energy Engineering
  - Mechanical Engineering
  - Mechanical Engineering/Civil &Environmental Engineering
  - Mechanical Engineering/Energy Engineering
  - Mechanical Engineering/Manufacturing Mechanical Engineering/Manufacturing Engineering
- Plastics Engineering
  - Doctor of Nursing Practice (DNP)
- Nursing
- Doctor of Philosophy (Ph.D.)
  - Applied Psychology and Preventative Science
    (http://www.uml.edu/Catalog/Graduate/FAHSS/Psychology/DoctoralAppliedPsychology.aspx)
  - Biomedical Engineering & Biotechnology
  - Business Administration
  - Chemistry
  - Computer Science
  - Criminology and Criminal Justice
    - Crime, Criminals
    - Community Global Perspectives on Crime &Justice
    - System &Policy Technology &Criminal Justice Victims, Crime &Justice
  - Global Studies
    (https://www.uml.edu/catalog-AY16/pdf/Graduate.pdf) Security &Human Rights Socio-
Economic Development
Comparative Cultures

- Marine Sciences & Technology
- Nursing
- Pharmaceutical Science
- Physics
  - Applied Mechanics
  - Energy
  - Atmospheric Sciences
  - Radiological Sciences
- Polymer Science
  - Polymer Science/Plastics Engineering

Doctor of Physical Therapy (DPT)
- Physical Therapy

Doctor of Science
- Work Environment
  - Cleaner Production & Pollution
  - Prevention
  - Ergonomics
  - Epidemiology
  - Hygiene
  - Policy

Graduate Certificates Offered

- Applied Statistics
- Behavioral Intervention in Autism
- Biomedical Engineering
- Biotechnology & Bioprocessing
- Chemistry
- Clinical Pathology
- Communications Engineering
- Composites and Materials
- Criminal Justice Leadership & Policy Development
- Medical Plastics Design and Manufacturing Engineering
- Design and Manufacturing Engineering
- Diversity in the Workplace
- Domestic Violence Prevention
- Energy Conversion
- Environmental Atmospheric Science
- Environmental Biotechnology
- Environmental GeoScience
- Family Studies
- Field Programming Gate Array
- Financial Management
- Forensic Criminology
- Foundations of Business
Health Informatics

Health Management

Integrated Engineering Systems

Criminal Justice: Leadership & Policy Development

Materials Sciences & Engineering

Mathematics for Teachers

Medical Plastics Design & Manufacturing

Microelectromechanical Systems/Nanoemtomical Systems (interdisciplinary)

Microwave and Wireless Engineering

Modeling, Simulation, and Control of Systems and Processes

Molecular & Cellular Biotechnology

Network Security

New Venture Creation

Nutritional Sciences

Peace and Conflict Studies

Pharmaceutical Science

Photonics & Opto-Electronic Devices

Plastics Design

Plastics Engineering Fundamentals

Plastics Materials

Plastics Processing

Professional Leadership

Public Health Laboratory Sciences
Professional Science Master's (PSM)

What differentiates the PSM from the core Master's degree?

The Professional Science Master’s (PSM) is an innovative, non-thesis degree option designed for students to pursue advanced training in science, health or engineering while simultaneously developing professional leadership skills highly valued by employers. PSM programs typically consist of 8 core courses in science, health or engineering, 3 professional courses in leadership, communication and project management, a paid internship or professional development project and a reflective seminar. PSM programs have been developed in concert with industry in response to employer demands for specific skills and knowledge above and beyond the core science curriculum.

In contrast to typical Masters degrees, which require a thesis as a step toward preparation for an academic career, PSM programs are designed as terminal degrees that prepare candidates to compete in the global market. In essence, PSM programs are the MBAs of the 21st century. The National PSM Association offers networking and professional workshops to promote continued career development for PSM alumni across the country.

What PSM programs are available at UMass Lowell?

UMass Lowell offers 19 PSM programs. Graduates earn a Masters degree in Science with a PSM Option in the fields indicated below.

**Biological Sciences**

- Applied Biotechnology
- Environmental Biotechnology
- Biosafety
- Project Management in Life Sciences

**Biomedical Engineering and Biotechnology**

**Chemistry**

- Chemistry and Polymer Science
- Pharmaceutical Biochemistry

**Clinical Laboratory Sciences**
Environmental Sciences  
(http://www.uml.edu/Catalog/Graduate/Sciences/Environmental/Default.aspx)
- Atmospheric Sciences
- Geosciences

Marine Sciences  
(http://www.uml.edu/Catalog/Graduate/Sciences/Marine/Default.aspx)
- Coastal and Ocean Administration, Science and Technology

Mathematics  
(http://www.uml.edu/Catalog/Graduate/Sciences/Mathematical-Sciences/Default.aspx)
- Industrial Mathematics

Physics  
(http://www.uml.edu/Catalog/Graduate/Sciences/Physics/Default.aspx)
- Radiological Sciences

Professional Leadership  
(http://www.uml.edu/Catalog/Graduate/Programs/Professional-Leadership.aspx)

Work Environment  
(http://www.uml.edu/Catalog/Graduate/Health-Sciences/Work-Environment/Default.aspx)
- Cleaner Production & Pollution Prevention
- Environmental Epidemiology
- Ergonomics and Safety
- Occupational & Environmental Hygiene

For more information regarding PSM programs at UMass Lowell contact William Smith (mailto:william_smith@uml.edu).

Recommended PSM Science Courses:

Students should consult with faculty advisers to determine best course choice for their career advancement needs. All PSM students should include at least 1 course (basic or enhanced) that incorporates communication into their curriculum. Course descriptions can be found on the Recommended Courses (https://www.uml.edu/docs/PSM%20Online%20Course%20Descriptions%2007012014_tcm18-149327.pdf) (pdf).

Doctoral Degree Requirements

Doctoral Research

1. It should demonstrate the candidate’s intellectual competence and maturity in the field of concentration;
2. It should make an original and valid contribution to knowledge; and
3. It should be an individual achievement and the product of independent research.

Although doctoral dissertations may result from a project involving collaboration of several scholars, the individual contribution of each doctoral candidate must be substantial, clearly identifiable, and presented separately. The Committee will judge the completed dissertation in terms of the candidate’s ability to review and make critical use of the literature; to formulate a problem, develop appropriate methodology, and work systematically toward a solution; and to summarize the material or data and draw conclusions from them. The writing should be of publishable quality.

Dissertation Committee

After a student has chosen an area of research and a research supervisor, a Dissertation Committee is selected by the student and his or her research advisor in accordance with the policy of the department. The Dissertation Committee shall consist of at least three members, one of whom is the research supervisor and at least two of whom shall be from the student's major department. An outside expert from industry or another university may be a member of the committee, but that individual must possess academic credentials which would qualify him or her to serve as a member of the University of Massachusetts Lowell faculty. The responsibilities of the Dissertation Committee shall be to:

1. Approve the research topic;
2. Supervise the progress of the dissertation;
3. Read, evaluate, and approve or disapprove of the written dissertation;
4. Hear, evaluate and approve or disapprove of the oral defense of the dissertation;
5. Report the completion of all dissertation requirements to the department and the Registrar’s Office.


Dissertation Credits

If the graduate student requires the use of University resources to continue his or her dissertation but has completed the required number of credits for doctoral research, he or she may sign up for 3, 6, or 9 credits of Continuing Graduate Research (see General Policies).

Graduate students who have completed all the requirements except the writing and defense of the dissertation and who do not need to use University resources must register for Continued Matriculation (CM.601.201) and pay a fee each semester until they graduate.

Note: International students on F-1 or J-1 visas must be registered for a minimum of nine credits each semester. Contact the International Students and Scholars Office for more information.

Dissertation Preparation

Every graduate student who completes a dissertation is required to bear the cost of binding two copies of the manuscript for the University’s files. Copywriting is optional and available for an additional fee.

Dissertation Defense

One week prior to the dissertation defense, announcements of the defense, listing the graduate student’s name, dissertation title, and place and time of the defense, must be submitted to the chairperson of the department, the college dean, the Registrar’s Office and posted and distributed throughout the University. The defense is open to the public.

Doctoral Degree Requirements

The doctoral degree is conferred upon graduate students who have met all the requirements listed below:

1. The student must successfully complete the graduate courses in the major field, including the GPA requirement, and the number of course and dissertation credits required by the particular program.
2. If indicated, the language requirement specified by the major department must be satisfactorily completed.
3. A qualifying examination, oral and/or written, conducted by the major department, must be passed before any work is begun on the dissertation. If the student fails the qualifying examination he or she may, at the discretion of the department, be permitted a second and final opportunity. At this point, having completed steps 1 through 3, the student is admitted to candidacy for the doctorate.
4. A dissertation based upon the results of original research, and which is satisfactory to the Dissertation Committee of the major department, must be completed.
5. A final oral dissertation defense conducted by the Dissertation Committee, based primarily upon, but not necessarily limited to, the contents of the candidate’s dissertation must be passed. The examination cannot be scheduled until all members of the Dissertation Committee have had seven working days in which to read the dissertation. The oral examination is to be conducted by the Dissertation Committee, whose membership may be augmented by the non-voting faculty. In order to pass the defense, the candidate may not receive more than one dissenting vote from the members of the Dissertation Committee.
6. All financial obligations (tuition, fees, and expenses) must be satisfied as evidenced by the completion and submission of a Graduate Degree Clearance form to the Registrar’s Office.

Procedure for Opting Out with a Master’s Degree

Students accepted into a doctoral program who elect to instead obtain the master’s degree and leave the university must follow the following procedure:

1. The student must file an Academic Petition requesting to be changed from the doctorate to the master’s degree program.
2. The student must complete all required courses for the master’s degree, compile a minimum 3.0 grade point average, successfully defend his/her thesis, and complete the clearance process at the Registrar’s Office.

3. All graduate courses (and undergraduate course work used for graduate credit), whether taken for the original doctoral program or for the master’s degree, will be included in the grade point average and listed on the student’s graduate transcript.

Financial Information

University-related costs include tuition and mandatory fees. Please contact the Student Financial Services (https://www.uml.edu/thesolutioncenter/bill/tuition-fees/default.aspx) at 978-934-3570 for more information.

- New England Regional Program
- Health Insurance
- Veterans
- Residency Classification
- Overdue Accounts
- Payment Plans
- University Charges

New England Regional Student Program

Massachusetts and the University participate in a reciprocal program in which qualified and legal residents of other New England states may attend graduate school in an approved program at the University of Massachusetts Lowell and pay 150% of the Massachusetts in-state tuition charges. (All other applicable fees apply.) Applicants are considered for unique and distinctive graduate level studies not available in their home state university system. Full details regarding eligible programs are available from the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts 02111 (617-357-9620), or at the University Graduate Admissions office (https://www.uml.edu/Grad/default.aspx)."Umass Lowell also participates in the Proximity Allowance of the New England Regional Program. This program allows New Hampshire residents from selected towns within a 20 mile radius of UMass Lowell to be eligible for a tuition discount for most majors. Please visit www.uml.edu/admissions/proximity (https://www.uml.edu/Grad/Costs/default.aspx) for details.

Health Insurance (https://www.uml.edu/student-services/Health/default.aspx)

Mandatory on-campus (accident) insurance is charged to all graduate students. All graduate students enrolled in 9 or more credit hours will be charged for health insurance as required by state law. Graduate students may waive student health insurance charges if they maintain comparable insurance coverage and complete an insurance waiver form by the required deadline. Forms are available in the Office of Graduate Admissions and Accounts Receivable Office, Dugan Hall, UMass Lowell South. Family health insurance plans are also available with options for coverage of spouses and/or spouses and dependent children.

International Students: As authorized under the insurance laws for higher education students in Massachusetts (section 275 of Chapter 151 of the Acts of 1996), the University of Massachusetts Lowell requires that all international students must enroll in the University’s Student Health Insurance Plan.

Veterans

The Veterans Administration has approved the University of Massachusetts Lowell for undergraduate study. For details regarding veteran tuition benefits, refer to the Registrar’s Office (https://www.uml.edu/Registrar/default.aspx) website (https://www.uml.edu/Registrar/default.aspx).

RESIDENCY CLASSIFICATION

Rules for Determination of Domicile

University tuition rates are established on the basis of official state residency as determined by a student’s true "domicile." "Domicile" is defined as a person’s true, fixed and permanent home and place of habitation where he or she intends to remain permanently or for an indefinite time. Massachusetts residency for tuition purposes is not acquired by mere physical presence in Massachusetts while a person is carrying on a course of study at the University. A student’s residency status is based on a determination of one’s domicile at the time of entry or re-entry to the University. A student may apply to be reclassified at any time and must provide detailed documentation to support the claim that he or she met the requirements for Massachusetts residency for tuition purposes at the time of his or her entry as a student. One notable exception is made for students who marry Massachusetts residents while enrolled in a course of studies. The complete set of rules are attached to the application for reclassification. These applications are available from the Residency Officer in Dugan Hall (978-934-2596).

Payment of Bills
Graduate students will be permitted to attend classes and to utilize University facilities only after they have cleared all their financial obligations to the University. Financial obligations include indebtedness for library and parking fines, rental payments, and repayment of emergency loans. All bills are payable in advance by check or money order and are due as specified on the student invoice. Major credit cards are also accepted. All payments of fees and tuition should be made payable directly to the University of Massachusetts Lowell. A student in debt to the University at the end of any semester or summer session is not permitted to register again at the University until his or her indebtedness has been discharged. In addition, student transcripts and diplomas will not be released unless all indebtedness has been discharged.

Overdue Accounts

Should it be necessary to utilize the services of a collection agency or attorney for an overdue student account, the student will be liable for any and all legal fees, commissions, and associated service charges.

Payment Plans

The University of Massachusetts Lowell offers a low-cost, interest-free payment option administered by Academic Management Services (AMS). This plan allows students to budget the annual cost of tuition and fees over a ten month period. Please call AMS directly at 1-800-635-0120 or contact the Financial Aid Office, Dugan Hall, UMass Lowell South (978-934-3570) for more information.

University Charges

University-related costs include tuition and mandatory fees. Please contact the Student Financial Services (https://www.uml.edu/thesolutioncenter/bill/tuition-fees/default.aspx) for more information.

Doctoral Degree Credit Requirements

<table>
<thead>
<tr>
<th>COLLEGE/PROGRAM</th>
<th>COURSE/SEMINAR CREDITS</th>
<th>DISSERTATION CREDITS</th>
<th>TOTAL CREDIT REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLLEGE OF SCIENCES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEMISTRY (Ph.D.) All Options</td>
<td>27-30</td>
<td>18</td>
<td>45-48</td>
</tr>
<tr>
<td>COMPUTER SCIENCE (Ph.D.) All Options</td>
<td>18</td>
<td>24</td>
<td>42 (Beyond M.S.)</td>
</tr>
<tr>
<td>PHYSICS (Ph.D.) All Options</td>
<td>36-45</td>
<td>15-24</td>
<td>60</td>
</tr>
<tr>
<td>POLYMER SCIENCE (Ph.D.)</td>
<td>27</td>
<td>18</td>
<td>45</td>
</tr>
</tbody>
</table>

Financial Assistance & Assistantships

**FINANCIAL ASSISTANCE**

- Applying for Financial Aid
- Other Types of Assistance
- Tuition and Fees

**Financial Aid**
Applying for Financial Aid:

The University requires students to file a Free Application for Federal Student Aid (FAFSA). Students may apply for the FAFSA online at [www.FAFSA.ed.gov](http://www.FAFSA.ed.gov). It is recommended that students save time by requesting personal identification numbers called Federal Student Aid PINs before the student applies for aid. The PIN can be used to electronically sign the FAFSA, electronically sign certain loan contracts, and access online information about federal student aid the student has received. The PIN must be requested online at [www.pin.ed.gov](http://www.pin.ed.gov).

Copies of students and spouses federal income tax, W2 forms and other forms may be requested by the Financial Aid Office to verify information provided on the FAFSA. Many forms requested are available on the financial aid website at [www.uml.edu/financialaid](https://www.uml.edu/thesolutioncenter/financial-aid/default.aspx). All information requested by the Financial Aid Office is required to complete the application process and is held in strictest confidence.

Eligibility Requirements

To receive financial aid from the various student aid programs, a student must:

- Have demonstrated financial need to qualify for need-based aid programs. Need is defined as the cost of attendance minus the expected family contribution derived from filing the FAFSA. Students may also be eligible for non-need based aid programs, such as the Federal Direct Unsubsidized Loan program and meritocratic awards.
- Be a U.S. citizen or eligible non-citizen.
- Have a valid Social Security Number.
- Make satisfactory academic progress.
- Have a high school diploma or a General Education Development (GED) certificate, pass a test approved by the U.S. Department of Education, meet other standards the state of Massachusetts establishes that are approved by the U.S. Department of Education, or complete a high school education in a home school setting that is treated as a home school or private school under state law.
- Be a matriculated student enrolled in a degree granting or approved certificate program. Students enrolled in non-degree programs are not eligible for financial aid.
- Be enrolled at least half-time each semester. (Minimum of six credits for graduate students).
- Cannot be in default or in over payment on a federal student loan.
- Register with the Selective Service, if required at [www.sss.gov](http://www.sss.gov).

Determining Financial Need:

Demonstrated financial need is the difference between the cost of attendance and the expected family contribution. The cost of attendance (COA) includes direct expenses such as tuition and fees, and also includes indirect such as room, board, books and transportation. The expected family contribution (EFC) is determined by the federal needs analysis formula and is calculated by completing a Free Application for Federal Student Aid (FAFSA).

Types of Financial Aid:

**William D. Ford Federal Direct Subsidized/Unsubsidized Loan Program:** The primary source of financial aid recommended for graduate students is the William D. Ford Federal Direct Student Loan Program. This program allows the student to borrow up to $20,500 per year at a low interest rate in subsidized and/or unsubsidized loans. Eligibility for a ?subsidized? or ?unsubsidized? direct loan is determined from the information provided on the FAFSA. A student may receive a subsidized loan and an unsubsidized loan for the same enrollment period. A ?subsidized? loan is awarded on the basis of financial need. A student will not be charged any interest before repayment begins or during authorized periods of deferment. A ?unsubsidized? loan is not awarded on the basis of need. A student will be charged interest from the time the loan is disbursed until it is paid in full. If a student allows the interest to accumulate, it will be capitalized?that is, the interest will be added to the principal amount of the loan and additional interest will be based upon the higher amount. For more information about graduate student aid contact the Financial Aid Office at 978-934-4220 or visit website at [www.uml.edu/financialaid](https://www.uml.edu/thesolutioncenter/financial-aid/default.aspx).
William D. Ford Federal Direct PLUS Loan Program:

A non-need based federal loan offers up to the cost of attendance minus financial aid per academic year to qualified graduate students and parents/stepparents of undergraduate dependent students. Interest rate is fixed and repayment begins 45-60 days after the second disbursement. Refer to the Direct Loan web site (http://www.ed.gov/offices/OSFAP/DirectLoan/index.html) for current interest rates. A FAFSA is not required to apply for the PLUS loan; however, students are encouraged to file a FAFSA so that they can receive the maximum aid available. Parents may download an application online from the financial aid webpage www.uml.edu/financialaid (https://www.uml.edu/thesolutioncenter/financial-aid/default.aspx) by clicking on forms. Applications should be returned to the financial aid for processing. This is a loan that needs to be repaid by the parent/stepparent.

Other Types of Assistance:

Federal Professional Nurse Traineeship Grant Program:

Federally funded grant available to graduate nursing students. Award amounts vary and are dependent upon funding. Please contact the School of Nursing for more information.

Federal Teach Grant:

Federally funded grant available to qualifying graduate education majors enrolled in coursework or plan to complete coursework toward a career in teaching in a high need subject area. Contact the Graduate School of Education for more information.

Deans Fellowships:

$2,000 awards granted to eligible, newly admitted full-time, in-state Masters candidates not receiving a teaching or research assistantship.

Provosts Fellowships:

$4,000 awards granted to eligible, newly admitted full-time, out-of-state and international Masters candidates not receiving a teaching or research assistantship.

ASSISTANTSHIPS

Teaching and Research Assistantships

A limited number of teaching and research assistantships are available for matriculated, full-time (minimum of 9 credits/semester) graduate students. All assistantships are subject to the agreement between UMass Lowell and UAW/Graduate Employees Organization. Teaching assistantships are assigned by the student’s department; therefore, queries regarding teaching assistantships should be directed to the departmental graduate coordinator (https://www.uml.edu/Grad/Accepted-Students/coordinators.aspx) or chairperson (see www.uml.edu/Grad/coordinators.aspx) for a list. Research assistantships are available through special arrangements with individual research advisers. Individuals interested in research assistantships should contact departmental faculty members concerning the availability of this form of financial aid.

Qualifying for an Assistantship

To ensure that assistantships are awarded to the most qualified individuals, the University has established the following requirements:

1. No teaching/research assistantship may be awarded to a graduate student with incompletes, F’s, or U’s on his or her transcript.
2. No teaching/research assistantship may be awarded to a graduate student who fails to maintain good academic standing (a grade point average under 3.0 on the official transcript). See the Academic Standing information at www.uml.edu/catalog/graduate/policies/Academic_Standing.htm.
3. No University-funded teaching/research assistantship may be awarded to a master’s degree candidate if he/she has completed the total number of credits required for his/her program.
4. Level III teaching/research assistantships may only be awarded to graduate students who have reached doctoral candidacy (i.e. completed all course work, oral/written and language examinations) and are enrolled in dissertation research.

Teaching and Research Assistants are awarded either a semester or a yearly contract. The current negotiated agreement between The University of Massachusetts Lowell Board of Trustees and the Graduate Employee Organization is posted on the Human Resources website. Current stipend levels may be found there as well.

Graduate Student Assistantships

A limited number of student assistantships may be available in the departments. Students in this category are paid an hourly rate and are obligated to pay their own tuition and fees. All queries concerning assistantships should be directed to the graduate coordinator (https://www.uml.edu/Grad/Accepted-Students/coordinators.aspx) or chairperson (see www.uml.edu/Grad/coordinators.aspx) in the student’s department.
Tuition and Fees

Please see the Student Financial Services website at www.uml.edu/Tuition-fees/default.aspx for current tuition and fee information. Your tuition rate is determined by your residency status: in-state, out-of-state (which would include international students), New England Regional or Proximity.

Master's Degree Requirements

- Advising
- General Requirements for the Master's Degree
- Research Option for the Master's Degree
- Research Project
- Thesis

Students Continuing on to a Doctoral Program

Advising

An entering graduate student should meet with the departmental graduate coordinator as soon as possible after arrival on campus. The coordinator will:

1. Help design and then approve the student's complete program leading to the master's degree.
2. Recommend course credits from within and outside the University for transfer into the student's degree program.
3. Monitor the student's progress toward the degree, which must be completed within a five-year time period in most programs (See Time for Limit for Degree Completion).

General Requirements for the Master's Degree

To be recommended for a master's degree, a candidate must satisfy all requirements of the University and the specific requirements of the department in which he or she is enrolled. The requirements of the University are listed below, and the specific requirements established by the various departments may be found in the section describing the particular programs.

A candidate for the master's degree must complete the following within five years of matriculation in order to receive the degree: (Note: Master's degrees which require 45 or more credits have a limit of six years.)

1. A course of study designed by the department in which he or she is enrolled and approved by the University. The course of study must have a minimum of 30 credit hours of graduate work including, where applicable, a thesis or project in the student's chosen field.
2. A student must successfully pass an oral or written examination on his or her complete master's program if required by the department.
3. Satisfactory grades in all subjects offered for the degree must be earned (See Academic Standing).
4. All financial obligations, including tuition, fees, and expenses, must be satisfied as evidenced by completion and submission of a signed Graduate Degree Clearance form to the Registrar's Office.

Research Option for the Master's Degree

If required by the program, a student must complete a master's project or a thesis. The proposal must be approved by the department in which the student is enrolled and the final project or thesis must be of graduate level quality.

Project

The project must consist of a scholarly investigation, such as a review, report, synthesis, design or experiments in the student's field resulting in a comprehensive written document. Usually, if a student chooses the project option, he or she is required to take additional course credits. Each project is awarded only three to four credits and is intended to be completed within the time limit of one semester. If the work for a project is not completed by the end of the semester, the instructor will give the student an Incomplete which is to be treated the same as an incomplete for a regular course.

Thesis

The requirements for a thesis are much more extensive, including the completion of acceptable research and its defense before a thesis committee. The completed thesis must conform to the format specified in the "Thesis Guide" which is available in the Registrar's Office. The time required for completion may vary; if a student has not completed the thesis by the end of the semester, but is making satisfactory progress, he or she is given the grade of "PR". If the student requires the use of university resources to continue thesis research, but has completed the required number of credits for the master's thesis, he or she may sign up for 3, 6, or 9 credits of Continuing Graduate Research (see Course
Descriptions). However, if the student is not using University resources, but is in the process of writing the thesis, he or she may register for Continued Matriculation for the semester(s) during which the work is completed. Continued Matriculation is available to international students only under special circumstances. International students should contact the International Student Office (https://www.uml.edu/ISSO/default.aspx) for more information and to make sure they comply with visa and immigration regulations.

Upon successful completion of the thesis, the grade of “S” will be awarded for the all semesters in which the student is registered for thesis research. Only the Registrar’s Office can issue this grade.

**Thesis Committee**

As soon as a student has chosen an area of research, a Thesis Committee is selected by the student and his or her research advisor in accordance with the policy of the department. The Thesis Committee shall consist of at least three members, at least two of whom shall be from the student’s major department. One member of the committee shall be the student’s thesis advisor. An outside expert, such as the supervisor of a research project conducted at an industrial setting or a faculty member from another institution, may be a member of the committee, but that individual must possess academic credentials which would qualify him or her to serve as a member of the University of Massachusetts Lowell faculty. The responsibilities of the Thesis Committee shall be to:

1. Approve the research topic.
2. Supervise the progress of the thesis.
3. Read, evaluate and approve or disapprove of the written thesis.
4. Hear, evaluate and approve or disapprove of the oral defense of the thesis.
5. Report the completion of all thesis requirements to the department and the Registrar’s Office.

**Thesis Preparation**

Every graduate student who completes a thesis is required to bear the cost of binding two copies of the manuscript for the University’s files. Copy writing is optional and available for an additional fee.

**Thesis Defense**

One week prior to the thesis defense, announcements of the defense listing the candidate’s name, thesis title, and place and time of the defense, must be submitted to the chairperson of the department, the college dean, and the Registrar’s Office, and posted and distributed throughout the University. The defense is open to the public.

**For Students Continuing on to a Doctoral Program**

Students accepted into a master’s degree program who decide to continue on for the doctorate but want to first complete their master’s degree must adhere to the following procedure.

1. The student must complete all required courses, compile a 3.0 grade point average, and successfully defend his/her thesis, if required.
2. The student must complete the Registrar’s Office clearance process for the master’s degree.
3. A student is prohibited from enrolling in doctoral research until he or she has completed the clearance process for the master’s degree.
4. The student must then apply to the doctoral program by completing the standard Graduate Admissions application process.
5. Official admission into a doctoral program and receipt of a letter of acceptance are contingent upon completion of the clearance process for the master’s degree.

**Master’s Degree Credit Requirements**

**College of Sciences**

<table>
<thead>
<tr>
<th>COLLEGE/PROGRAM</th>
<th>COURSE or SEMINAR CREDITS</th>
<th>THESIS or PROJECT CREDITS</th>
<th>TOTAL CREDIT REQUIREMENT</th>
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</thead>
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<tr>
<td>BIOLOGICAL SCIENCES (M.S.)</td>
<td>The sis 18-24</td>
<td>6-12</td>
<td>30</td>
</tr>
<tr>
<td>Project 24-27</td>
<td>3-6</td>
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<tr>
<td>PS M options 37</td>
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<td>37</td>
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| CHEMISTRY (M.S.) | The sis 18 | 12 | 30 |
| Non - Thesis 30 | 0 | 30 |
### Computer Science (M.S.)

<table>
<thead>
<tr>
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### Computer Science (M.S.) Entrepeneurs HIP option

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### Mathematics (M.S.)

[all options except PSM]

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### Mathematics (M.S.) PSM option

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### PSM option

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### College of Fine Arts, Humanities & Social Sciences

#### Colleague/Program

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### Graduate School of Education

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<td>Thesis or Project Credits</td>
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<tr>
<td>Educational Administration (M.Ed)</td>
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<td>Reading &amp; Language (M.Ed)</td>
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**Francis College of Engineering**

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</table>

**Environmental Studies (M.S.)**

| Thesis                         | 24                        | 6                         | 30                       |
| Project                        | 27                        | 3                         | 30                       |

**Atmospheric Sciences (Concentration)**

| Thesis                         | 24                        | 6                         | 30                       |
| Non-Thesis                     | 30                        | 0                         | 30                       |

**Mechanical (M.S.E.)**

| Thesis                         | 21                        | 9                         | 30                       |
| Non-Thesis                     | 30                        | 0                         | 30                       |

**Plastics (M.S.E.)**

| Thesis                         | 24                        | 6                         | 30                       |
| Non-Thesis                     | 33                        | 0                         | 33                       |

**College of Health Sciences**

<table>
<thead>
<tr>
<th>Program</th>
<th>Course or Seminar Credits</th>
<th>Thesis or Project Credits</th>
<th>Total Credit Requirement</th>
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<td>Thesis or Project Credits</td>
<td>Total Credit Requirement</td>
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<tr>
<td>HEALTH MANAGEMENT and POLICY (M.S.) [all options]</td>
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<td>UMASS INTERCAMPUS</td>
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<tr>
<td>BIOMEDICAL ENGINEERING &amp; BIOTECHNOLOGY (M.S.)</td>
<td>28</td>
<td>3</td>
<td>31</td>
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</tbody>
</table>

TOTAL CREDIT REQUIREMENT:

- MANNING SCHOOL OF BUSINESS:
  - BUSINESS ADMINISTRATION (M.B.A.) [all options]: 42 credits
  - INNOVATION AND TECHNOLOGICAL ENTREPRENEURSHIP (M.S.): 30 credits

- UMASS INTERCAMPUS:
  - BIOMEDICAL ENGINEERING & BIOTECHNOLOGY (M.S.):
    - M.S.: 28 credits
    - M.S. - PSM: 34 credits

GRADUATE CERTIFICATES

<table>
<thead>
<tr>
<th>Program</th>
<th>Course or Seminar Credits</th>
<th>Thesis or Project Credits</th>
<th>Total Credit Requirement</th>
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<tr>
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<tr>
<td>MARINE SCIENCES &amp; TECHNOLOGY (M.S.) Thesis</td>
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<tr>
<td>Non-Thesis</td>
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<tr>
<td>PSM option</td>
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</table>

NOTE: While most graduate certificates are 12 credits, some are as many as 18 credits. Courses completed for one graduate certificate may not be used for another graduate certificate.

Graduate Admissions

- Admissions Requirements
- Departmental Requirements

Find Us

The Office of Graduate Admissions (www.uml.edu/grad)
(https://www.uml.edu/Grad/default.aspx)

University of Massachusetts Lowell

Cumnock Hall, Suite 110

31 University Ave.

Lowell, MA 01854

978-934-2390 or 1-800-656-GRAD

Admission Requirements
The general requirements for admission to graduate study at the University are listed below.

1. The applicant must show official evidence of having earned a baccalaureate degree or its U.S. equivalent from an accredited college or university. If an international transcript does not adequately demonstrate that an applicant has the equivalent of an American bachelor’s or master’s degree, the Office of Graduate Admissions will require such verification by an independent service such as the Center for Educational Documentation (http://www.cedevaluations.com), Boston, MA (617-338-7171).

2. The degree must have been earned with a satisfactory scholastic average to demonstrate that the applicant has had adequate preparation for the field in which graduate studies are to be undertaken.

3. The applicant must have obtained a satisfactory score on the appropriate entrance examination required for admission by the program or department to which admission is sought. The official score report must be submitted; a photocopy of the examinee’s report is unacceptable. Unless otherwise stated under a specific program description, the required examination is the Graduate Record Examination General Test.

4. The Commonwealth of Massachusetts requires that all full-time graduate students (9 or more credits) must be immunized against measles, mumps, rubella, tetanus, and diphtheria. In addition, all students in programs in the health professions, regardless of age or enrollment status, must show proof of immunization. Students will not be permitted to register for courses at the University unless proof of immunization has been sent directly to the Director of Health Services (http://www.uml.edu/student-services/health/), University of Massachusetts Lowell, Lowell, MA 01854.

Departmental Requirements

The rules, regulations, and policies delineated by the University constitute only the minimum requirements for admission, retention, and graduation. Each department may have additional requirements mandated by the unique nature of its programs. It is the responsibility of the graduate student to be aware of the minimum requirements of the University and, in addition, to fulfill the special requirements of the particular program in which he or she is enrolled.

Learning Outcomes Assessment Policy

In keeping with the University’s commitment to excellent educational experiences and high-quality programs for its students, and consistent with practices at other institutions within the state and nationally, UMass Lowell routinely engages in the assessment of student learning at the course, program, institution and systems levels. The learning outcomes assessment process may include a variety of methods such as standardized tests, student surveys and focus groups, campus developed instruments, and a review of student work. In circumstances beyond the individual course level, the identity of the student will be protected. The student’s name, grade or other identifying information will be removed before the student work is reviewed. Selected student work may be subject to review by a limited cohort of higher educational personnel, primarily faculty. Assessment of student learning is undertaken primarily for the purpose of improving student learning, curriculum development, instructional improvement, and enhancing student academic success. Assessment activities will have absolutely no effect on a student’s grade, academic standing, ability to transfer, or ability to be graduated. UMass Lowell will take all necessary steps to ensure the confidentiality of all student records and student work reviewed through this process in accordance with FERPA regulation.

Application Procedure

- Departmental Requirements
- Application Procedure for Graduate Admissions
- Conventional Application
- Application Deadline
- Types of Admission
- Status as a Graduate Certificate Candidate
- Non Degree Status
• Graduate Readmission/Deferral Policy

General Admissions Requirements

The general requirements for admission to graduate study at the University are listed below.

1. The applicant must show official evidence of having earned a baccalaureate degree or its U.S. equivalent from an accredited college or university. If an international transcript does not adequately demonstrate that an applicant has the equivalent of an American bachelor’s or master’s degree, the Office of Graduate Admissions will require such verification by an independent service such as the Center for Educational Documentation (http://www.cedevaluations.com/), Boston, MA (617-338-7171).

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The rules, regulations, and policies delineated by the University constitute only the minimum requirements for admission, retention, and graduation. Each department may have additional requirements mandated by the unique nature of its programs. It is the responsibility of the graduate student to be aware of the minimum requirements of the University and, in addition, to fulfill the special requirements of the particular program in which he or she is enrolled.

Application Procedure for Graduate Admission

Applicants to graduate programs are encouraged to apply online. Apply now with our Online Application. (https://sa-webapp-prd.erp.umasscs.net/psc/webapp/EMPLOYEE/HRMS/c/UM_WEBAPP_MENU.UM ADM_APP_LOGIN.GBL&instituion=UMLOW&CareerGRAD&CenterGRAD?&

- Conventional Application
- Application Deadline
- Types of Admission
- Status as a Graduate Certificate Candidate
- Non-Degree Status
- Graduate Readmission/Deferral Policy
- Acceptance of Foreign or American Master’s Degree Toward Doctoral Requirement
- Transfer Credit
- Graduate Equivalency Credit

Conventional Application

Application forms and materials may be obtained from:

The Office of Graduate Admissions

University of Massachusetts Lowell
Cumnook Hall, Suite 110
One University Avenue
Lowell, MA 01854

978-934-2390 or 1-800-656-GRAD

www.uml.edu/grad (https://www.uml.edu/Grad/default.aspx)

A non-waivable and non-refundable application fee must be received before the application is processed. Each applicant must file the following documents:

1. A completed application form.
2. Official transcripts of all undergraduate and graduate
records.

3. Three letters of recommendation written by individuals qualified to judge the ability of the applicant to carry on graduate work and research.

4. Official scholastic test scores specified for various degree programs at the University (see individual departmental requirements). An applicant who has earned a graduate degree from an accredited university may petition the department graduate coordinator to waive the scholastic test requirements (e.g. GRE).

5. The official score report for the "Test of English as a Foreign Language" (TOEFL) for students from countries where English is not the national language. If the TOEFL bulletin cannot be obtained locally, students should write well in advance to:

Test of English as a Foreign Language
Box 6151
Princeton, NJ 08541-6151, U.S.A.

All test scores must be official and sent directly by the testing agency.

Application Deadline

The University of Massachusetts Lowell Graduate Admissions Office has a "rolling admissions" policy. However, some programs have early, fixed application deadlines. Consequently, the applicant is strongly urged to contact the department of interest to determine the last date on which applications may be received. In general, early applications will ensure that all materials are processed on time and that a student who wishes to apply for a teaching assistantship will be given due consideration. Many programs will fill available openings several months before the beginning of the semester. A student who has been accepted into a graduate program must attend within a year of acceptance or may, at the discretion of the department, be required to submit a new application. Application files for individuals who do not matriculate will be retained for only two years from the date of application.

Types of Admission

A student may be admitted to graduate study at the University of Massachusetts Lowell under one of the two classifications listed below.

1. Matriculated status: A student who has met all requirements for admission to a degree program and who has been recommended by the department in which he or she proposes to study as a degree candidate.

2. Matriculated with conditions: A student who has not fully met the requirements stipulated by the program may be admitted as a prospective candidate for a degree with specified conditions to be met in the future. Such a student must have as an initial objective the satisfactory completion of all requirements for full matriculation.

Status as a Graduate Certificate Candidate

Graduate certificate programs are designed for students holding a baccalaureate degree in a field related to the certificate program. A student who wishes to apply for a certificate program must complete the Graduate Certificate Application (https://www.uml.edu/Grad/programs/about-certificates.aspx), submit the appropriate application fee, and submit an official transcript indicating the conferral of a Bachelor's degree. The graduate record exam (GRE) is not required.

A student in a certificate program who wishes to enroll in a master's or doctoral program is ineligible to receive credit towards a degree until he or she files a formal application and is then admitted as a matriculated student.

The maximum number of graduate credits a student may complete while enrolled in a graduate certificate is 12 credits.

Non-Degree Status

An individual without advanced degree objectives may take courses in certain programs with non-degree status. A student who wishes to take courses as a non-degree student must submit an official transcript indicating the conferral of a Bachelor's degree. A student in non-degree status is ineligible to receive credit towards a degree until he or she files a formal application and is then admitted as a matriculated student.

The maximum number of graduate credits a student may complete with non-degree status is 12 credits.

NOTE: International students are not eligible for non-degree status.

Graduate Readmission/Deferral Policy

1. A matriculated student who formally withholds in good standing from the university may request readmission within two years by completing only the cover page of the
A newly accepted student dropped from a graduate program for failure to register may be re-admitted by submitting a new application cover page and fee within two years of acceptance date.

3. A matriculated student who fails to maintain continuous enrollment and has not formally withdrawn may be readmitted by submitting a new application cover page and fee within two years of being dropped from the program.

4. A student may request a deferment of enrollment up to one year beyond the date when he or she was scheduled to begin his or her graduate program. If the one-year time period is exceeded, the student must submit a new application and fee. Deferral must be requested before the start of the semester for which the student is accepted.

Professional Leadership Certificate

About the Program

The Professional Leadership certificate is a useful credential for science, engineering and technology professionals in the private and public sectors who wish to advance to managerial and/or move to more business related positions within their organizations. This is a 12 credit (four courses, three credits per course) program.

Admission Requirements

1. Bachelor's degree in science, engineering, technology or mathematics.
2. Minimum of two years post-baccalaureate work experience.

Curriculum

This program consists of four masters level courses (3 credits each), with three courses in the professional leadership area and one advanced course in the individual's field of expertise. For qualified individuals, the 12 earned graduate credits are transferable to a related Professional Science Masters graduate program with the approval of the appropriate graduate program coordinator.

Required Professional Courses: (three credits each all are online courses)

- PSM 535 Project Management for Science Professionals
- PSM 545 Professional and Scientific Communication
- PSM 555 Professional Science Leadership

Contact

Deborah White
(mailto:Deborah_White@uml.edu)

UMass System Graduate Programs

UMass Lowell offers two intercampus programs drawing on the strengths of the whole UMass System.

Marine Science

- Biomedical Engineering & Biotechnology Program

Colleges & Degrees of Graduate Study

- Manning School of Business
- Graduate School of Education
- College of Engineering
- College of Fine Arts, Humanities & Social Sciences
- School of Health & Environment
- College of Sciences
- UMass System Graduate Programs

Graduate Programs

UMass Lowell offers more than three dozen master's programs, including Education Specialist (Ed.S.) post-graduate programs. Many of our programs have non-thesis options. If you're not ready to matriculate into a full program, consider our certificate programs. If you are looking for a doctoral
program, we offer more than two dozen in a wide range of disciplines.

Online Graduate & Undergraduate Degrees & Part-Time Programs

UMass Lowell offers a number of graduate degrees and certificates (http://continuinged.uml.edu/degrees/Graduate.htm) and part-time undergraduate degrees and certificates (http://continuinged.uml.edu/degrees/Undergraduate.htm) entirely online, or as a mix of online and on-campus courses through its Division of Online and Continuing Education. By making the courses available online - during the evening and on weekends - the University makes it easier for busy professionals to fit education into their lives.
General Regulations for Graduate Students

Each University student is subject to two sets of academic regulations - those of the University as a whole, which are cited in this section, and the academic rules of the college and program in which he or she is enrolled. The academic rules of colleges and programs are listed in sections devoted to college programs.

In registering for courses, each student assumes full responsibility for knowledge of and compliance with the definitions, regulations, and procedures for the University, as set forth in this publication. Moreover, in accepting admission to the University, each student assumes responsibility for knowledge of and compliance with the definitions, regulations, and procedures of the University pertaining to his or her student status as set forth in the appropriate UML publications.

Students who have questions about the interpretation or application of University academic policy should consult the dean of their college or the Vice Provost for Graduate Education.

Academic Integrity Policy

UNIVERSITY OF MASSACHUSETTS LOWELL POLICY AND PROCEDURES RELATING TO STUDENT ACADEMIC INTEGRITY AND MISCONDUCT

I. Statement of Principles: The University has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others academic endeavors. Academic dishonesty is prohibited in all programs of the university.

II. Academic Misconduct Subject to Disciplinary Action:

(1) Academic misconduct is an act in which a student:

(a) Seeks to claim credit for the work or efforts of another without authorization or citation;
(b) Uses unauthorized materials or fabricated data in any academic exercise;
(c) Forges or falsifies academic documents or records;
(d) Intentionally impedes or damages the academic work of others;
(e) Engages in conduct aimed at making false representation of a students academic performance;
(f) Assists other students in any of these acts.

(2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as ones own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; getting unauthorized access to examinations or course materials; submitting, without the permission of the current instructor, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

III. Possible Disciplinary Sanctions:

(1) The following are the disciplinary sanctions that may be imposed by an instructor for academic misconduct:

(a) An oral or written notice of misconduct;
(b) An assignment to repeat the work, to be graded on its merits;
(c) A lower or failing grade on the particular assignment or test;
(d) A lower grade in the course;
(e) A failing grade in the course;

In addition, an instructor or the Academic Dean may recommend the following sanctions:

(f) A non-deletable failing grade in the course;
(g) Suspension from the University; (h) Expulsion from the university.

Sanctions f  h are imposed by the Office of the Provost.

(2) One or more of the disciplinary sanctions listed above may be imposed for an incident of academic misconduct.

IV. Definitions

As used herein:

(1) Office of the Provost means the Provost, Vice Provost or a designee.

(2) Days means academic calendar days and excludes Saturdays, Sundays, legal holidays and days upon which the university is closed.

(3) Academic Dean means the Academic Dean or designee for the college in which the subject course is taught.

(4) Instructor refers to the Instructor of Record.

(5) Minor Disciplinary Sanction means a disciplinary sanction, identified in paragraph III (1) (a)-(e) and imposed, for academic
misconduct, upon a student by an instructor.

(6) Major Disciplinary Sanction means a disciplinary sanction, identified in paragraph III (1) (f)-(h) and imposed, for academic misconduct, upon a student by the Office of the Provost or the Academic Integrity Appeals Board upon the recommendation of the instructor or the Academic Dean or imposed at the discretion of the Office of the Provost.

(7) Notice to the student, whenever required herein, shall be e-mailed to the students official student.uml.edu e-mail address or mailed to the student by regular first class United States mail at his or her current address as maintained by the university.

V. Imposition of Disciplinary Sanctions by the Instructor:

(1) Where an instructor concludes that a student enrolled in one of his or her courses has engaged in academic misconduct, the instructor may impose one or more of the following disciplinary sanctions, as listed under paragraph III, subsections (a) through (e):

(a) An oral or written notice of misconduct;
(b) An assignment to repeat the work, to be graded on its merits;
(c) A lower or failing grade on the particular assignment or test;
(d) A lower grade in the course;
(e) A failing grade in the course.

(2) When possible, prior to imposing a minor sanction, the instructor shall notify the student that the instructor believes an act of academic misconduct has occurred, that a sanction may be imposed, and that a Notification of Academic Dishonesty Form will be filed with the Office of the Provost.

(3) Upon the imposition of a minor sanction under this section, the instructor shall notify the Office of the Provost. Notification to the Office of the Provost shall occur within 10 days, using the Notification of Academic Dishonesty Form (http://www.uml.edu/docs/notificationofacademicdishonesty_tc m18-3543.pdf). Notification to the Office of the Provost shall include identification of the student, a description of the misconduct and a specification of the sanction imposed.

(4) Within 10 days following receipt of such notice, the Office of the Provost shall provide notice of the imposed discipline to the student, the instructor and to the Academic Dean. Notification to the student shall include a statement of the misconduct, specification of the sanction imposed, a statement indicating the students right to an appeal before the Academic Dean and a link to the policy and procedures set forth herein.

(5) A student who receives notice of a disciplinary sanction imposed under this section has the right to a hearing before the Academic Dean to contest the determination that academic misconduct occurred or the disciplinary sanction imposed or both. If the student desires such a hearing, he or she must file a written request with the Office of the Provost and the Academic Dean within 10 days of receipt of notice from the Office of the Provost.

VI. Recommendation of Major Disciplinary Sanction by the Instructor:

(1) Where an instructor concludes that a student enrolled in one of his or her courses has engaged in academic misconduct in the course, the instructor for that course may recommend one or more of the following disciplinary sanctions:

(f) A non-deletable failing grade in the course;
(g) Suspension from the University;
(h) Expulsion from the university.

(2) When possible, prior to the recommendation of a major sanction, the instructor shall notify the student that the instructor believes an act of academic misconduct has occurred, that a major sanction is being recommended, and that a Notification of Academic Dishonesty Form will be filed with the Office of the Provost.

(3) Upon the recommendation of a major sanction under this section, the instructor shall notify the Office of the Provost using the Notification of Academic Dishonesty Form (http://www.uml.edu/docs/notificationofacademicdishonesty_tc m18-3543.pdf). Notification to the Office of the Provost shall occur with 10 days and shall include identification of the student, a description of the misconduct and a specification of the sanction recommended.

(4) Within 10 days following receipt of such notice, the Office of the Provost shall provide notice of the recommended discipline to the student, the instructor, and the Academic Dean. Notification to the student shall include a statement of the misconduct, specification of the sanction recommended, a statement indicating the students right to an appeal before the Academic Dean and a copy of the policy and procedures set forth herein.

(5) A student who receives notice of a disciplinary sanction recommended under this section has the right to a hearing before the Academic Dean to contest the determination that academic misconduct occurred or the disciplinary sanction recommended or both. If the student desires such a hearing, he or she must file a written request with the Office of the Provost and the Academic Dean within 10 days of receipt of notice from the Office of the Provost.

(6) In the event that the student does not file a written request for an appeal within 10 days, the Office of the Provost shall review the matter with respect to the subject student and may, at his or her discretion, uphold the recommended sanction or impose a major sanction. In any event, the Office of the Provost shall, within a reasonable time, provide notice of the outcome to the student, the instructor and to the Academic Dean.
modify the sanction recommended. In any event, the Office of the Provost shall, within a reasonable time, provide notice of the outcome to the student, the instructor, and to the Academic Dean.

VII. Appeal to the Academic Dean: When an appeal to the Academic Dean is commenced in accordance with the provisions set forth in Paragraphs V(5) or VI(5), the Academic Dean shall proceed in accordance with this section to consider one or more of the disciplinary sanctions listed in paragraph IV, subsections (1) (a) through (h).

(1) Conference With Student: The Academic Dean shall offer to discuss the matter with the student. The purpose of this discussion is to permit the Academic Dean to review with the student the charges levied against him or her and to afford the student an opportunity to respond.

(2) Conference With Instructor: The Academic Dean shall attempt to discuss the matter with any involved instructor. This discussion may occur either before or after the conference with the student. It should include consultation with the instructor on the facts underlying the alleged academic misconduct and on the appropriateness of the imposed or recommended sanction.

(3) Determination that No Academic Misconduct Occurred: If, as a result of discussions under subsections (1) and (2), the Academic Dean determines that academic misconduct did not in fact occur or that the disciplinary sanction is not appropriate under the circumstances, the Academic Dean shall notify the instructor and the Office of the Provost. The Office of the Provost shall promptly thereafter notify the student and take appropriate action with respect to the student records.

(4) If, as a result of discussions under subsections (1) and (2), the Academic Dean determines that academic misconduct did occur and that one or more of the disciplinary sanctions listed under paragraph III, subsections (1) (a) through (h) is appropriate, the Academic Dean shall prepare and forward to the Office of the Provost, within 10 days, a written Finding of Misconduct which shall include identification of the student, a description of the alleged misconduct, a summary of evidence, findings of fact and a specification of the disciplinary sanction imposed.

VIII. Appeal to the Office of the Provost

The decision reached by the Academic Dean may be appealed to the Provost Office of the Provost if the student believes that he or she did not receive due process.

Grounds for Appeal of Due Process

An appeal to the Office of the Provost shall be limited to a review of supporting documents and the process and outcome of the Academic Dean or designee for one or more of the following grounds:

- Bias by the Instructor, Academic Dean, or designee substantially influenced the outcome of the process to the detriment of the student.
- New, relevant information has come to light that was not available at the time of the hearing by the Academic Dean.
- Unusual procedures were followed or the procedures outlined herein were not followed, to the detriment of the student.

If the student desires such a hearing, he or she must file a written request with the Office of the Provost and the Academic Dean within 10 days of receipt of notice from the Office of the Provost. The request must be based upon the Grounds for Appeal listed above.

(2) When an appeal to the Office of the Provost is commenced in accordance with this paragraph, the Office of the Provost shall review the matter with respect to the subject student and may, at his or her discretion, uphold, vacate or modify the discipline imposed or direct such appeal to be heard by the Academic Integrity Appeals Board. In any event, the Office of the Provost shall, within a reasonable time, provide notice of the outcome to the student, instructor, and to the Academic Dean.

(3) In the event that the student does not file a written request for an appeal within 10 days, the Office of the Provost shall review the matter with respect to the subject student and may, at his or her discretion, uphold or modify the discipline imposed. In any event, the Office of the Provost shall, within a reasonable time, provide notice of the outcome to the student, instructor and to the Academic Dean.

IX. Role of the Academic Integrity Appeals Board:

(1) The Academic Integrity Appeals Board is an ad hoc committee appointed by the Office of the Provost and consists of a minimum of three faculty members chosen by the Office of the Provost with no two members selected from the same College; the board shall not include a faculty member from within the department initiating charges of academic dishonesty. The Board is chaired by the Office of the Provost who shall vote only in the case of a tie. [Or One member shall serve as Chair at the direction of the Office of the Provost. The Chair shall vote only in the case of a tie.]

When an appeal is directed to the Academic Integrity Appeals Board by the Office of the Provost in accordance with the provisions set forth in Paragraphs VIII, the Academic Integrity Appeals Board shall schedule the hearing, within a reasonable time period, at a time that is mutually agreed upon by the student, Office of the Provost and members of the Academic Integrity Appeals Board.

(2) Reasonably in advance of the hearing, the Academic...
Integrity Appeals Board shall obtain from the Academic Dean, in writing, a full explanation of the facts upon which the determination of misconduct was based and shall provide to the student a copy of the policy and procedures set forth herein.

(3) The hearing before the Academic Integrity Appeals Board shall be conducted in accordance with the following requirements:

(a) The Academic Integrity Appeals Board shall consider relevant evidence including documentary evidence and testimony of the instructor, student, Chair and/or Dean where appropriate.

(b) The student shall have the right to be heard and to present relevant evidence, including documentary evidence and the testimony of witnesses, in his or her own behalf.

(c) The Academic Integrity Appeals Board shall maintain a record of the hearing including any and all pleadings and documentary evidence presented.

(d) The Academic Integrity Appeals Board shall prepare written findings of fact and a written statement of its decision based upon the record of the hearing.

(e) The Academic Integrity Appeals Board may find academic misconduct and impose a sanction of suspension or expulsion only if the proof of such misconduct is clear and convincing. In other cases, a finding of misconduct must be based on a preponderance of the credible evidence.

(f) The Academic Integrity Appeals Board may impose a disciplinary sanction that differs from the recommendation of the Academic Dean.

(g) The instructor or Academic Dean may be witnesses at the hearing conducted by the Academic Integrity Appeals Board, but shall not have responsibility for conducting the hearing.

(4) Determination that No Academic Misconduct Occurred: If, after the hearing, the Academic Integrity Appeals Board determines that there is insufficient evidence that academic misconduct occurred or that no disciplinary sanction is appropriate under the circumstances, the Academic Integrity Appeals Board shall notify the instructor, the Academic Dean and the Office of the Provost. The Office of the Provost shall promptly thereafter notify the student and take appropriate action with respect to the student records.

(5) Process Following Determination by the Academic Integrity Appeals Board that Academic Misconduct Occurred:

(a) If, after the hearing, the Academic Integrity Appeals Board determines that academic misconduct did occur and that one or more of the disciplinary sanctions listed under paragraph III, subsections (1) (a) through (h) is appropriate, the Academic Integrity Appeals Board shall prepare and forward to the Office of the Provost, within 10 days, a written Finding of Misconduct which shall include identification of the student, a description of the misconduct and a specification of the disciplinary sanction to be imposed.

(b) Within 10 days following receipt of the written Finding of Misconduct from the Academic Integrity Appeals Board, the Office of the Provost shall provide written notice of the imposed discipline to the instructor, the Academic Dean and the student.

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### Academic Standing

- **Warning Notice**
- **Probation**
- **Academic Dismissal and Reinstatement**
- **Graduate Fresh Start**

### GPA Minimum

No more than 6 course credits of grades below a B may be counted toward the master’s degree; no more than 9 credits of the same grades may be counted toward the doctorate. **No graduate degree will be awarded to any student whose overall cumulative grade point average falls below 3.0.**

### Academic Standing

Graduate academic standing is run three times per year - Fall, Spring and Summer.

The consequences of the academic standing of warning or suspension will not apply for students completing degree requirements for that semester.

### Warning Notice

Any graduate student whose semester grade point average (GPA) falls below 3.0 will automatically receive a warning notice which will also be sent to the graduate coordinator, and filed with the student's record in the Registrar's Office. The student will be strongly advised to meet with the graduate coordinator or his/her designee within 30 days of receipt of the warning notice and develop an academic plan to bring his or her GPA to a level above 3.0.

### Probation

Any graduate student whose semester GPA falls below 3.0 for a second time, will automatically receive a letter of probation from the Vice Provost for Graduate Education. Copies of the
letter will be sent to the graduate coordinator, chairperson, college dean, and also placed on file with the student’s record in the Registrar’s Office. Within 30 days, the department graduate committee, chaired by the graduate coordinator or his/her designee, will meet with the student and decide whether to recommend loss of degree candidacy. Such a decision or other course of action will be fully documented in writing with copies sent to the chairperson, and college dean. A recommendation of loss of degree candidacy and dismissal are subject to the approval of the college dean.

Academic Dismissal and Reinstatement

Any student whose semester GPA falls below 3.0 for a third time, and whose cumulative GPA is below 3.0, will automatically be dismissed from his or her graduate program and the University. Reinstatement will be considered if the student provides a detailed justification and academic plan concerning how he or she will correct this academic deficiency. The plan must be attached to a Graduate Academic Petition and approved by the graduate coordinator, chairperson, the college dean, and the Vice Provost for Graduate Education or his/her designee. If any of the above individuals disapproves of the reinstatement, the dismissal will remain in effect and no subsequent appeals will be considered.

Independent of the warning/probation/dismissal system, the dean of the college where the student’s degree program resides may at any time examine the performance of any student not meeting the academic standard expected of graduate students within that college and recommend to the appropriate graduate committee a course of action including dismissal.

For the procedure for formal adjudication of any academic issues (non-misconduct) which may arise, please see University Appeals Process Regarding Academic (non-misconduct) Issues of Graduate Students.

Graduate Fresh Start

Master and Doctoral degree candidates and non-degree students who have been absent from the University for four years or longer may be readmitted under the program Graduate Fresh Start. If admitted into a degree granting program, under the terms of Graduate Fresh Start, a returning graduate student will be treated as if s/he were a new student.

A maximum of two courses (six credits) at the 500 level or higher completed during earlier periods of enrollment with grades of "B" or better may, with the approval of the degree granting department, be transferred into the degree program. These courses must be transferred via an academic petition and will be accepted toward graduation but not included in the cumulative grade point average (GPA). Thesis and dissertation research credits are ineligible for transfer. Courses completed during earlier periods of enrollment with grades below "B" are not eligible for transfer. A student may be readmitted under the Graduate Fresh Start program only once at the graduate level.

Students who wish to be considered for the Graduate Fresh Start Program must follow the normal procedures for admission to the University and file a Graduate Fresh Start Contract ([https://www.uml.edu/docs/GraduateFreshStart16_tcm18-229435.pdf](https://www.uml.edu/docs/GraduateFreshStart16_tcm18-229435.pdf)). Academic Petitions for transfer credits must be approved by the appropriate graduate coordinator and/or department chair of the degree granting department, and must be filed with the University Registrar. In addition, the student must submit a personal statement which addresses personal and professional growth during the period of time in which the student was absent from the University which supports the student potential for academic success. If admitted, credits and GPA start at zero. Transfer courses may count towards the degree, but are not included in the GPA.

All courses taken and grades achieved during earlier periods of enrollment will appear on the transcript along with a notation that they are not included in the cumulative grade point average. Once this change is made to the academic record, the change can NOT be reversed.

Acceptance of Foreign or American Master’s Degree toward Doctoral Requirements

Students accepted into a doctoral program who hold a master’s degree in the same or a closely related discipline from a U.S. or foreign academic institution will have their transcripts and supporting documentation reviewed by the department graduate committee.

The committee may choose one of the following actions:

1. Approve all coursework and thesis for the master’s degree up to the total number of credits granted by the University of Massachusetts Lowell department for its master’s degree, and thereby require the student to complete only “beyond the master’s” course/thesis credits for the doctorate.

2. Accept the U.S. or foreign master’s degree, but because of deficiencies in the student’s master’s program, require a limited number of graduate courses to be added to the total credits required for doctoral degree completion “beyond the master’s”.

3. Require that a student with a U.S. or foreign master’s degree obtain a University of Massachusetts Lowell master’s degree before proceeding to the doctorate.

All coursework for U.S. or foreign master’s degrees considered for approval by the department must be at a grade level of B or
better. Official, documented verification of the degree awarded must also be provided.

Commencement

Commencement

Conferring of Degrees

Academic Honors

Replacement Diploma

Commencement

Graduation exercises are held once a year at the end of the spring semester. Students who have completed degree requirements during the previous summer term or fall semester are permitted to attend commencement exercises, and their names are listed in the commencement booklet. Attending commencement exercises is not compulsory. An individual who wishes to receive a diploma by mail must notify his/her college dean and file a corrected address through student self service if he or she anticipates moving from a previously reported permanent address.

Conferring of Degrees

Diplomas are awarded three times a year:
1. In June for students completing degree requirements during the spring semester.
2. In October for students completing degree requirements during the summer term.
3. In February for students completing degree requirements during the fall semester.

Individuals who wish to submit verification of degree completion to employers or to graduate schools during the period between the end of their final grading period and the awarding of diplomas may obtain a letter of completion from the Registrars Office.

Academic Honors

Due to the many fields and diversity of study at UMass Lowell, academic honors for graduate students are discipline-based and vary within respective colleges. Honors for graduate students are not listed on transcripts.

Replacement Diploma

Replacement diplomas may be ordered through University Alumni Relations for an additional fee.

Course Credit

Maximum Semester Credit Limit

Graduate Credit for Undergraduate Courses

Undergraduate Credit for Graduate Courses

Maximum Semester Credit Limit

The usual course load for full-time graduate students is 9 credits/semester. Depending upon the program requirements and abilities of the student, individuals may carry more than 9 credits each semester. However, the absolute maximum number of total credits (combined undergraduate and graduate) for which a graduate student will be allowed to register is 18 credits/semester. The maximum number of thesis or dissertation credits for which a student may enroll in any semester is nine credits.

During the summer term students are classified as full-time when they are registered for a minimum of 9 credits which may combine courses/credits from the different sessions within the summer term. Students who enroll in only one of the accelerated summer session (summer I or summer II) may be considered by the institution as the equivalent to full-time for the specific time period of that session only when registered for a minimum of 6 credits. This is for enrollment purposes only. Please note: Financial aid, veterans benefits or other types of aid define 9 credits for full-time study.

Navitas Summer Pathway Program

The University of Massachusetts Lowell (UMass Lowell) offers a 10-week summer session to its Pre Undergraduate and Pre Masters international students. These students are admitted into a Bachelors or Masters program with the condition of a preparatory semester(s) which could encompass the summer session. The Pre Undergraduate and Pre Masters summer session consists of intensive academics of 18-22 clock hours per week in English, Mathematics and Cultural Support.

Graduate Credit for Undergraduate Courses

UMass Lowell courses at the 400 level are designed for seniors but under certain circumstances may be taken by graduate students for graduate credit. A maximum of 6 credits of 400 level courses may be used for credit toward the graduate degree with the permission of the degree granting department. Three hundred level courses and below are never counted toward a graduate degree. If a graduate student takes certain undergraduate courses to make up for background deficiencies or to satisfy language requirements, the course credit hours are not used as part of the graduate degree program but will appear on the graduate transcript.

Undergraduate Credit for Graduate Courses

A qualified junior or senior may take a course at the 500 level for undergraduate credit in accordance with the policy and procedures of the department or college in which the course is offered. The grade received in any such course is used in
calculating the undergraduate’s cumulative grade point average. Counting of graduate credits for both the bachelors and masters degrees is subject to departmental requirements.

At no time may grades computed in an undergraduate GPA be used toward a graduate GPA.

Course Designations

- Course Numbering System
- Continuing Graduate Research
- Course Prefixes
- Audit

Maximum Semester Credit Limit

The usual course load for full-time graduate students is 9 credits/semester. Depending upon the program requirements and abilities of the student, individuals may carry more than 9 credits each semester. However, the absolute maximum number of total credits (combined undergraduate and graduate) for which a graduate student will be allowed to register is 18 credits/semester. The maximum number of thesis or dissertation credits for which a student may enroll in any given semester is nine credits.

Course

Numbering System and Designation:

- 4000-4999 - Undergraduate courses usually designed for juniors or seniors; no more than six credits may be taken for graduate credit with the permission of the graduate coordinator.
- 5000-5999 - Courses for graduate credit, but which may be taken by advanced undergraduates with the advisor’s permission.
- 6000-6999 - Graduate courses which are open only to graduate students.
- 7000-7999 - Seminars, special topic courses, projects, or thesis research for advanced candidates in master’s and doctoral degree programs.

Each course offering is designated by a four letter prefix and a four-digit course number (e.g., BIOL.5290).

Continuing Graduate Research

Once a student has completed the required number of credits for master’s or doctoral thesis/dissertation research with grades of PR or S (see summary of degree credit requirements), he or she will not be allowed to sign up for additional thesis/dissertation research credits. Instead, if required for teaching/research assistantships or immigration/visa purposes, the student may enroll in 3, 6, or 9 credits of Continuing Graduate Research designated _ _763, 766, or 769 _ _ _ where the first two blanks represent the departmental designation, 3, 6, and 9 indicate the respective number of credits, and the last three blanks are the standard numbers which code to a particular faculty member in the department.

The two digit college prefix identifies a college department and/or special area. The three-digit course number identifies the course level.

Course Prefixes

Each college department and/or special subject area has been assigned an identifying two digit number within the numerical ranges specified as follows:

- Education - EDUC
- Engineering - CHEN, CIVE, EECE, ETEC, ENVE &MECH, MTEC, ENGY, ENGN, PLAS
- Health - PUBH &AREO, HSCI, NURS, DPTH, NUTR, HSCI, MLSC, EXER
- Humanities/Social Sciences, Fine Arts - AMST, LGST, ENGL, HIST, CRIM, PHIL, POLI, PSYS, ASP, SOCI, ECON, WLFT, WLGE, WLIT, WLAR, WLKH, WLCH, WLPO, WLAN, WLSI, WLSP, WLLA, ARHI, FAHS &ARTS, MUTH, MUAP MUED, MUHI, MUPF, MUEN, MUBU, MUSR, AEST
- Management - ACCT, FINA, MKTG, POMS, MIST, ENTR, MGMT, BUSI
- Science and Math - BIOL, LIFE, CHEM, ATMO, ENVI, GEOL, INFO, COMP, MATH, MSIT, PHYS, POLY, RADI
- Biomedical Engineering - BMBT
- Marine Science - im

Audit

A graduate student may, upon approval of the advisor and the instructor, register for a course on an audit basis, but must pay the full amount of tuition and fees. An audit student is not required to take tests or the final examination. A change in registration from audit to credit or credit to audit must be done during the add/drop period. Under no circumstances can a
course taken for audit be given credit at a later date.

Equal and Fair Treatment

Under federal and state laws, all students are protected from discrimination based on race, color, religion, national origin, disability, gender, (including sexual harassment), age, sexual orientation, marital or veteran status. If you feel that you have been discriminated against based upon any one of these areas, you must contact Equal Opportunity and Outreach (EOO). These protections also include retaliation for filing complaints of discrimination. Concerns regarding course offerings, instructor and student attitudes should also be directed to EOO staff at 978-934-3565.

Students are responsible for adhering to the polices of the University regarding equal and fair treatment.

Graduate Grading Policies

Grading System
Grade Exclusion
Grades for Projects, Theses/Dissertations and Seminars
Incompletes
Course Listing on the Graduate Transcript
Audited Courses
Grade Appeal Process

Grading System
The grading system uses grades:

- A+(4.0), A(4.0), A-(3.7)
- B+(3.3), B(3.0), B-(2.7)
- C+(2.3), C(2.0)
- F(0.0)
- FX (0.0) Failed due to Academic Misconduct (May not be replaced or deleted)

The following special grades are also used:

- INC (Incomplete)
- S (Satisfactory, B or better)
- U (Unsatisfactory) for projects, theses/dissertations, and seminars only
- AU (Audit)
- W (Withdrawal from a course or from the University)
- X (Withdrawal because of illness or personal emergency)
- Y (University withdrawal for non-academic reasons)
- Q (Never attended but did not withdraw. This grade requires a letter from the instructor to the University Registrar stating the student never attended the class.)
- PR (In Progress for theses or dissertations)
- NC (No Credit for theses or dissertations where no progress has been made).

A student registering for research will do so each semester up to the total number recommended. No graduate degree will be awarded to a student whose cumulative average for course work in his or her program is below 3.0. Some programs may require a higher grade point average for graduation. The cumulative grade point average is computed from all graduate level courses taken for a grade at the University of Massachusetts Lowell.

Grade Exclusion

A request may be submitted to omit a specific course (grade and credits) from the GPA for matriculated students. Such a request must be presented on an Academic Petition, provide detailed justification for the specific action, and certify that the action has been approved by a majority of the departmental graduate committee. Only one grade exclusion in total, including a grade for a repeated course, will be permitted for each degree sought by the student as recommended by the departmental graduate committee. However, the official transcript will list grades for all undergraduate and graduate courses taken at the University with the notation that the grade and credits are excluded from the GPA. Once a grade exclusion has been processed it may not be reversed. Additionally, grade substitutions are not permitted.

Grades for Projects, Theses/Dissertations and Seminars

- Projects (Enrollment Restricted to Matriculated Graduate Students):
  Only one of three grade designations will be allowed for projects:
  - S for projects completed at a satisfactory level
  - U for unsatisfactory completion of a project (no credit toward degree requirements)
  - INC Incomplete

- Theses/Dissertations (Enrollment Restricted to Matriculated Graduate Students):
  - PR will be given for thesis/dissertation research if the student has made satisfactory progress during the semester.
  - NC will be given if the student has made no progress during the semester on thesis/dissertation research.
  - U Unsatisfactory (no credit toward degree requirements)

After successful defense of the thesis/dissertation, a grade of “S” (Satisfactory) will be given for all semesters of the thesis/dissertation research. Only the Registrar’s Office can issue this grade.
• Seminars
  S - Satisfactory
  U - Unsatisfactory (no credit toward degree requirements)
  INC - Incomplete

Under no circumstances will letter grades (A, B+, etc.) be allowed for projects, theses/dissertations, or seminars.

Incompletes

If, because of unusual circumstances, a student is unable to meet all the requirements of the course by the end of a semester, the grade of Incomplete (INC) may be given. Responsibility for making arrangements with an instructor to complete all outstanding coursework rests entirely with the student, who must complete all outstanding coursework by the date listed on the Graduate Academic Calendar (https://www.uml.edu/Registrar/Calendars/default.aspx). Under no circumstances will a student be allowed to graduate with incomplete(s) on his or her transcript.

Prior to completion of the missing work, the incomplete will not be computed into the grade point average (GPA). If the student completes the missing work within the specified period, the instructor must evaluate the work and turn in a grade change form to the Registrar's Office before the deadline for instructors to submit final grades for incomplete courses as specified on the Graduate Academic Calendar (https://www.uml.edu/Registrar/Calendars/default.aspx).

However, if the student does not complete the missing work by the specified date and no grade change form is submitted by the instructor, the student's grade will automatically change to a grade of "F" and be computed into the GPA.

Course Listing on the Graduate Transcript

All graduate courses for which a student registers (including repeated courses) are listed on the transcript and are used to calculate the student's grade point average whether or not they are taken to fulfill degree requirements. In addition, undergraduate courses which a student takes to fulfill prerequisite requirements before or during matriculation in a graduate program, or courses taken for personal enrichment, will also be listed on the transcript.

Audited Courses

A graduate student may, upon approval of the advisor and the instructor, register for a course on an audit basis, but must pay the full amount of tuition and fees. An audit student is not required to take tests or the final examination. A change in registration from audit to credit or credit to audit must be done during the add/drop period. Under no circumstances can a course taken for audit be given credit at a later date.

Graduate Clearance

To apply for Graduation, graduate students must fill out a Declaration of Intent to Graduate (DIG) form and have it approved by their Graduate Coordinator and (if applicable), Thesis/Dissertation Advisor.

The Registrar's Office will verify number of credits, final grades, GPA requirements and if applicable submission of thesis/dissertation prior to awarding the degree.

Additional Requirements for Students Completing a Thesis or Dissertation

All students who are completing a thesis or dissertation must submit one clean copy (NOT the original) of the signature page for the thesis or dissertation. The signature page must be signed and dated by the thesis/dissertation advisor and all committee members. Copies of the Thesis or Dissertation must be submitted to the Library for binding and microfilming by the deadline date. In addition, doctoral students are required to complete the "Survey of Earned Doctorates" online, you will be emailed the information when you submit your DIG form.

Graduate Grade Appeal Process for Students

The instructor of the class is the primary authority with respect to a students proficiency and final grade in that course. A student who believes that his or her final grade reflects an erroneous, capricious, arbitrary, or prejudiced academic evaluation may appeal the grade. The academic judgment used in determining the merits of the grade to be awarded shall not be reviewable. This process does not apply to cases of academic dishonesty, which are adjudicated through the "academic dishonesty process."

1. The student may file an appeal of his or her complaint, in writing, to the instructor within 30 days after a final grade is posted to the students record. The instructor must respond within 14 days of receiving the appeal.
2. If the student remains dissatisfied by the decision of the instructor under step (1), he or she may, within 14 days after formal receipt of the instructor’s final decision, appeal, in writing, to the chairperson of the program (or the Dean of the College if the instructor is the chairperson) in which the course or other exercise or
activity is offered. The chairperson must respond within 14 days of receiving the appeal. The decision may be: (a) that the appeal be dismissed; (b) if there is demonstrable evidence of an erroneous, arbitrary, capricious, or prejudiced academic evaluation, then the chairperson will recommend appropriate remedies that a grade be changed or the student be allowed an opportunity to retake an examination or other exercise; or (c) that another appropriate remedy be administered.

3. If no satisfactory resolution is reached in step (2) then the student or the instructor may appeal, in writing, to the Dean of the College within 14 days after formal receipt of the chairperson’s final decision.

4. The Dean, after discussion with the appropriate parties, may resolve the grievance by agreement or render a decision within 21 days of receipt of the written appeal. The decision may be: (a) that the appeal be dismissed; (b) if the student provides demonstrable evidence of an erroneous, arbitrary, capricious, or prejudiced academic evaluation, then the Dean will recommend appropriate remedies that a grade be changed or the student be allowed an opportunity to retake an examination or other exercise; or (c) that another appropriate remedy be administered.

5. The decision of the Dean is final and not subject to additional appeal by either student or instructor. The appeals process ends at this step.

6. The Department chair or his/her designee is responsible for keeping a record of the appeal on file in accordance with University Records Retention Policy.

Registration and Enrollment Policies

Continuous Registration
Dropping Classes and Refund Policy
Changes in Registration
Change of Program

Continuous Registration

In order to maintain continuity of enrollment, a matriculated student must register each fall and spring until the program of study is complete and the degree has been earned. A graduate student who plans to receive his/her graduate degree in the summer term (awarded in October) must register during the previous summer session in order to maintain continuous matriculation.

If for any reason a student is not registered for a course (because of a leave of absence or because the thesis or dissertation has been successfully defended, but the final manuscript has not been submitted to the library), the student must register for CONT.6010 (Continued Matriculation) in order to maintain continuous registration. Since students are not allowed to register if they have outstanding financial obligations to the university, it will be necessary for them to clear their financial record in order to register for Continued Matriculation.

Continued Matriculation does not entitle a student to any use of university facilities, services or resources, but only maintains an active record and provides for appropriate mailings. Students who are engaged in academic work necessary to complete their thesis or dissertation, participate in a required full time internship or curricular practical training, or otherwise engage in or make use of University facilities or other resources must register for a minimum of 1 credit. (Note: Specific internship/CPT requirements will vary by department and students may be required to register for 3, 6, or 9 credits depending upon their program of study.)

The rules regarding the Statute of Limitations for the completion of master’s and doctoral degrees still apply to students registered for Continued Matriculation.

All international students on F-1 or J-1 visas must register as full-time students (9 credits) each semester until their degree requirements are completed. Any variance from this policy must be approved by the International Student and Scholars Office.

A student who fails to maintain continuous matriculation loses the status of a degree candidate and must reapply to the Graduate Admissions Office for readmission and for renewal of candidacy.

Dropping Classes and Refund Policy

Graduate students may drop courses during the first ten days of classes and receive a refund. No refund will be given after these time periods. To formally withdraw from a course during this period, or thereafter, the student must drop the course through SiS self service.

If the student fails to officially drop a course, he or she will remain enrolled and be required to pay for tuition and fees. In
addition, if the student does not drop a course and does not attend classes, he or she will receive an "F" on the official transcript.

Changes in Registration

Courses may be added or dropped through self-service in SiS (https://www.uml.edu/Enrollment/SiS/default.aspx) (www.uml.edu/enrollment/isis/default.aspx). Students who wish to add a course during the sixth through 10th day of classes will need a permission number from the instructor of the course. Permission numbers are not needed to drop a course. In addition, students may change from audit to credit or from credit to audit during this period. Courses dropped during the first 10 academic days will not appear on the student's permanent record. No new courses may be added and no course may be changed from audit to credit after the tenth academic day. Thereafter, a student wanting to drop courses must do so by the date indicated in the Graduate Academic Calendar (http://www.uml.edu/Registrar/Calendars/default.aspx).

No refund of tuition and fees is allowed after the tenth day of the semester. The grades for courses dropped after the tenth day will appear as W on the student's record.

Change of Program

A graduate student wishing to change departments or transfer to a doctoral program upon completion of his or her master's degree must follow the steps listed below:

1. No transfers will be considered until the student has been in the original department in which he or she was accepted for at least one semester.
2. All sections of a new application sheet must be completed.
3. If so desired, the student may request that all test scores, letters of recommendation, etc., in his or her original file be used as part of his or her new application package.
4. The student must specify on the application form when his or her master's degree will be completed and when he or she will actually begin doctoral studies (for students applying to a doctoral program).
5. A check made payable to University of Massachusetts Lowell to cover the application fee must be included, or payment must be made by credit card when applying online.

Right of Access to Student Records

Access

University Student Records
Release of Student Records
Release Exclusions
Additional Information

Access

The Family Educational Rights and Privacy Act of 1974 (FERPA) grants any student currently in attendance, or any former student, the right of access to inspect or review his or her educational files, records, or data. Students who wish to inspect their records must file a Right of Access form with the office or department in which the desired record is kept. Right of Access forms are available in the Office of Student Services or through student self service. Wherever practicable, within ten days of receipt of the Right of Access form, the office or department will notify the student as to the date, time, and location when the desired record will be available for inspection. If a student believes that circumstances effectively prevent inspecting and reviewing the records at the designated date, time, and location, he or she may request alternative inspection arrangements or copies of the records instead, subject to a fee for copies. The Dean of Students or the Deans designee will consider the request.

University Student Records

The University maintains the following general records on students:

Admission File - Admissions Office (https://www.uml.edu/Grad/default.aspx) - www.uml.edu/grad
Health Records - Health Services Office - www.uml.edu/student-services/health/
The file of each student must contain a record of all non-University affiliated individuals or organizations requesting access to information in the file, plus statements that specify the legitimate educational purposes for which access was requested.

Except as otherwise permitted under FERPA, information or records concerning individual students may not be released to any individual or agency without the students written permission. Any request for such information received without such written permission will not be honored and will be returned with a request for a written release from the student.

Release of Student Records

FERPA allows release of a students education records without the students written permission under certain circumstances, including the following:

1. To personnel of the University, i.e., faculty, administrators, or staff for legitimate educational purposes only.
2. To officials of other institutions in which the student seeks admission or intends to enroll, provided that the student is notified of the release.
3. To federal or state officials in connection with the audit and evaluation of programs funded by federal or state governments, with the enforcement of legal requirements that relate to such programs, or in connection with the students application for or receipt of financial aid.
4. To accrediting organizations in order to carry out their accrediting functions.
5. To parents who claim the student as a dependent on their IRS statement.
6. In connection with an emergency, to appropriate persons if revealing such information is necessary to protect the health or safety of the student or other persons.
7. In response pursuant to a validly issued subpoena, subject to advance notification of the student unless such notice is prohibited by court order.
8. As otherwise permitted under or consistent with FERPA.

The following data are considered informational in nature and may be released without the permission of the student, at the discretion of the University: students name, major, acknowledgement of a student’s participation in officially recognized activities and sports, weight and height of members of athletic teams, date(s) of attendance; degrees, certificates, awards received; the most recent previous educational agency or institution attended by the student and appointment as a Resident Assistant or Community Development Assistant. For graduate students who are teaching credit courses, work department, office address, and employments category are also defined as directory information.

Release Exclusions

Any student who wishes to have some or all of his or her directory information excluded from release by the University without prior permission must complete the appropriate selections available thru student self service.

Additional Information

Any student who believes that his or her records are inaccurate or misleading may request a hearing with the Dean of Students to discuss the contents of such records and whether or not they need to be changed. Additional information on procedures or policies relating to University compliance with the Family Rights and Privacy Act can be obtained from the Office of Student Services or the Registrar’s Office.

Statute of Limitations (Time Limit for Degree Completion)

A graduate degree, at either the master’s or doctoral level, implies a significant mastery of a discipline within a specified time period. A well designed curriculum is not a mere collection of classes that add up to a set number of credits. It is, rather, a coherent selection of courses with an overall educational achievement that is greater than the sum of its parts. However, this coherence is lost if the program is completed over a long time span.

Master’s degree requirements must be completed within a five-year period from the semester of admission. For those master’s programs requiring 45 or more credits, the time limit is six years.

The doctoral degree must be completed within an eight-year period beginning with the semester of admission as fully matriculated or matriculated with conditions.

A student may obtain an extension of one year by filing an Academic Petition.
Time Extension Appeal Procedure

In exceptional cases, an additional extension may be granted by the Graduate Policy and Affairs Committee (GPAC). In this case, the student must submit an Academic Petition, a letter of explanation accompanied by a detailed schedule for degree completion, and a letter from the student’s coordinator or thesis advisor in support of the request.

Transcripts

In order to obtain a transcript, a student may print an unofficial transcript or order an official copy through self-service in ISIS. If ISIS is not available, a transcript may be ordered by filling out a Transcript Request Form and submitting it to the University of Massachusetts Lowell Registrar’s Office at 883 Broadway Street, Lowell, MA 01854.

Course Listing on the Graduate Transcript

All graduate courses for which a student registers (including repeated courses) are listed on the transcript and are used to calculate the student’s grade point average whether or not they are taken to fulfill degree requirements. In addition, undergraduate courses which a student takes to fulfill prerequisite requirements before or during matriculation in a graduate program, or courses taken for personal enrichment, will also be listed on the transcript.

Transfer Credit

The following are minimal guidelines for transfer of credit. Individual departments are free to impose more stringent requirements. Only courses completed elsewhere within five years prior to the date of admission to a graduate degree program at the University of Massachusetts Lowell may be considered by the faculty of the department for transfer in accordance with the following regulations.

1. A maximum total of 12 graduate credits earned with a grade of B or better may be transferred to a master’s degree program. The limits of 12 credits toward a masters and 24 toward a doctoral degree do not apply to any credits earned at UMass Lowell by students while in a non-degree or undergraduate BA/MA or BS/MS status, provided the courses were taken within the department offering the masters or doctoral degree.

2. Grades of C or better for courses taken at UMass Lowell when the student held non-degree status may also be transferred (by Academic Petition) into a degree program. However, the 6 and 9 credits with grades below a B (graduation limit) for master’s and doctoral degrees, respectively, (see Retention Policy) and calculation of the cumulative grade point average based on all graduate courses taken at the University (see Academic Grades) remain in effect.

3. An official transcript and description of the course(s) must be submitted with the written request.

4. The courses presented must be from an accredited U.S. or Canadian institution authorized to grant graduate degrees.

5. The courses presented for a master’s degree must not have been used in earning another master’s degree.

6. The courses presented must be appropriate to the degree program for which the applicant is applying.

7. The courses presented must be graduate level.

8. Transfer credit may not be granted for research seminars, clinical courses, practica, internships, or special projects.

9. Transfer credit from another U.S. or Canadian institution must not exceed equivalent course credit (typically 3) at UMass Lowell, and will be based on UMass Lowell’s standard of 37.5 semester contact hours being equal to 3 credits. One and two course credit transfers will also be considered providing they are proportional to the 37.5 semester contact hour standard.

10. Students who wish to transfer credit must file (within the first semester of matriculation) the Academic Petition form available from the Registrars Office.

11. With the approval of the department, a maximum of 6
University Appeals Process Regarding Academic (Non-Grade Appeal and Non-Misconduct) Issues

The underlying purpose of the University’s appeals procedure is to guarantee due process and to protect the rights of both students and faculty in graduate programs.

The following procedure provides a mechanism for formal adjudication of any academic issues (non-misconduct and not related to grade appeal) which may arise. (For information regarding the process for grade appeals, see the Graduate Grade Appeal Process.)

Responsibility for initiation of each of the steps belongs to the appellant.

Step 1. If an informal discussion between the student and the instructor or individual with whom the student has a conflict does not resolve the issue, the resolution of an academic appeal of a student should begin within the department. The first step in the resolution of a problem or disagreement should be a discussion between the instructor, the student, and his/her faculty advisor or the coordinator of the program.

Step 2. If the matter cannot be resolved after such a discussion, a formal appeal, in writing and containing the pertinent facts, should be presented by the student to the chairperson/head of the department within two months of the occurrence that precipitated the appeal. Any appeal made outside this time period shall not be considered by any University body. The chairperson of the department will appoint committee composed of faculty members in the department. Within seven working days, this committee shall convene and discuss the appeal with the student and the instructor, coordinator, or individual with whom the student has a conflict. The student may be accompanied by his or her faculty advisor or a faculty representative during the discussion of the appeal. The committee, by a majority vote after deliberations with only members of the committee present, shall render a decision within five working days and notify the appropriate parties in writing with the rationale for the decision included in the notification.

Step 3. If the decision of the departmental committee is not satisfactory to all parties, the appeal may be forwarded to the College Dean within two weeks of the decision of the departmental committee. The Dean will appoint a college committee composed of area coordinators of all graduate programs within the college or a suitable committee of faculty. The committee will be chaired by the college dean, or his/her designee. Within seven working days, the committee shall convene and discuss the appeal with the student. At this level the student may request to be present at the committee meetings, that discussions or proceedings be tape recorded, and that a transcript be prepared from the tape. The request for a recording must be made at the time the appeal is made to the college committee. The college committee shall render a decision by majority vote after deliberations with only members of the college committee present within five working days and notify the appropriate parties in writing with the rationale for the decision included in the notification.

Step 4. If the decision of the college committee is not satisfactory to all parties, the appeal may be forwarded to the Graduate Policy and Affairs Committee (GPAC) within ten working days after the decision of the college committee. The committee shall convene within 10 working days after the GPAC chairperson has received a written request for a hearing from the appellant, and discuss the appeal with the student and faculty advisor or representative. A request for recording and preparing a transcript of the discussions with the student present may be made at the time of appeal. The committee shall render a written decision within five working days and notify the appropriate parties. The decision of the Graduate Policy and Affairs Committee shall be final, and the information accumulated during the appeal procedure shall be forwarded to the Provost to be kept on file. If any decision involving the awarding of a degree is made and the official deadline for graduation exercises has passed during the appeal, the degree date will reflect the initiation of the appeal.

The above time periods define working days as days when classes are in session for the fall and spring semesters. Efforts will be made to honor the same time periods during intercession and June - August although some flexibility must be accepted by the appellant because of potential difficulties in assembling committee members during these periods.

The GPAC chairperson may modify the Step 4 hearing time framework at his/her discretion to coincide with regularly scheduled GPAC meetings. In either of the above cases, the appellant must be notified in writing by the hearing officer (along with an explanation) of any modification of the hearing time schedule. The chairperson may recommend that final voting/discussion of Step 4 cases be done in Executive Session with only committee members present.

University Disciplinary Procedures for Graduate
Administrative Dismissal from the University

Administrative dismissal may be invoked when a student fails to comply, after due notice, with an administrative regulation of the University. Examples of some conditions which justify administrative dismissal are listed in the Undergraduate Catalog at www.uml.edu/catalog/undergraduate/policies/administrative_dismissal.aspx (https://www.uml.edu/catalog-AY16/pdf/Undergraduate.pdf) and apply to all students, undergraduate and graduate.

Non-Academic Misconduct

Improper conduct or behavior of graduate students is subject to the University of Massachusetts Lowell Student Conduct Code and Judicial Process (http://www.uml.edu/docs/Student%20Conduct%20and%20Discipline%20Process.pdf). Copies of this document may be obtained from the Dean of Students Office.

Withdrawal Policies

Withdrawal from a Course

Withdrawal from the University

A student finding it necessary to withdraw from a course must do so within the time specified in the graduate academic calendar (https://www.uml.edu/Registrar/Calendars/default.aspx) (www.uml.edu/Registrar/Calendars/default.aspx). The student’s permanent record will indicate a grade of W for the course(s) from which he or she has withdrawn unless the withdrawal has taken place within the first 10 class days of the semester during which time no record will be kept. (See Dropping Classes and Refund Policy in this Catalog for information on dropping a course.)

Withdrawal from the University

A student who wishes to withdraw from the University must submit his/her request in writing to the Registrar’s Office. This procedure ensures that the student’s academic and financial obligations are cleared before leaving the University. If a student officially withdraws from the University by the withdrawal date indicated in the graduate academic calendar, the permanent record will indicate a grade of W. If the student fails to follow the official withdrawal procedure and does not withdraw in good standing, the student will not be permitted readmission to a graduate program at the University except under extenuating circumstances.

All previous application materials will remain on file for a two year period. At any time during this period, a student who has officially withdrawn may request readmission by completing and submitting only the cover page of the graduate application and paying the application fee. After two years, a student must file a new, complete application and submit the appropriate fee to the Graduate Admissions Office (https://www.uml.edu/Grad/default.aspx) (www.uml.edu/grad/default.aspx) in order to be readmitted.
Graduate School of Education

The Graduate School of Education offers graduate degree programs, which provide professional preparation for individuals who aspire to serve in the roles of teacher, curriculum specialist or director, school principal, higher education administrator and other positions of educational leadership. The school is led by Anita Greenwood, Ed.D (https://www.uml.edu/Education/Faculty-Staff/faculty/greenwood-anita.aspx).

View the faculty in the Graduate School of Education (http://www.uml.edu/Education/Faculty-Staff/faculty/Default.aspx).

Graduate Programs Offered

Master of Education Degree (M.Ed.) is offered in:
- Curriculum and Instruction (Initial License)
- Curriculum and Instruction (Advanced)
- Educational Administration: K-12
- Education Administration: Higher Education Option
- Reading and Language

Education Specialist Degree (Ed.S.) is offered in:
- Curriculum and Instruction
- Reading and Language
- Administration, Planning and Policy

Doctoral Degrees (Ph.D and Ed.D.):
- Mathematics and Science Education (https://www.uml.edu/docs/Math-Science%20Course%20of%20Study%20F2015_tcm18-48013.pdf)
- Leadership in Schooling
- Language Arts and Literacy

Graduate Certificate
- Teaching English as a Second Language - Open to School District Cohorts Only

Bachelor’s-Master’s Program

The Graduate School of Education offers graduate degree programs, which provide professional preparation for individuals who aspire to serve in the roles of teacher, curriculum specialist or director, school principal, higher education administrator and other positions of educational leadership. The school is led by Anita Greenwood, Ed.D (https://www.uml.edu/Education/Faculty-Staff/faculty/greenwood-anita.aspx).

View the faculty in the Graduate School of Education (http://www.uml.edu/Education/Faculty-Staff/faculty/Default.aspx).

Graduate Programs Offered

Master of Education Degree (M.Ed.) is offered in:
- Curriculum and Instruction (Initial License)
- Curriculum and Instruction (Advanced)
- Educational Administration: K-12
- Education Administration: Higher Education Option
- Reading and Language

Education Specialist Degree (Ed.S.) is offered in:
- Curriculum and Instruction
- Reading and Language
- Administration, Planning and Policy

Doctoral Degrees (Ph.D and Ed.D.):
- Leadership in Schooling
- Language Arts and Literacy

Graduate Certificates
- Teaching English as a Second Language - Open to School District Cohorts Only

Bachelor’s-Master’s Program

Graduate School of Education Course Listings (https://www.uml.edu/catalog-AY16/pdf/Graduate.pdf)
Graduate Certificates

The Graduate School of Education at UMass Lowell offers the following 12 credit, certificate programs:

- Teaching English as a Second Language
  [https://www.uml.edu/docs/ESLcert_tcm18-53259.pdf](https://www.uml.edu/docs/ESLcert_tcm18-53259.pdf)

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Graduate certificates require 12 credits of coursework designed to assist the candidate in gaining the content knowledge and practical experience for their work in classrooms. Candidates have the opportunity to apply for an add-on license in these high-need areas through a Massachusetts DESE competency review. Individuals interested in an additional Massachusetts license should seek advice from Dr. Vera Ossen about licensing (including teacher test requirements) in the Commonwealth of Massachusetts.

Graduate Certificate Application Form

Admissions Requirements

- Proof of either a bachelor’s or master’s degree from an approved teacher-preparation program with a minimum GPA of 3.0.
- Must hold an initial or professional Massachusetts teacher license in the appropriate field required for the certificate.
- Graduate Certificate Application Form.
- Application fee.
- No GRE is required for admission to a graduate certificate program.

The candidate should follow the procedures described on the Graduate Admissions website
[https://www.uml.edu/Grad炀programs/about-certificates.aspx](https://www.uml.edu/Grad炀programs/about-certificates.aspx) at www.uml.edu/grad

Master of Education (M.Ed.)

Degree Requirements

Each graduate student is personally responsible for complying with all rules and regulations of Graduate Admissions and the Graduate School of Education, and for fulfilling all degree requirements.

1. Curriculum and Instruction
2. Educational Administration
3. Reading and Language

Master of Education (M.Ed.)

1. To qualify for admission to a graduate degree program at the Master of Education level, an applicant must have completed a bachelor’s degree program with a scholastic record that gives evidence of ability to succeed in graduate work. Specific requirements are listed with each program.

2. In order to qualify for a Master of Education degree, each candidate must meet the following requirements: Complete a minimum of thirty (30) credits of required course work in a specific degree program with a cumulative GPA of B or better. Complete satisfactorily the specified internship and/or field practicum, and appropriate seminar, under supervision of a designated faculty member in the Graduate School of Education. Practica are open only to matriculated students who have completed all other degree requirements. Complete the degree within five years of the date of admission.

1. Curriculum and Instruction (M.Ed.)

Initial Licensure Program

Designed for individuals who seek initial licensure in the Commonwealth of Massachusetts. Certification opportunities are available in the following areas: Elementary Education, Middle School General Science, High School or Middle School Biology, Chemistry, Earth Science, English, History, Mathematics and Physics.

Requirements

Successful applicants for the elementary program must have an undergraduate major, or a minimum of 24 credits, in an arts or science academic content area. In addition, the applicant must meet prerequisite requirements in mathematics, science, history, English (two courses with grades of B or better in each area) and one course in art or music, and health.

Applicants for the secondary program must have a degree, or equivalent, in the content area they wish to teach together with supporting general education requirements.

Applicants are expected to achieve a minimum grade point
average of 3.0 in undergraduate work, and satisfactory scores on each subtest on the Graduate Record Exam or passing scores on the Massachusetts Tests for Educator Licensure.

All candidates must pass the Communication and Literacy Test and a Subject Test of the Massachusetts Educator Certification Tests to qualify for Massachusetts licensure.

A list of program areas and degree requirements include:

- **Elementary and Moderate Disabilities**

- **High School English**

- **High School History**

- **High School Mathematics**

- **High School Science**

- **Fast Track to Elementary Teaching**

- **Fast Track to Secondary Teaching**

**Curriculum and Instruction (including Science Education Option) (M.Ed.) - Advanced Program**

This program is designed to meet the needs of experienced practitioners, who seek to broaden and deepen their professional knowledge and to expand the contributions they can make to education. Candidates must hold and initial or professional teaching license. This program does not lead to licensure. Candidates may choose to specialize in science education by taking five (15 credits) courses in science and science education. The core of the degree consists of distribution requirements in the following areas: Foundations of Education, Research and Evaluation, and Specialization.

- **Degree requirements: Curriculum and Instruction**

- **Degree Requirements: Curriculum and Instruction - Science Education Option**

**Curriculum and Instruction: Mathematics Education Concentration (M.Ed.) - Advanced Program**

This M.Ed. degree concentration requires 30 credits of graduate study. The program is blended with education courses offered online and mathematics courses, taken in the mathematics department, generally on campus. Candidates must hold an initial license in mathematics to be admitted to this degree program. Those seeking professional licensure in Massachusetts should confirm the degree meets their requirements by contacting the Massachusetts Department of Elementary and Secondary Education.

- **Degree requirements: Curriculum and Instruction - Math**

**Curriculum and Instruction: Autism Studies Option (M.Ed.) - Advanced Program**

The M.Ed. in Curriculum and Instruction: Autism Studies Option is a 30-credit degree program. Which can be completed entirely online. This program does not lead to a teaching license in any state. Candidates must already hold a teaching license (initial or professional) in their state. Additionally, they must be working as a classroom teacher of record or they will be unable to complete course assignments, particularly the Action Research Capstone.

Candidates who have completed the Graduate Certificate in Behavioral Intervention in Autism courses at UMass Lowell must apply for admission to the M.Ed.. Conversely, candidates admitted to this M.Ed. option, by completing the specialization courses, may also be able to apply for the Graduate Certificate in Behavioral Intervention in Autism (BIA).

Information about the Graduate Certificate can be found on the UMass Lowell Department of Psychology Website (http://www.uml.edu/Catalog/Graduate/FAHSS/Psychology/Graduate/GRADUATE/GRADUATE%20SCHOOL%20OF%20EDUCATION/Pg.41).
Curriculum and Instruction-Option: Special Education (M.Ed.) - Advanced Program

The M.Ed. in Curriculum and Instruction: Special Education Option is a 30-credit degree program. The program is blended with some courses taught online and some on campus. This program does not lead to a teaching license in any state. Candidates must already hold a teaching license (initial or professional) in their state. Additionally, they must be working as a classroom teacher of record or they will be unable to complete course assignments, particularly the Action Research Capstone or Internship in Teaching Students with Moderate Disabilities.

Coursework in this program focuses on fulfilling the subject matter knowledge requirements for teaching students with moderate disabilities in grades PreK-8 and 5-12. Successful completion of the program provides qualified Massachusetts teachers the OPPORTUNITY TO ADD ON A LICENSE in this high need area through a Massachusetts Department of Elementary and Secondary Education Competency Review and passing the appropriate MTEL tests.

- Degree Requirements: Curriculum and Instruction-Special Education:
  C and I Special Education Advanced (https://www.uml.edu/docs/C%20and%20I%20Special%20Education%20Advanced%20122015_tcm18-228923.pdf) (pdf)

2. Educational Administration (M.Ed.)

The purpose of the Educational Administration Program is to develop individuals and teams who will guide educational opportunities in our region in the 21st century. The program is designed to meet the needs of experienced practitioners who seek to broaden and deepen their professional knowledge and to expand the contributions they can make to education.

Professional Experience

Each candidate for the degree in Educational Administration is required to complete at least three years full time, successful employment in a Pre-K-12 setting.

- Degree requirements: Principal (https://www.uml.edu/docs/M.Ed.%20Education%20Administration%20-%20Massachusetts%20Teacher%20122015_tcm18-228934.pdf) (pdf)*

Education Administration: Higher Education Option (M.Ed.)

The M.Ed. Education Administration, Higher Education Option is a thirty credit program which focuses on policy and practice in Higher Education. Some courses offered on campus and some online, providing the flexibility for working professionals to complete the degree in a timely and convenient manner. Applicants to the program must be working or interning at an institution of higher education. They must have an undergraduate degree from an accredited institution which has been earned with a minimum grade point average of 3.0.

- Degree requirements: Higher Education Option (https://www.uml.edu/docs/M.Ed.%20Education%20Administration-
  Higher%20Education%20042016_tcm18-228932.pdf) (pdf)

3. Reading and Language (M.Ed.)

The Master of Education Degree in Reading and Language is a thirty credit program designed to provide the necessary course work to continue the education of licensed teachers.

Massachusetts teachers seeking licensure as a Teacher of Reading in the Commonwealth of Massachusetts complete two practica (6 credits) as part of the thirty credit degree. Candidates for this degree must hold either an initial or professional Massachusetts teaching license in Elementary Education, Middle/Secondary English, English Language Learners, Moderate Disabilities or Early Childhood Education and should be employed as a teacher in a Massachusetts public K-12 setting.

- Degree requirements: Reading and Language -Teacher of Reading (https://www.uml.edu/docs/Med-reading-teacher%20042016_tcm18-235007.pdf) (pdf)*

A non-licensure concentration is available for teachers who do not hold a Massachusetts license and/or do not work in a Massachusetts school. Candidates who seek to enroll in this degree program should hold a teaching license in their own
state in Elementary Education, Middle/Secondary English, English Language Learners, Moderate Disabilities or Early Childhood Education and be employed as teacher in a public or private K-12 school setting. This degree program is offered on line.

- **Degree requirements: Reading and Language - Non-Licensure** ([https://www.uml.edu/docs/MEd-reading-non-lic%20042016_tcm18-235008.pdf](https://www.uml.edu/docs/MEd-reading-non-lic%20042016_tcm18-235008.pdf) (pdf)*

*These programs may be taken online.*

**Educational Specialist (Ed.S.)**

Degree options include:


- Reading and Language - Teacher of Reading Licensure for Massachusetts Teachers ([https://www.uml.edu/docs/Ed.S.%20Reading%20and%20Licensure%202014_tcm18-228945.pdf](https://www.uml.edu/docs/Ed.S.%20Reading%20and%20Licensure%202014_tcm18-228945.pdf) (pdf)

- Reading and Language - on-line, non-licensure for teachers working in states other than Massachusetts ([https://www.uml.edu/docs/Ed.S.%20On-line%20Non-Licensure%202014_tcm18-228946.pdf](https://www.uml.edu/docs/Ed.S.%20On-line%20Non-Licensure%202014_tcm18-228946.pdf) (pdf)


**Note:** The Educational Specialist degree programs are offered either completely or partially online. Contact edoffice@uml.edu for further information.

**Admission and Completion Requirements**

Admission to a degree program at the Educational Specialist level requires that an applicant hold a master’s degree in education from an accredited college or university or a masters degree in a closely related field of study, with a cumulative grade point average of not less than 3.0. Additionally, applicants should have at least three years of full-time experience in a K-12 school or a related setting. Full admission requirements can be found at [Graduate Admissions](https://www.uml.edu/Grad/default.aspx), which include:

- Online application and fee
- Two-page statement in which you describe your educational philosophy and reasons for seeking entry to the degree
- Three letters of recommendation
- Proof of professional teaching status or GRE scores (general test)
- All official transcripts
- TOEFL scores if appropriate

In order to qualify for a Educational Specialist degree, each candidate must meet the following requirements:

1. Complete a minimum of 30 credits of course work in the specified degree program.
2. Complete all course requirements for the degree program at this university. A maximum of six credits of course work transferred from another accredited institution is the only exception granted.
3. Complete all course requirements with a cumulative grade point average of B or better. No additional course credits may be permitted in order to achieve the grade point average of B or better required for the degree.
4. Complete the program within five years of the date of admission.

**Bachelor’s-Master’s Program in Education**

The B.A. or B.S./M.Ed. Fast Track Program to Teaching is designed for high achieving University of Massachusetts Lowell undergraduates who seek to pursue a career in teaching at the middle/secondary levels. The program leads to a master of education degree in curriculum and instruction, including initial Massachusetts teacher licensure. The program may be completed in one or two years.
Advantages

- two degrees plus teacher licensure in five years;
- six graduate credits may be taken in the senior year, provided the student has been accepted to the program and all other undergraduate requirements have been fulfilled;
- scholarship opportunities;
- early advisement;

Requirements

University of Massachusetts Lowell undergraduate students may apply to the program during the fall semester of their senior year.

1. Successful applicants must have an undergraduate major in the specialization field in which they are seeking licensure as follows:
   - Biology 36 cr. in biology + 18 cr. in other sciences
   - Chemistry 36 cr. in chemistry + 18 cr. in other sciences
   - Physics 36 cr. in physics + 18 cr. in other sciences
   - Earth Science 36 cr. in earth science + 18 cr. in other sciences
   - English 36 cr. in English
   - General Science 36 cr. in a major field of science + 18 cr. in other sciences
   - Mathematics 36 cr. in mathematics
   - History 36 cr. in History

2. Applicants are expected to have a minimum grade point average of 3.0 in undergraduate work.

3. Applicants to the Fast Track Program must pass the MTEL-Massachusetts Tests for Educator Licensure (Communication and Literacy Skills and Subject Area Test are required).

Degree Requirements

1. Complete the stipulated course requirements for the degree program at this university.
2. Complete all course requirements for the degree with a cumulative grade point average of B or better.
3. Complete all course requirements for the degree with a cumulative grade point average of B or better.
4. Pass comprehensive examinations as determined by the specific program prior to beginning dissertation work.
5. Satisfactorily complete and defend a dissertation based upon the results of original research as approved by the candidates dissertation committee.
6. Complete the program within eight years from the date of admission.

Links to Program Information:

- Literacy Studies Ph.D. (https://www.uml.edu/Education/Programs/Doctorate/Literacy-Studies-Doctorate.aspx)
- Research and Evaluation Ph.D. (https://www.uml.edu/Education/Programs/Doctorate/Research-Evaluation-Doctorate.aspx)

For more information, contact:

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Graduate School of Education
OLeary Library 510 - UML South
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E-mail: Patricia_Fontaine@uml.edu

Degree requirements for Bachelor’s/Master’s Program

Doctoral Degrees (Ph.D. and Ed.D.)

In addition to the general requirements for admission to a program at the Graduate School of Education, to qualify for admission to a graduate program at the Doctor of Education level, an applicant must have earned a bachelor’s degree from an accredited college as well as a masters degree appropriate to the intended field of specialization from an accredited college. A cumulative grade point average of no less than 3.0 is expected. The Graduate Record Exam is also required for admission. GRE scores must be recent within the past 5 years.
EDUC.5010 Teaching Diverse Populations (Formerly 01.501) - Credits: 3
Students examine, confront and learn to manage the challenge of successfully educating all children, regardless of racial, cultural, linguistic, gender or physical differences.

EDUC.5012 Mathematics for Elementary Teachers III: Basic Principles of Euclidean Geometry (Formerly 04.501) - Credits: 3
This course integrates the study of geometry and measurement and includes lines, angles, investigations of triangles, quadrilaterals, polygons, area and perimeter; congruency, similarity, and Pythagoras’ Theorem. The students will explore mathematical explanation, argument, justification and how these processes connect to geometric proof. Also systems of units and concepts related to measurement will be investigated.

EDUC.5013 Introduction to Leading Professional Learning Communities (Formerly 05.501) - Credits: 1
This course introduces participants to strategies that will enable them to cultivate and lead school-based professional learning communities. During a week-long summer institute, students develop an action plan. In the fall, students will keep in contact (electronically) with peers and the instructor and will attend a final face-to-face session to support their efforts. The grade for the one credit course is awarded at the end of the fall semester.

EDUC.5020 Adolescent Development and Behavior (Formerly 01.502) - Credits: 3
This course provides an overview of adolescent development issues and classroom management practices. Adolescent development is examined through research into major theorists in developmental psychology: Piaget, Vygotsky, and Erikson etc. Classroom management strategies are explicitly taught through case study analyses, and examination of core beliefs, focusing on interpersonal relationships between students, teachers, parents, mentors and supervisors.

EDUC.5021 Issues, Mandates and Ethics in Special Education (Formerly 05.502) - Credits: 3
This course will examine special education laws and ethical practices in K-12 settings.

EDUC.5030 Understanding Child Development in a Diverse Society (Formerly 01.503) - Credits: 3
Examines the major theoretical frameworks of child development and how cultural differences affect development and learning. Focus is on helping students make responsive and culturally relevant pedagogical decisions.

EDUC.5040 Methods of Teaching Students with Moderate Disabilities (Formerly 01.504) - Credits: 3
Examines the methods of teaching students with moderate disabilities. Topics include curriculum (including the Massachusetts frameworks), IEPs, and instructional modifications appropriate for students with special needs.

EDUC.5043 Methods of Teaching Students with Moderate Disabilities - Secondary - Credits: 3
Examines the methods of teaching students with moderate disabilities at the secondary level. Topics include curriculum (including the Massachusetts frameworks), IEPs, and instructional modifications appropriate for students with special needs.

EDUC.5050 Children with Disabilities in the Classroom (Formerly 01.505) - Credits: 3
This course examines the nature of cognitive emotional, developmental, sensory, and physical disabilities that compromise student capacity to make adequate academic progress without special intervention. Legal and ethical responsibilities of the educator in inclusive classroom settings and as an active member of a multidisciplinary learning team are emphasized.

EDUC.5060 Oral Comm.for English Lang.Users I: Pronunciation for List. & Speaking (Formerly 02.506) - Credits: 0
This course offers graduate students the opportunity to increase and refine their understanding and ability to produce discrete sounds, sound combinations and the rhythm of spoken English to add in their comprehension of spoken English and to aid in their personal communication skills. Class activities include pronunciation drills, short extended listening, short presentations, speaking tasks and group discussion. This is not a conversation class but student participants will be required to actively speak in each class. Priority given to TA’s/RA’s an later semester graduate students, but available to all graduate students.

EDUC.5062 Oral Communications for English Language Users II: Academic Oral English - Credits: 0
This course offers graduate students the opportunity to
increase awareness of and to practice features of advanced spoken communication typical of academic environments: academic discussion/debate, conference/classroom/informal presentation, and question/answer sessions. Targeted skills include structure/organization, body language, intonation, dealing with nervousness, and awareness of cross-cultural communication patterns. As a workshop, this course requires active participation in a variety of speaking tasks, presentation preparation outside of class and feedback/discussion of peer communication. Priority given to and required for all TA’s. Some students may be required to successfully complete 02.506/EDUC.5060 prior to enrollment in

EDUC.5063 Advanced English Expression for English Language Users - Credits: 0

This course focuses on the grammar, vocabulary and phrases typically used in formal academic settings, i.e. the language forms required for understanding and producing research papers, journal articles, conference presentations and formal speaking. Students will learn to use online corpora tools to aid in their own language development, as well as analyze sentences and the language in a journal article of their choice. Recommended for graduate students early in their studies.

EDUC.5070 Introduction to Academic Writing for English Second Language Users (Formerly 02.507) - Credits: 0

This course offers an introduction to the complex nature of academic language and academic writing, focusing on effective sentence, paragraph and text structures, purposeful and appropriate word choice, the writing process in writing contexts appropriate for graduate students early in their studies. Through attentive, details and critical reading of various materials, students will enhance their writing skills by applying effective planning, drafting, rewriting and editing strategies. As a workshop class, students are required to write (and write often), participate in a variety of oral/written tasks in class, and engage in constructive peer review. Recommended for graduate students early in their studies.

EDUC.5120 History for Teachers (Formerly 04.512) - Credits: 3

This course examines the major concepts, people and events of US and World history using the ten themes outlined by the NCSS (National Council for the Social Studies). These standards are grouped under the four strands for teaching social studies in the state of Massachusetts (history, economics, geography and civics) and guide the focus for teacher preparation and instruction.

EDUC.5130 Teaching World History (Formerly 04.513) - Credits: 3

In an increasingly globalized and diverse age, courses in world history have become a growing teaching field at the secondary level in the United States. The overarching purpose of this class is to help students prepare to teach classes in world history. This course will introduce the field and concepts of world history. It will familiarize students with available materials such as textbooks, readers, primary documents, academic books and articles, novels, films, websites, and podcasts. The class will introduce and align with the state, national, and AP standards in world history.

EDUC.5150 Internship in English as a Second Language PreK-6 (Formerly 02.515) - Credits: 3

On-site field experience in an ESL classroom, under the supervision of a qualified ESL teacher and faculty of the Graduate School of Education.

EDUC.5160 Internship in English as a Second Language 5-12 (Formerly 02.516) - Credits: 3

On-site field experience in an ESL classroom, under the supervision of a qualified ESL teacher and faculty of the Graduate School of Education.

EDUC.5170 Community Organization and Parental Partnership (Formerly 02.517) - Credits: 3

The aim is to prepare school personnel to work effectively with community groups and bilingual parent organization.

EDUC.5200 Teaching Reading and Writing in English (Formerly 02.520) - Credits: 3

This course examines the development of reading and writing necessary for the ESL child to learn to read and write in English. Students gain familiarity with the various perspectives and practices that have been found to be effective in the teaching of reading and writing to students whose first
language is not English.

EDUC.5220 Young Adult Literature (06.522) - Credits: 3
The major emphasis of the course will be discussion and analysis of the goals of a literature curriculum and the exploration of various methods for achieving these goals. The characteristics of the different genres of literature will be discussed in detail.

EDUC.5240 Educational Assessments of Students with Moderate Disabilities (Formerly 02.524) - Credits: 3
A review of the various assessments and standardized tests that are used to identify students with moderate disabilities. The interpretation of assessment results and how to communicate them effectively to parents and school personnel will be examined.

EDUC.5250 Science for Secondary Science Teachers (Formerly 04.525) - Credits: 3
This course emphasizes content knowledge which includes the facts, concepts, laws, theories and organizing frameworks of science and syntactic knowledge which includes values, beliefs and assumptions that the science teacher has about the generation of scientific knowledge.

EDUC.5270 Language Acquisition (Formerly 06.527) - Credits: 3
This course will focus on the study of the acquisition of language and the relationship of language learning to the development of literacy. Students will examine both first and second language acquisition. Students will be expected to apply their knowledge of language acquisition to best teaching practices for enhancing first and second language development in the classroom and to the development of literacy.

EDUC.5280 Assessment of Reading and Language Disabilities (Formerly 06.528) - Credits: 3
This course examines the selection and use of procedures to make an adequate clinical and educational diagnosis. Includes the assessment of function and dysfunction in factors associated with language development; receptive, expressive, writing, reading; and the administration and interpretation of individual and group tests of perceptual, motor, and conceptual functioning in reading and language.

EDUC.5282 Teaching and Assessing Academic Reading and Writing I (Formerly 02.528) - Credits: 3
This course is designed to provide candidates with a broad overview of topics and approaches to teaching English language learners to become competent academic readers and writers who can critically and creatively evaluate, analyze, construct and present their ideas and arguments. Emphasis is on demonstrating teaching methods which are student oriented, pro-active and where writing skills are connected to reading skills; also, effective planning, drafting, rewriting and editing strategies will be emphasized.

EDUC.5290 Treatment Reading and Language Disabilities (Formerly 06.529) - Credits: 3
This course will explore the specific practices in remedial teaching in grades K-12, using published materials, and developing new materials for small group, whole class, and tutoring settings. Students will develop and implement realistic corrective programs based on the interpretation of literacy assessments. These programs will include selecting strategies of instruction and materials, and establishing a framework of time and evaluation.

EDUC.5292 Teaching and Assessing Academic Reading and Writing II (Formerly 02.529) - Credits: 3
This course is a continuation of Teaching Reading and Writing I. The level is advanced; effective teaching methods of writing, reading and editing are emphasized using relevant and real life examples of academic texts. Detailed analyses and discussions of academic texts through analytical, critical and constructive readings will provide candidates with a solid understanding of teaching methods in advanced reading and writing.

EDUC.5300 Interactions and Assessment in Science (Formerly 04.530) - Credits: 3
This course examines the ways in which students interact and learn in the science classroom. Construction of a Science, Technology, and Society (STS) unit plan, as well as the development of assessment tools that align to lesson and unit goals are key features of this course.

EDUC.5301 Reading and Thinking: Secondary School (Formerly 06.530) - Credits: 3
This course examines the relationships among reading, writing, and thinking in high school, particularly in diverse populations and with second language learners. Emphasis will be placed upon practical work in classrooms and the development and assessment of new teaching practices.

EDUC.5312 Internship in English as a Second
Language 5-12 (Formerly 02.531) - Credits: 3

On-Site field experience in an ESL classroom, under the supervision of a qualified ESL teacher and faculty of the Graduate School of Education.

EDUC.5330 Mathematics for Elementary Teachers I: Basic Principles of Arithmetic (Formerly 04.533) - Credits: 3

Participants will be engaged in constructing solid conceptual understanding of the language and operations of arithmetic; topics include place value and the history of counting, inverse processes, a large repertoire of interpretations of operations with numbers, concepts of integers and rational numbers, multi-digit calculations, including standard algorithms and non-standard methods the reasoning behind the procedures.

EDUC.5340 Mathematics for Teachers I (Formerly 04.534) - Credits: 3

This course revisits the content related to the development of number and operation, proportions, ratios and percent; modeling operations with fractions, beginning algebra and geometry. The course emphasizes the meanings of operations and relationships among those operations; multiple representations of concepts and connections across different representations. It also examines basic Number Theory concepts, such as factors and multiples, as well as divisibility tests, at both concrete and abstract levels.

EDUC.5350 Mathematics for Teachers II (Formerly 04.535) - Credits: 3

This course revisits the mathematics content related to the grades 8-12. It examines in depth elementary functions, and different mathematical models such as linear, quadratic, exponential, logarithmic and trigonometric, to describe real life situations. The course includes some topics from Euclidean geometry. The course emphasizes multiple representations of concepts, connections across different representations, as well as different levels of representations form concrete to abstract.

EDUC.5370 Mathematics for Elementary Teachers II: Basic Principles of Algebra (Formerly 04.537) - Credits: 3

The course examines the topics related to ratio and proportion, slope, the notion of function, absolute value, linear and non-linear functions, sets, equations, inequalities, simultaneous equations, reading and creating graphs of functions, formulas (in closed and recursive forms), and tables; studying characteristics of particular classes of functions on integers. It will also investigate some topics related to statistical analysis and probability.

EDUC.5390 Pre-Practicum: Alternate Route (Formerly 02.539) - Credits: 0

The pre-practicum occurs in the semester before the practicum. The course focuses on what it means to be a teacher by examining the content, dispositions and skills necessary to succeed in the profession. Students observe other teachers in their school and must spend one day observing in a district with different demographics. While there is no credit assigned to the pre-practicum, it is a required component of the program. Students complete a pre-practicum binder based on their observances.

EDUC.5400 Pre-Practicum (Formerly 02.540) - Credits: 0

The pre-practicum occurs in the semester before the practicum. The course focuses on what it means to be a teacher by examining the content, dispositions and skills necessary to succeed in the profession. Through a combination of site observations in schools of different demographics, personal/professional teaching opportunities and participation in professional seminars, elementary and secondary preservice teachers gain additional information and skills to prepare them for their practicum. While there is no credit assigned to the pre-practicum, it is a required component of the program. A fee is assessed.

EDUC.5410 Teaching English Learners-Secondary (Formerly 02.541 & UTL.441) - Credits: 3

The purpose of this course is to prepare new secondary teacher candidates with the knowledge and skills to effectively shelter their content instruction, so that the growing population of English learners (ELs) in PK-12 schools can achieve academic success, and contribute their multilingual and multicultural resources. The course will provide aspiring teachers with practical research-based methods, strategies, and protocols to integrate subject area content, language, and literacy. Successful completion of this course provides SEI (Sheltered English Immersion) endorsement, which is required for teaching in the Commonwealth of Massachusetts. This is a service learning course.

EDUC.5413 Practitioner Action Research (Formerly 07.541) - Credits: 3

This course examines how action research helps educators to learn to explore pressing classroom and school issues in systematic ways. Action research provide educators with opportunities to deepen their knowledge and skills as reflective
practitioners, allowing them to contribute to the achievement of students and the improvement of schools.

EDUC.5414 Teaching English Learners-Elementary - Credits: 3

This course will prepare elementary teacher candidates with the knowledge and skills to effectively shelter content instruction to ensure that the growing population of Massachusetts’ English Language Learners (ELLs) can access the curricula, “achieve academic success and contribute their multilingual and multicultural resources as participants and future leaders in the 21st century global economy” (MA DESE, 2013).

EDUC.5420 Methods of Early Childhood Education II: Social Studies,Arts,Health and Phys Ed. (Formerly 02.542) - Credits: 3

Students learn basic principles and concepts of history, geography, government, economics, the arts, health and physical education appropriate to the prekindergarten to second grades. Students learn to use project approaches appropriate for teaching young children.

EDUC.5430 Classroom Management and Integrative Techniques (Formerly 02.543) - Credits: 3

This course prepares participants to create and maintain a safe and collaborative learning environment through the development of effective rituals, routines, and appropriate responses in the classroom. With attention to the development of Positive Behavioral Supports, participants will examine and apply basic behavioral theories, evidence-based principles, and relevant policies. Based in the Three Tiered Philosophy, the course learning progresses for Universal Design concepts to more prescriptive individualized interventions and incorporates the practices of personal reflection, professional collaboration and effective communication.

EDUC.5490 Theory and Research: Reading and Language (Formerly 06.549) - Credits: 3

A final course on the national and international research in reading and language and the pertinence and proposed implementation of research findings to instruction and the various roles of the reading supervisor or director.

EDUC.5500 Reading Specialist: Practicum I (Formerly 06.550) - Credits: 3

The Reading Specialist Practicum requires students to use the knowledge gained in their coursework to design, implement, and analyze a program for struggling readers in a clinical experience. The practicum meets both Massachusetts and IRA standards for Reading Specialist/Literacy Coach.

EDUC.5510 Elementary Math Methods (Formerly 02.551) - Credits: 3

New approaches in the curriculum and teaching of mathematics in the elementary school; analysis and use of current materials, national and state standards, multimedia approaches, and inductive and problem-solving techniques.

EDUC.5511 Literacy Coach: Practicum II (Formerly 06.551) - Credits: 3

This is the second of two clinical practicum experiences in the Reading and Language program. Candidates will design a professional development project in their school setting which will allow them to model lessons, observe and co-teach with peers, and provide feedback to teachers and paraprofessionals. The online seminar provides support for implementing the program. The practicum meets the guidelines for the International Reading Association.

EDUC.5530 Language Arts and Childrens Literature (Formerly 02.553) - Credits: 3

Approaches in the teaching and assessment of the language arts in the elementary school will be analyzed. Assorted genres of literature and the development of literature programs for children in multicultural environments will be studied.

EDUC.5531 Lowell and Industrial Revolution (Formerly 04.553) - Credits: 3

Participants in this National Endowment for the Humanities-sponsored Landmarks Workshop, offered through the Tsongas Industrial History Center, examine the causes and consequences of America’s Industrial Revolution, using Lowell as a case study. The course covers the nineteenth-century shift from an agrarian to an industrial society, with a focus on water-powered factory systems, textile production and corporations, the issue of slavery in a cotton textile city, labor and women’s history, environmental impacts, immigration, globalization, and literary responses. Limited to NEH participants only.

EDUC.5540 Creation of a Nation (Formerly 04.554) - Credits: 3

This course will focus on the meeting of three worlds: Africa, Europe and the Americas and will explore the cultural and ecological interactions.
EDUC.5560 Reading and Reading Disabilities (Formerly 02.556) - Credits: 3

A critical analysis of fundamental issues and principles in the teaching of reading, including all phases of the elementary reading program. Analysis and remediation of reading disabilities which explores the use of critical diagnostic tools.

EDUC.5580 Becoming A Nation (Formerly 04.558) - Credits: 3

This course looks at the westward expansion of the United States from the signing of the Constitution to the pre-Civil War period.

EDUC.5592 Teaching Founding Documents (Formerly 04.559) - Credits: 3

This course examines the founding documents and how these documents are relevant in the lives of middle school children.

EDUC.5620 Elementary Social Studies (Formerly 02.562) - Credits: 3

Examines teaching strategies and materials appropriate for the teaching of K-8 social studies. Examines national and state standards for the discipline.

EDUC.5630 Elementary Science Methods (Formerly 02.563) - Credits: 3

Models the teaching of science as guided discovery while exploring developmentally appropriate concepts in science. Examines national and state standards as well as nationally developed curriculum kit-based materials.

EDUC.5680 Internship in Moderate Disabilities 5-12 (Formerly 02.568) - Credits: 3

Practicum in a special education setting under the supervision of qualified teachers, principal, and university faculty.

EDUC.5691 Tchng Middle Sch:English (Formerly 02.569) - Credits: 6-12

EDUC.5720 Curriculum and Teaching: English (Formerly 02.572) - Credits: 3

The purpose of this course is to prepare teacher candidates for the content-specific dimensions of their practicum. The course is designed to develop pedagogical skills, curriculum writing and also to encourage prospective English teachers to examine their own beliefs, expectations, and dispositions about the nature of the discipline, the practice of teaching, the process of learning, and the nature of the learners.

EDUC.5730 Curriculum and Teaching History (Formerly 02.573) - Credits: 3

Students analyze the content, methods, materials, and management techniques used in teaching History. Examination of national and state standards for the discipline. The course will include micro-teaching and self-evaluation, as well as school-based observation and participation in schools.

EDUC.5750 Curriculum and Teaching Math (Formerly 02.575) - Credits: 3

Students analyze the content, methods, materials, and management techniques used in teaching mathematics, and examine national and state standards for the discipline. The course will include micro-teaching, self-evaluation, school-based observation, and participation in schools.

EDUC.5760 Curriculum and Teaching Science (Formerly 02.576) - Credits: 3

Students analyze the content, methods, materials, and management techniques used in teaching science. Examination of national and state standards for the discipline. The course will include micro-teaching and self-evaluation, as well as school-based observation and participation in schools.

EDUC.5761 Promoting Healthy Lifestyles Among Students (Formerly 04.576) - Credits: 3

The focus of this course is on applying nutrition concepts relevant to elementary and middle school children and how these concepts can be integrated into the classroom at an age appropriate level. This course will address a broad range of issues including eating habits, disordered eating, sports nutrition, food allergies and school wellness policies.

EDUC.5780 Teaching Elementary Education and Seminar (Formerly 02.578) - Credits: 6

This full time practicum in the elementary school covers 12 weeks under the supervision of qualified teachers, principals, and faculty of the Graduate School of Education. Weekly seminar and portfolio development address the Massachusetts professional teaching standards. Matriculated students only. All coursework must be completed with a minimum 3.25 GPA. Before beginning the practicum.

EDUC.5790 Internship in Moderate Disabilities PreK -
8 (Formerly 02.579) - Credits: 3
Practicum in a special education setting under the supervision of qualified teachers, principal, and university faculty.

EDUC.5830 Teaching English and Seminar (Formerly 02.583) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5840 Teaching History and Seminar (Formerly 02.584) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5890 Teaching Mathematics and Seminar (Formerly 02.589) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5900 Teaching Biology and Seminar (Formerly 02.590) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5910 Teaching Chemistry and Seminar (Formerly 02.591) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5920 Teaching Earth Science and Seminar (Formerly 02.592) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the

EDUC.5922 Principalship: Practicum I (Formerly 05.592) - Credits: 1
The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 500 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the 'Standards for Advanced Programs in Educational Administration' of the ELCC (Educational Leadership Constituent Council). and the Massachusetts Administrative Leadership Standards.

EDUC.5930 Teaching Physics and Seminar (Formerly 02.593) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the Massachusetts Professional Standards for Teachers.

EDUC.5932 Principalship Practicum II (Formerly 05.593) - Credits: 2
The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 500 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the Standards for Advanced Programs in Educational Administration of the ELCC (Educational Leadership Constituent Council). and the Massachusetts Administrative Leadership Standards.

EDUC.5940 Teaching General Science and Seminar (Formerly 02.594) - Credits: 9
Full time practicum in the elementary, middle or secondary schools under the supervision of qualified classroom teachers and faculty of the Graduate School of Education. Weekly seminar and performance assessment addressing the
Massachusetts Professional Standards for Teachers.

EDUC.5942 Practicum I, Middle School Principal 5-8
(Formerly 05.594) - Credits: 1

The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 300 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the ‘Standards for Advanced Programs in Educational Administration’ of the ELCC (Educational Leadership Constituent Council). In addition to the field-based activities, candidates participate regularly in an on-line seminar with the university supervisor/instructor and meet for 3-4 face-to-face seminar sessions at the university. Students develop a practicum action plan, document their activities in a journal, participate in regular on-line discussions, complete several reflection assignments, and compile a final Practicum Portfolio. The basis of all work in the online seminar relates directly to the issues, experiences, and questions form the candidate's field-based activities. The Practicum aims to help all students achieve a fuller realization of their professional and personal resources as leaders and learners and strengthen their effectiveness as educational administrators now and into the future.

EDUC.5950 Practicum II, Middle School Principal 5-8
(Formerly 05.595) - Credits: 2

The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 300 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the ‘Standards for Advanced Programs in Educational Administration’ of the ELCC (Educational Leadership Constituent Council). In addition to the field-based activities, candidates participate regularly in an on-line seminar with the university supervisor/instructor and meet for 3-4 face-to-face seminar sessions at the university. Students develop a practicum action plan, document their activities in a journal, participate in regular on-line discussions, complete several reflection assignments, and compile a final Practicum Portfolio. The basis of all work in the online seminar relates directly to the issues, experiences, and questions form the candidate's field-based activities. The Practicum aims to help all students achieve a fuller realization of their professional and personal resources as leaders and learners and strengthen their effectiveness as educational administrators now and into the future.

EDUC.5960 Practicum I, High School Principal 9-12
(Formerly 05.596) - Credits: 1

The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 300 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the ‘Standards for Advanced Programs in Educational Administration’ of the ELCC (Educational Leadership Constituent Council). In addition to the field-based activities, candidates participate regularly in an on-line seminar with the university supervisor/instructor and meet for 3-4 face-to-face seminar sessions at the university. Students develop a practicum action plan, document their activities in a journal, participate in regular on-line discussions, complete several reflection assignments, and compile a final Practicum Portfolio. The basis of all work in the online seminar relates directly to the issues, experiences, and questions form the candidate's field-based activities. The Practicum aims to help all students achieve a fuller realization of their professional and personal resources as leaders and learners and strengthen their effectiveness as educational administrators now and into the future.

EDUC.5970 Practicum II, High School Principal 9-12
(Formerly 05.597) - Credits: 2

The practicum is a two-semester (1+2=3 credits) field-based experience in which the student engages in administrative responsibilities at the level of a school principal. These responsibilities are supervised by an on-site supervisor/mentor who holds certification in the appropriate area. A minimum of 300 hours must be completed during the course of the year. The responsibilities must be real and varied enough to allow the student to actively apply their knowledge and skills, thus demonstrating competence in the ‘Standards for Advanced Programs in Educational Administration’ of the ELCC (Educational Leadership Constituent Council). In addition to the field-based activities, candidates participate regularly in an on-line seminar with the university supervisor/instructor and meet for 3-4 face-to-face seminar sessions at the university. Students develop a practicum action plan, document their activities in a journal, participate in regular on-line discussions, complete several reflection assignments, and compile a final Practicum Portfolio. The basis of all work in the online seminar relates directly to the issues, experiences, and questions form the candidate's field-based activities. The Practicum aims to help all students achieve a fuller realization of their professional and personal resources as leaders and learners and strengthen their effectiveness as educational administrators now and into the future.
EDUC.6000 Multiculturalism and Language Learning  
(Formerly 01.600) - Credits: 3

This course will provide a broad overview of the explicit (overt) and hidden (implicit/covert) elements of culture and their implications for language learning and teaching practice. Course participants will explore the ways in which their cultures influence their world view and their perceptions of self and others, thereby exploring their openness or resistance to difference. Through course readings, discussions, and interactive learning activities, participants will understand the intersection of culture and language, how culture shapes language as how language is shaped by culture. The relationships between language and power will also be examined. Throughout the course participants will engage in self-reflection as they apply cultural theories to their own development, their attitudes, their perspectives, how they think and the way they use language.

EDUC.6001 Introduction to Second Language Acquisition (Formerly 02.600) - Credits: 3

This course is designed to facilitate students’ understanding of how people learn, or acquire, a second (or third, fourth etc.) language. This understanding then facilitates and benefits language teaching and assessment. In this course, we will examine current second language acquisition (SLA) research; we will study some of the current language teaching approaches and techniques and discuss how to apply them in specific situations. Students will become familiar with SLA terminology, research and data and will be able to connect SLA research with teaching and assessment (i.e. connecting theory with prax), other crucial and relevant topics, such as universal features of SLA (age, critical periods, environmental triggers, cross-linguistic influences), individual factors (aptitude, motivation), social factors (class, gender, social, cultural contexts), etc. will be covered. As part of the learning process in the class, students will be asked to develop their own theory of SLA and SL teaching or to analyze in detail the theory (or theories) they most identify with. Discussions and active participation are crucial in the course.

EDUC.6003 Leadership in Schooling: Residency - Credits: 0

The residency is a required on-campus component of the Ed.D. in Leadership in Schooling. Held during the summer, students spend several full days working with their student cohort and selected faculty on program outcomes. Students establish study groups, conduct preliminary work for the portfolio (for comprehensive exam I) and qualifying paper (for comprehensive exam II), and participate in daily seminars. There is a fee associated with the residency.

EDUC.6010 Leadership, Law & Policy in Higher Education (Formerly 08.601) - Credits: 3

This course examines theory, research and practice that inform us about the problem of scholarship, teaching, change and innovation in higher education. Students study academic life in the larger context of the institutional structure.

EDUC.6011 Seminar: Portfolio Development and Defense (Formerly 05.601) - Credits: 1

The Portfolio Development and Defense seminar provides each doctoral student with a guided experience to develop a portfolio, which demonstrates the ways in which she or he has met established program outcomes for the first phase of the Leadership in Schooling doctoral degree. The one-credit option is for the student who anticipates submitting required materials and defending her or his portfolio over two or more semesters.

EDUC.6012 Introduction to Linguistics (Formerly 02.601) - Credits: 3

All language teachers benefit from understanding of how language in general works. This course is designed to help students to understand and use in their language teaching the basic concepts, methods and approaches of linguistics. The following topics are covered in the course; phonetics (sounds/sound inventory of a language), phonology (how we understand and organize the sounds and patterns), morphology (word structure, morphemes; how smaller units of meaning make up words), syntax (sentence structure, how words make up sentences), semantics (how we understand and parse sentences), structural ambiguity, context within sentences), pragmatics (how context impacts meaning on a textual level), social aspects of language(dialects, sociolects, language change, etc.). Although most of the examples will involve English, for comparative and contrastive purposes other languages will be used (no need to understand them). Students will be encouraged to come up with as many of their own examples as possible.

EDUC.6020 Seminar: Portfolio Development and Defense (Formerly 05.602) - Credits: 2

The Portfolio Development and Defense seminar provides each doctoral student with a guided experience to develop a portfolio, which demonstrates the ways in which she or he has met established program outcomes for the first phase of the Leadership in Schooling doctoral degree. The two-credit accelerated option is for the student who will submit all required materials and defend her or his portfolio in one semester.

EDUC.6030 Seminar: Portfolio Development and
Defense (Formerly 05.603) - Credits: 3
The Portfolio Development and Defense seminar provides each doctoral student with a guided experience to develop a portfolio, which demonstrates the ways in which she or he has met established program outcomes for the first phase of the Leadership in Schooling doctoral degree. The three-credit accelerated option is for TAs and RAs only.

EDUC.6031 Curricular Practical Training (Formerly 04.603) - Credits: 1
CPT provides students with the opportunity to apply their learning from coursework in an educational setting. Candidates are required to submit a culminating assignment before the end of the academic semester.

EDUC.6040 Leadership of Community Engagement I (Formerly 05.604) - Credits: 2
The purpose of Leadership of Community Engagement I is to expose teacher leaders to the variety of issues associated with family and community engagement. Through critical examinations of theory, personal experiences and collective knowledge, teacher leaders will learn how to engage families and community members (i.e., business, health and service agencies and community-based organizations) and recognize the different forms of engagement. This course will highlight collaborative strategies that "share power" with parents, families, and community organizations in schools.

EDUC.6050 Leadership of Community Engagement II (Formerly 05.605) - Credits: 1
The purpose of Leadership of Community Engagement II is to continue the conversation and exploration of family and community engagement with teacher leaders from 05.604. The second course focus is on the implementation and analysis of the Research Action Plan drafted in the first semester. Teacher leaders will explore the challenges, barriers, successes and unintended consequences of their family and community engagement action plan. This course will highlight collaborative strategies of "critical friend groups" and participatory action research. Teacher leaders will lead group discussions and share ideas and strategies to help them address their family and community engagement issues.

EDUC.6060 Leadership and Learning I (Formerly 05.606) - Credits: 1
"Leadership and Learning: Course One" is the first in a sequence of three one credit courses that provide strategies, practical training, and the intellectual foundation necessary for teachers to cultivate and lead school-based professional learning communities. For Course One, students participate in a three day summer institute (9 AM to 3 PM) and develop an action plan for the coming school year in which they will lead the development of a professional learning community. Students are invited to participate in an ongoing research study of professional learning communities.

EDUC.6070 The Adult Learner (Formerly 01.607) - Credits: 3
This course will focus on the learning and development of adolescent young adults, adults and older adults in both school-based and non-school based settings. Cognitive, emotional, social and professional learning will be addressed as well as differing and changing learning styles across the lifespan and different learning settings.

EDUC.6071 Advanced Academic Writing I (Formerly 02.607) - Credits: 3
This course will enable graduate level English language learners to become competent academic writers who can critically and creatively evaluate, analyze, construct and present their ideas and arguments. This is a student oriented, pro-active course where writing skills are connected to reading skills. Through attentive, detailed and critical reading of various materials students will further enhance their writing skills by applying effective planning, drafting, rewriting and editing strategies.

EDUC.6073 Leadership and Learning II (Formerly 05.607) - Credits: 1
"Leadership and Learning: Course Two" is the second in a sequence of three one credit courses that provide strategies, practical training, and the intellectual foundation necessary for teachers to cultivate and lead school-based professional learning communities. For course two, students participate in three online learning modules and two face-to-face seminars during the fall semester. Students receive coaching and instruction as they pursue action plans developed in Course One and write a reflective journal. Students also read literature comprising the intellectual foundation for the professional learning community and write two critical essays.

EDUC.6074 Methods of Sheltered Language Instruction (Formerly 06.607) - Credits: 3
Different approaches and teaching procedures in Second Language instruction will be discussed as well as the methodological models of English as a Second Language instruction.

EDUC.6075 Academic Writing for English Second Language Users - Credits: 0
This course engages students in forms of academic writing, particularly relevant to scientific areas of study, from proposal and responses to research articles. Topics include (but not limited to) the language necessary to convey specialized/technical content to a variety of audiences, information structure, extensive use of sources, analysis of and feedback on writing (published and in progress) and resources (corpora) available and their usage. Priority given to graduate students later in their studies.

EDUC.6080 Student Development Theory (Formerly 01.608) - Credits: 3

The Student Development Theory course will provide students with a theoretical background in the developmental processes of college students. The course will cover pertinent models of student development pertaining to cognitive, moral, psycho/social, environmental, and identity development. Students will gain an understanding of each theory, and understand their practical application.

EDUC.6081 Leadership and Learning III (Formerly 05.608) - Credits: 1

"Leadership and Learning: Course Three" is the third in a sequence of three on credit courses that provide strategies, practical training, and the intellectual foundation necessary for teachers to cultivate and lead school-based professional learning communities. For Course three, students participate in three online learning modules and two face-to-face seminars during the spring semester. Students receive coaching and instruction as they pursue action plans developed in Course One and write a reflective journal. Students also read literature comprising the intellectual foundation for the professional learning community and write two critical essays.

EDUC.6090 Seminar I: Professional Accomplishments (Formerly 05.609) - Credits: 1

Candidates are asked to document a limited number of verifiable accomplishments outside the classroom from both the professional and local communities. Candidates must explain how each accomplishment impacts student learning. Accomplishments are limited to the last five years. Later in the program, more recent accomplishments may be added to the entry. The portfolio entry is 20 pages in length.

EDUC.6100 Teaching Reading in Content Area (Formerly 06.610) - Credits: 3

This course presents the theoretical foundation and current best practices for content area reading, writing, and study skills. The focus is on motivation, cognition, memory, and verbal processing theories as they apply to methodology.

Students learn to develop lessons and units that integrate reading and writing while covering concepts in the content areas.

EDUC.6101 Theories of Learning (Formerly 01.610) - Credits: 3

This course offers a detailed analysis of the major contemporary learning theories, both behavioral and cognitive.

EDUC.6103 Seminar II: Active Learning (Formerly 05.610) - Credits: 2

In this seminar, candidates must analyze an inquiry approach to education and its relation to their current practices. They must examine the connections between inquiry, teaching, learning, and the standards of accomplished teaching. The portfolio entry requires a video in which candidates are asked to document a class meeting where students are learning through inquiry based instruction. Documentation takes the form of a 20 minute video edited into three sections. Section one shows how the lesson is introduced. Section two records students engaged in inquiry learning. Finally, section three records the lesson’s closure. The analysis focuses on the available evidence from the video; specifically, how the candidate’s actions (or inaction’s) resulted in student learning. The portfolio entry is limited to 12 pages.

EDUC.6110 Introduction to Higher Education Administration (Formerly 05.611) - Credits: 3

EDUC.6120 Topics in Language Arts and Literacy (Formerly 06.612) - Credits: 3

This is an elective course in the doctoral program that covers a range of topics in language arts and literacy.

EDUC.6130 Leading the Professional Learning Community (Formerly 05.613) - Credits: 3

it is well documented that teachers who habitually examine their shared work based on inquiry, observation, analysis of data, dialogue, and experimentation tend to be more effective than those who are not reflective and work in isolation. How do we help all teachers become highly effective: How do we spread reflective practice from isolated pockets to all teachers in a school? The answer lies in the transformation of a school’s professional staff from isolated practitioners into a professional learning community. A professional learning community is a work culture in which educators regularly learn with and from each other through collaborative inquiry. This course provides the practical know-how and deep understanding need for educators to introduce and lead collaborative inquiry within their school or district and transform the teaching staff into a...
professional learning community. Furthermore, this course introduces the idea of collaborative inquiry by transforming participants into a professional learning community during the course. Thus, participants focus collaborative inquiry on their shared practice, read and reflect on selected authors, and develop action plans to help them introduce or advance collaborative inquiry in their own work settings.

EDUC.6150 Seminar II: Teaching Cycle (Formerly 05.615) - Credits: 1

This seminar focuses on the teaching cycle (planning, implementing, assessing) in conjunction with the standards of accomplished teaching in specific content areas. The portfolio entry emanates from the day to day work of each teacher and requires teachers to document the decisions and choices which directly impact the student learning experience. The entry includes lessons plans associated with specified learning objectives, detailed assignments, examples of student work form two of those assignments representing high and low achieving groups, and an analytical reflection of how the teachers work fostered (or did not foster) student understanding. The portfolio entry is 12 pages in length.

EDUC.6170 Seminar IV: Whole Class Discussion (Formerly 05.617) - Credits: 2

Candidates develop the knowledge, skills, and dispositions necessary to foster student engagement. They will examine formal and informal assessment techniques associated with whole class discussions and analyze the importance of an equitable learning environment in fostering student participation. Candidates are required to submit a second, 20 minute unedited video of a whole class discussion. They closely analyze the video and interpret the student exchanges and teacher actions according to the standards of accomplished teaching. The portfolio entry is limited to 12 pages in length.

EDUC.6220 Managing Resources and Finances (Formerly 05.622) - Credits: 3

This course will provide students with an understanding of the financial principles and budget management in the operation of our public schools. We will analyze economic and demographic data, review local/state and federal education budgets, examine the legal principles of school finance, review local, state and federal laws and policies on public education and evaluate case studies in the operation of public schools. Students will prepare budget documents, develop financial forecasts and prepare policy briefs on various topics related to school finance.

EDUC.6221 Science, Mathematics and the Educated Mind (Formerly 04.622) - Credits: 3

Examination of interaction of Science and Mathematics in the growth of knowledge, and current considerations of literacy.

EDUC.6225 Education Reform in Science, Technology, Engineering, & Mathematics - Credits: 3

This blended course explores the ongoing efforts to improve the equity and quality of Science, Technology, Engineering, and Mathematics (STEM) education. By examining a series of STEM education reform efforts form the local, state, and national levels, students will gain a practical and theoretical understanding of both the historical role policy plays in education and its chronic shortcomings. Students will investigate an example of a local example of STEM reform and report on it to the class from a reform perspective. Finally, the educator’s role in implementing effective reform in is considered.

EDUC.6226 Leadership and Research in STEM Education - Credits: 3

Educators in this course will explore and analyze current research in STEM education, investigate how student performance data informs school and district program decision making, learn how to lead and empower teachers in the mapping of STEM curriculum across grade levels, and develop strategies to develop effective district-wide STEM professional development for K-12 educators.

EDUC.6227 Foundations of Student Learning in STEM fields - Credits: 3

This course examines key crosscutting issues that enable STEM teachers to understand how knowledge is obtained and verified. During the course you will explore the theoretical foundations and research that would help you to better understand the nature of cognitive processes, the development of STEM reasoning abilities, and applications for teaching.

EDUC.6230 School Policy and Law (Formerly 05.623) - Credits: 3

This course will provide students with an understanding of the law and legal basis for making decisions in our public schools. We will analyze court decisions, state and federal constitutional provisions and laws and public policies and regulations as they pertain to the operation of the public schools in the United States. With a solid understanding of the legal framework of governance at the federal, state and local level and the decisions derived through court cases, educators will be better equipped to respond to the numerous challenges and decisions they face throughout the school year.

EDUC.6231 Policy & Practice in Sci., Tech., Eng., &
Mathematics Education (Formerly 04.623) - Credits: 3
This course explores the dynamic relationship between educational policy and classroom teaching. By comparing the similarities and differences for this relationship within each of these fields, students will gain a practical and theoretical understanding of both the historical role policy plays in education and its chronic shortcomings. Finally, the educators role in implementing effective change in these fields is considered.

EDUC.6240 Assessment of Learning (Formerly 04.624) - Credits: 3
Students examines various approaches to the formative and summative assessment of learning. This course examines the importance of assessment in planning curricula and individual lessons.

EDUC.6250 Organization of Schools and School Systems (Formerly 01.625) - Credits: 3
This course is designed to help students understand the organizational dynamics of schools. The knowledge gained should assist students in identifying and suggesting alternatives to programmatic and behavioral regularities found in a school or human service organization.

EDUC.6251 Teaching of Writing (Formerly 06.625) - Credits: 3
The Teaching of Writing examines theories and research in writing instruction at all levels. The course focuses, particularly, on teaching/learning strategies and activities that improve students' writing.

EDUC.6260 Developments of concepts in Science (Formerly 04.626) - Credits: 3
Students explore the historical development of selected science concepts and the emergence of the philosophy of science. Progress in science is examined together with views of the nature of science.

EDUC.6270 Second Language Acquisition and Assessment (Formerly 06.627) - Credits: 3
A Study of the general schools of thought that have formed the basis of teaching English as a Second Language. This course is designed to assist students in conceptualizing the foundations of second language acquisition. The course will also inform students about appropriate procedures for assessing the skill development of second language learners.

EDUC.6271 Development of Mathematics Concepts (Formerly 04.627) - Credits: 3
Participants will analyze the nature of mathematics content knowledge and the nature of mathematics process knowledge, as well as the nature and process of knowledge acquisition. A conceptual framework will emerge from the synthesis of existing information.

EDUC.6280 Reasoning and Problem Solving in Science (Formerly 04.628) - Credits: 0
An analysis of the development of procedural knowledge, with particular emphasis on reasoning and problem solving, as they are currently conceptualized in educational and psychological literature.

EDUC.6300 Educating Diverse Populations (Formerly 01.630) - Credits: 3
As the world becomes increasingly diverse, educators must be prepared to examine, confront, and manage the factors that affect the education of all children. This course addresses several central issues focusing on how teachers address the problems that confront students who differ from the majority population in language, ethnicity, culture, gender, and sexual orientation. Ensuring that their families and communities are actively involved in the educational process is also an important component of the course.

EDUC.6301 Reasoning and Problem Solving (Formerly 04.630) - Credits: 3
The course is designed to direct and encourage critical examination of the theory of problem solving. Students analyze current research literature relating to reasoning, problem solving and critical thinking. Synthesis of this literature serves as a foundation for examining curriculum decisions.

EDUC.6302 Leadership and Educational Policy (Formerly 05.630) - Credits: 3
The course provides students in the Ph.D. in Leadership in Education the opportunity for in-depth consideration of fundamental questions, seminal research, and theoretical perspectives related to education policy at all levels. Students who successfully complete this course will be able to explain major theoretical perspectives related to educational policy; discuss seminal research relevant to education policy; discuss contemporary education policy trends at state, federal and international levels; critique education policy proposals from a distinct theoretical perspective; and formulate and defend
policy recommendations, within a distinct political/economic/cultural context.

EDUC.6320 The Inclusive School (Formerly 01.632) - Credits: 3

School leaders must create environments that are welcoming to all students and their families and that capitalize on the strengths students bring to the learning environment as well as address the needs of students. As the population of students in our schools has continued to become more diverse, building an inclusive environment in which all are valued and in which all student can succeed has become increasingly complex. Participants in this course will explore their values and beliefs as well as the dominant culture and prevailing belief systems present in the majority of today’s public schools. Participants will learn about ways in which many students, their families, and their communities may differ from this dominant culture, and the possible effects of this mismatch. Through readings and interactive discussions, participants will examine ways to build a school culture that is inclusive for all students and their families. Participants will develop detailed plans of action to actively and meaningfully involve parents and community members in all aspects of the school.

EDUC.6350 Dynamics of Curricular Change (Formerly 04.635) - Credits: 3

This course considers alternative perspectives of curriculum and explores issues and strategies involved in the process of changing the curricular visions and practices of schools.

EDUC.6360 Sociocultural Contexts of Educational Communities (Formerly 01.636) - Credits: 3

Examines the social, cultural, and political forces that shape the school environment and provide context for teaching and learning. Additionally, the types of existing and desired relationships among schools, families and communities will be discussed.

EDUC.6361 Literacy Coach Institute (Formerly 06.636) - Credits: 3

EDUC.6370 History & Theory of Curriculum (Formerly 04.637) - Credits: 3

This course examines the historical development of American curriculum from the colonial period to the present, with a focus on theories that shaped what was taught in schools, and how those theories reflected social, cultural and political values and conflicts. Particular attention will be paid to curriculum theories that have shaped contemporary curriculum, and to examination of programs that reflect those theories.

EDUC.6380 Curriculum Design K-12 (Formerly 04.638) - Credits: 3

A review of state mandates which, by law, shape the curriculum of the school. Examination of "new" curricula and their sources, as well as the development of a rationale for curriculum design and an evaluation of the personnel and techniques by which these curricula can be developed.

EDUC.6381 Planning, Technology and School Improvement (Formerly 05.638) - Credits: 3

This course helps educators develop a broad grasp of the educational possibilities and concerns the Internet raises, for K-12 educators as well as those in higher education. Through the course, students develop in-depth knowledge of Internet resources and problems related to a specific issue of professional interest.

EDUC.6410 Issues in Staff Development (Formerly 05.641) - Credits: 3

Includes understanding of how to work with adult learners who are peers, as well as techniques for assessing staff needs, design of programs to improve staff performance and strategies to ensure productive in-service education.

EDUC.6420 Sem:Technology and American Mat Culture (Formerly 01.642) - Credits: 3

EDUC.6421 Principles of Supervision (Formerly 05.642) - Credits: 3

This course is designed to help current and aspiring supervisors explore the skills,knowledge and personal attributes central to instructional leadership and supervision. A paradigm shift away from an historical/traditional view of supervision towards a more collegial model is emphasized. Students will complete field work including two observations of a colleague and pre and post-lesson conferences.

EDUC.6423 Program Evaluation (Formerly 07.642) - Credits: 3

Evaluation tasks will be identified and the policy issues attendant to evaluation will be examined. Students will identify and discuss several models of program evaluation,understand what needs to be considered and addressed in needs assessment, learn to identify an appropriate design for a new evaluation. Students will be expected to conduct program evaluation, present their ideas and illustrate how evaluation results can be useful for program decision making.
EDUC.6430 The Skillful Teacher (Formerly 04.643) - Credits: 3

This course is designed to help teachers and educational leaders view teaching from a reflective stance. Video material of teaching situations will be examined for the application of skills discussed in the course.

EDUC.6431 Principalship PK - 12 (Formerly 05.643) - Credits: 3

This course is designed to help aspiring principals explore the skills, knowledge and personal attributes central to effective leadership. The course aims to acquaint students with research, theories, and frameworks from the knowledge base on school leadership; explore the issues, daily experiences, and decisions of the principal within the action context of the school; assist students to think critically and systematically about leadership; help students become more conscious of their own values, assumptions and purposes as school leaders; further develop leadership skills, insight, and vision for schooling; assist students to think of themselves as educators for transformation.

EDUC.6440 Foundations for Practitioner Scholars (Formerly 01.644) - Credits: 3

This course will introduce students to seminal and recent work in the fields of philosophy, history, and psychology as they relate to education. Students will critically examine research and scholarly theory in these fields and their relationship to PK-12 Practice.

EDUC.6441 Models of Teaching (Formerly 04.644) - Credits: 3

This course will investigate researched-based instructional models that have been proven to facilitate learning in any academic content area. Each model addresses academic content as well as attainment of instructional goals and objectives. All models support the 21st learner by focusing on the needed skills for school, life and work. This course will benefit teachers who teach at any grade level.

EDUC.6450 Perspectives and Visions of Schooling I (Formerly 01.645) - Credits: 3

Open to matriculated doctoral candidates only. This foundational course provides new doctoral students with an understanding of differing perspectives on the purpose of public education in the United States during the last 150 years. The philosophical and political perspectives which influenced educational reform during this period will be examined. The course will culminate in reading and discussion of contemporary visions for schooling. This course must be taken before 01.646.

EDUC.6451 Directed Study Curriculum and Instruction (Formerly 04.645) - Credits: 3

EDUC.6460 Perspectives and Visions of Schooling II (Formerly 01.646) - Credits: 3

This course examines how psychology and education have been intertwined throughout the history of American education. Various psychological perspectives for educational practice will be considered. The role of research in education, including the use of psychological research methods will be considered as you begin preparing to conduct educational research. Visions of educational psychologists for utilizing psychological research findings in creating future educational practice and policies will also be explored.

EDUC.6490 Directed Study: Administration (Formerly 05.649) - Credits: 3

Through frequent consultation with the instructor, the student will investigate and define a problem for research and will present the findings in a significant paper. The directed study may not be substituted for a required course.

EDUC.6500 Capstone TESOL (Formerly 02.650) - Credits: 3

The capstone project requires participants to apply the theories and strategies they have learned throughout the TESOL program to analyze a case study. Participants will be presented with a case study and will apply principles of learning, linguistics, second language acquisition, and methods of ESL (or sheltered) instruction to analyze the case and provide a comprehensive instructional play to address the needs of the case student. The final project for the capstone is a comprehensive paper of approximately 25 pages. Participants will be graded on the content of the project as well as the quality of writing.

EDUC.6501 Capstone Project: Advanced Programs (Formerly 04.650) - Credits: 3

Students will have the opportunity to develop a teacher work sample consisting of work in six major areas: (1) contextual factors, (2) learning goals, (3) assessment plan, (4) design for instruction, (5) analysis of student learning, and (6) reflection.

EDUC.6502 Instructional Leadership and School Reform (Formerly 05.650) - Credits: 3

Addresses the way in which an instructional leader initiates
changes in organizations—whether curricular or in the systems which make organizations function.

**EDUC.6510 Web-based Tech. in the Learning Environment: Teaching and Learning (Formerly 03.651)** - Credits: 3

Students will research, discuss and examine web-based educational technologies and the pedagogical practices associated with them. We will also interrogate the way that these technologies and their requisite literacies have changed, are changing and will change the nature of institutional instruction. In addition, we will investigate the policy implications that arise from the existence of these technologies. This course is taught online. It is suitable for students at the Masters, Ed.S or Doctoral level.

**EDUC.6511 Transformative Leadership for Schools (Formerly 05.651)** - Credits: 3

This course considers ways in which school leaders can facilitate transformative change in all aspects of school life. Focusing on theory, research, and pragmatic strategies, the course examines approaches to school design for school startup and redesign for schools undergoing significant change.

**EDUC.6520 Managing Change and Conflict (Formerly 05.652)** - Credits: 3

Examines theories in the changing process, strategies for effective adoption and implementation of innovations and conflict resolution.

**EDUC.6530 Capstone Alternative (Formerly 04.653)** - Credits: 3

This Capstone Alternative is the culminating course for students who are not in regular PK-12 classroom settings, particularly those who are in the Autism Studies program. Candidates in this course will apply information that they have learned during their coursework to an action research project in a classroom or small group setting. In addition, candidates will develop a professional portfolio with products developed during coursework.

**EDUC.6540 Student Development & Leadership in Higher Education (Formerly 08.654)** - Credits: 3

This course will examine the role of higher education in creating leaders for a diverse and democratic society. Grounded in student development theory and practice, this course will engage participants in reflective and critical exploration of leadership theories, frameworks, concepts, and skills that focus on social justice and purposeful change. The course is designed to provide foundational grounding in the study of leadership theory and research, with a focus on the leadership paradigms emphasizing transformation, collaboration, and empowering group members in an effort to improve the world in which we live. During this course you will read current ideas about student development and the nature of leadership, you will engage in class activities and assignments which challenge you to think critically with multiple perspectives and frameworks and you will undertake a self-examination about who you are and what you believe as someone who will facilitate student development and leadership in student affairs and within higher education.

**EDUC.6550 Directed Study Curriculum and Instruction (Formerly 04.655)** - Credits: 3

Through frequent consultation with the instructor, the student will investigate and define a problem for research and will present the findings in a significant paper. The directed study may not be substituted for a required course.

**EDUC.6560 Ed.S Seminar (Formerly 04.656)** - Credits: 3

Candidates undertake an in-depth study of issues pertinent to PK-12 education and develop a product to address these issues. Candidates must complete 24 credits prior to registering for the Ed.S Seminar.

**EDUC.6571 Readers Responses to Literature (Last Term 2009 Spring)** (Formerly 06.657) - Credits: 3

An in-depth study of theory and research on the work in readers’ responses to literature. Attention is given to past findings and methodologies as well as to future research in this area.

**EDUC.6580 Role of the Curriculum and Instructional Leader (Formerly 05.658)** - Credits: 3

This course provides prospective leaders with the theoretical and empirical bases for understanding the instructional core and how to create the conditions needed for high quality teaching and learning to occur in their schools. Course participants will explore how to (i) establish a vision that promotes high standards for learning and is shared by all stakeholders; (ii) promote a positive school culture that is anchored in professional behavior and trusting relationships; (iii) promote effective instructional programs and the application of best practices to student learning; (iv) make decisions grounded in reliable data integrity, fairness, and ethical conduct.
EDUC.6590 Strategies for Instruction in Higher Education (Formerly 08.659) - Credits: 3

A variety of theories, methods and multi-media techniques of teaching will be explored in order to familiarize students with the many options available to facilitate learning by adults.

EDUC.6600 Ethnographic Inquiry (Formerly 07.660) - Credits: 3

This course provides the theoretical underpinnings of the nature, principles and processes of ethnographic research which focuses on the understanding of human cultures. Students will study how an ethnographic research project is developed and will conduct an aspect of a study during the semester. There will be particular emphasis on collecting and analyzing data in ethnographic research.

EDUC.6601 Diversity in Higher Education (Formerly 08.660) - Credits: 3

Focuses on the preparation, admission, retention, and achievements of minorities in higher education, both past and present.

EDUC.6700 CAGS Capstone Seminar I (Formerly 05.670) - Credits: 3

EDUC.6701 Practicum I: Higher Education Option (Formerly 08.670) - Credits: 3

The Practicum I: Higher Education is the first of two culminating requirements for those students striving to earn the M.Ed. in Education Administration: Higher Education Option. Practicum I and II require students to engage in a project that demonstrates the practical application of their knowledge and skills in real-life higher education leadership activities and responsibilities over the course of two semesters; both semesters involve significant leadership work in partnership with a supervisor/mentor in an appropriate higher education site. Selection of the focus and scope of the project will be tailored to students' area of focus in the Higher Education Option and their current work responsibilities.

EDUC.6710 Practicum II: Higher Education (Formerly 08.671) - Credits: 3

Practicum II: Higher Education is the second in the series of two culminating requirements for those students striving to earn the M.Ed. in Education Administration: Higher Education Option. Similar to Practicum I (08.670), Practicum II (08.671) requires students to engage in the continuation of the project form Capstone I that demonstrates the practical application of their knowledge and skills in real-life higher education leadership activities and responsibilities over the course of the semester. Both Practicum semesters involve significant leadership work in partnership with a supervisor/mentor in an appropriate higher education site. Practicum II content will be tailored to students’ area of focus in the Higher Education Option and their current work responsibilities.

EDUC.6730 Advanced Research Seminar (Formerly 05.673) - Credits: 3

EDUC.6740 Research into Learning in Science (Formerly 04.674) - Credits: 3

In this course, we shall be reading research articles and examining how the research was carried out. You will conduct an “action research” project. Those who engage in action research have a commitment to bring about change. In this case, you will be investigating something in your own classroom or school that concerns you and therefore the results of your research will help you to think about what might be done to change the situation. Through the collection and sorting of data we can gain insights into situations that were previously muddy. Teachers often have to make judgments based on experience, but this is not persuasive to outsiders. With data we can convince others that the course of action we choose is justified.

EDUC.6750 Leadership in Science Education (Formerly 04.675) - Credits: 3

There are many issues in science education that can be clarified as a result of reading current literature and engaging in discussion with other teachers. In this course, we will examine some of the most pressing issues that face us as science teachers e.g. What is science literacy? What role should inquiry play in a science curriculum? What is the role of technology in science education? Is ability grouping appropriate for learning in science? Each week we will examine a different issue and share our expertise, as we explore what it means to be a leader in science education. You will share your own science teaching expertise by developing an article to be submitted to an NSTA publication via a peer review process. Additionally, you will put your program learning into practice and will be assessed through written evidence captured in a professional portfolio.

EDUC.6751 History, Theory, & Contemporary Issues in Lang, Literacy & Culture (Formerly 06.675) - Credits: 3

The purpose of this course is to engage students in the complexities and debates regarding theoretical perspectives and research on language, literacy, and culture that have affected language and literacy learning. This course will begin with introduction to the history of research done on concepts of language, literacy and culture. Students then look at the
evolution of sociolinguistic and stenographic research language, literacy and culture as well as other modes of inquiry on language and literacies. Most of the course is spent closely examining studies for how they conceptualize the mutual construction of language, literacy, and culture, and for what they can tell us about the nature of literacy learning. In addition, students will explore the questions those studies raise such as cultural diversity, identity, learning, curriculum and instruction school-community relationships and social justice in literacy and language learning.

EDUC.6760 Exploring the Nature of Science
(Formerly 06.676) - Credits: 3

If you were asked to describe the characteristics of science what would you say and would you know whether professional scientists agree with you? National professional societies such as the NSTA and the AAAS, believe that if middle and high school students understand how science has been and is practiced, they will be more likely to question their own thinking, recognize the power of scientific theories and understand that there are no absolute truths. This course will take you on an exploration of some fascinating discoveries in the history of science, engage you in debate about controversial issues in science, and involve you in raising your own scientific questions.

EDUC.6761 History, Theory, and Research in the Teaching of Writing (Formerly 06.676) - Credits: 3

This course covers the history of the teaching of composition from the ancient Greeks to the present day, the development of both theory and pedagogy, and the current research into how writers learn, which teaching methods work best, and which issues continue to be of concern. Students will learn to critique writing pedagogy, to place programs and issues into historical perspective, and to analyze and design research into the teaching of writing.

EDUC.6770 Theories of Verbal Communication
(Formerly 06.677) - Credits: 3

The course will examine various theories and models of verbal communication appropriate for study in the Language Arts and Literacy. The specific theories and models will be determined each semester.

EDUC.6780 History, Research and Contemporary Issues in Reading Instruction (Formerly 06.678) - Credits: 3

Students will trace the history of reading instruction in the United States from The New England Primer in the 1600s to the present with special attention to the ways in which those milestones may have impacted reading instruction today. Each of the key philosophical orientations to reading instruction will be explored from the point of view of the research that informs that instruction. Contemporary issues in reading instruction will be examined with ties to both the research and the history. Contemporary issues will be drawn from, but not limited to, politics, curriculum design, instructional materials, and instructional design.

EDUC.6800 Leadership of Community Engagement I
(Formerly 05.680) - Credits: 2

This course will examine the intricacy of community engagement. Parent and community engagement in education is widely recognized as important, yet very few teacher leaders are taught how to foster engagement more broadly and deeply in schools. Teachers will learn community-based relational approach and other theories related to parent and community engagement. Through action plans, they will create opportunities for community partnerships necessary for promoting the success of all students.

EDUC.6810 Leadership of Community Engagement II
(Formerly 05.681) - Credits: 1

In this course, students will implement and evaluate their community engagement action plan from Leadership of Community Engagement I. Students will begin to unravel and document best practices seminal to community and school partnerships. Through the sharing of important resources such as social networks and community capital. Teachers will create a learning community to support each other and colleagues engaged in this important work.

EDUC.6820 Peer Leadership I (Formerly 05.682) - Credits: 1

This is the first in a sequence of three one credit courses that provide strategies, practical training, and a foundation in adult learning theory necessary for teachers to cultivate and lead school-based professional learning communities. For Course One, students participate in a three day summer institute (9am-3pm) and develop an action plan for the coming school year in which they will lead the development of a professional learning community. Students are invited to participate in an ongoing research study of professional learning communities.

EDUC.6830 Peer Leadership II (Formerly 05.683) - Credits: 1

This is the second in a sequence of three one credit courses that provide strategies, practical training, and intellectual foundation necessary for teachers to cultivate and lead school-based professional learning communities. For Course Two,
students participate in three online learning modules and two face-to-face seminars during the fall semester. Students receive coaching and instruction as they pursue the action plans developed in Course One and write a reflective journal. Students also read literature comprising the intellectual foundation for the professional learning community and write two critical essays.

EDUC.6840 Peer Leadership III (Formerly 05.684) - Credits: 1

This is the third in a sequence of three one credit courses that provide strategies, practical training and the intellectual foundation necessary for teachers to cultivate and lead school-based professional learning communities. For Course Three, students participate in three online learning modules and two face-to-face seminars during the spring semester. Students receive coaching and instruction as they pursue action plans developed in Course One and write a reflective journal. Students also read literature comprising the intellectual foundation for the professional learning community and write two critical essays.

EDUC.6850 Accomplished Teaching Seminar I; Professional Accomplishments (Formerly 05.685) - Credits: 1

Candidates are asked to document a limited number of verifiable accomplishments outside the classroom from both the professional and local communities. Candidates must explain how each accomplishment impacts student learning. Accomplishments are limited to the last five years. Later in the program, more recent accomplishments may be added to the entry. The portfolio entry is 20 pages in length.

EDUC.6860 Accomplished Teaching Seminar II; Active Learning (Formerly 05.686) - Credits: 2

In this seminar, candidates must analyze an inquiry approach to education and its relation to their current practices. They must examine the connections between inquiry, teaching, learning, and the standards of accomplished teaching. The portfolio entry requires a video in which candidates are asked to document a class meeting where students are learning through inquiry based instruction. Documentation takes the form of a 20 minute video edited into three sections. Section one shows how the lesson is introduced. Section two records students engaged in inquiry learning. Finally, section three records the lesson’s closure. The analysis focuses on the available evidence from the video; specifically, how the candidate's actions (or inaction's) resulted in student learning. The portfolio entry is limited to 12 pages.

EDUC.6870 Accomplished Teaching Seminar III;

Teaching Cycle (Formerly 05.687) - Credits: 1

This seminar focuses on the teaching cycle (planning, implementing, assessing) in conjunction with the standards of accomplished teaching in specific content areas. The portfolio entry emanates from the day to day work of each teacher and requires teachers to document the decisions and choices which directly impact the student learning experience. The entry includes lesson plans associated with specified learning objectives, detailed assignments, examples of student work from two of those assignments representing high and low achieving groups, and an analytical reflection of how the teachers work fostered (or did not foster) Student understanding. The portfolio entry is 12 pages in length.

EDUC.6880 Accomplished Teaching Seminar IV; Whole Class Discussion (Formerly 05.688) - Credits: 2

Candidates develop the knowledge, skills, and dispositions necessary to foster student engagement. They will examine formal and informal assessment techniques associated with whole class discussions and analyze the importance of an equitable learning environment in fostering student participation. Candidates are required to submit a second, 20 minute unedited video of a whole class discussion. They closely analyze the video and interpret the student exchanges and teacher actions according to the standards of accomplished teaching. The portfolio entry is limited to 12 pages in length.

EDUC.6910 Developing Inclusive School Contexts (Formerly 05.691) - Credits: 3

This course will introduce students to theory and research about structural inequities, barriers to education, and promising practices for addressing these barriers. Students will examine theory and research and implications for practice in PK-12 Leadership.

EDUC.6911 Applied Research Design (Formerly 07.691) - Credits: 3

This course is designed to provide PK-12 practitioners with an understanding of the principles of research design and the ethical responsibilities of conducting a research study. Participants will learn a broad range of research methodology approaches that can be applied to problems of practice. Participants will become skilled at reading, evaluating, and judging the trustworthiness of studies using different methodology approaches. They will design a practitioner-oriented research study.

EDUC.6920 Law, Policy, and Finance (Formerly
05.692) - Credits: 3
In this course students will examine scholarship and research in the areas of law, policy and finance as these affect educational practice. They will analyze law, policy and finance and its implications for leaders in PK-12 schools and school systems.

EDUC.6921 Quantitative Data Analysis for Practitioner Leaders - Credits: 3
The primary focus of this course is to prepare practitioner leaders to understand, interpret, and analyze quantitative data as it relates to their identified problem of practice.

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EDUC.6930 Organizational Learning (Formerly 05.693) - Credits: 3
This course will introduce students to research and theory in the field of organizational learning and its application to PK-12 practice. Students will study the origins, evolution and contemporary findings of research in this field. Students will explore the practical implications of organizational learning for PK-12 leadership.

EDUC.6931 Qualitative Data Analysis for Practitioner Leaders (Formerly 07.693) - Credits: 3
This course will introduce practitioner leaders to the field of qualitative research and prepare them with the skills, techniques and knowledge necessary to conduct qualitative investigation in a practitioner-oriented research study.

EDUC.6940 Systems Leadership I (Formerly 05.694) - Credits: 3
Drawing on organizational, management, and educational scholarship, this course introduces students to concepts and practices associated with strategic systems leadership. Students will apply their understandings of how to leverage both formal and informal sources of influence in their analysis of relevant teaching cases and the data they collect in an extensive field study project.

EDUC.6950 Systems Leadership II (Formerly 05.695) - Credits: 3
building on the core concepts and practices introduced in Systems Leadership I, this course focuses specifically on how effective leaders use data to understand and address the challenges of their operation environment. Importantly, the course focuses on not only the technical knowledge and skills leaders need to use data as a lever for improvement at scale, but on the adaptive leadership skills required for meaningful systems change.

EDUC.6960 Strategic Partnering with Families and Communities (Formerly 05.696) - Credits: 3
This course will critically examine the variety of issues associated with partnering with parents, families and community organizations. Through analysis of theory, research and collective knowledge, doctoral students will learn how to strategically engage parents, families and community organizations and recognize the different forms of engagement. This course will emphasize collaborative strategies that "shares power" with key stakeholders in U.S. schools.

EDUC.6990 Doctoral Research Seminar (Formerly 07.699) - Credits: 1
This seminar, for all doctoral students and faculty in the Research and Program Evaluation Ph.D. program gives students the opportunity to learn about research and evaluation practice directly from faculty and other students speaking about their research and evaluation experiences. Students will learn how to: understand research and evaluation presentations; ask educated questions and make substantive suggestions and comments about research; and create and deliver a presentation of their research evaluation projects.

EDUC.7000 Introduction to Research Design and Methods (Formerly 07.700) - Credits: 3
In this course students will be introduced to: Principles of research design in social sciences; Understanding how to plan for research using quantitative and/or qualitative data collection methods; Ethics of research conduct; Understanding and preparing for the Institutional Review board (IRB) process; Evaluating the trustworthiness of research; How to critically review research; The historical and philosophical issues undergirding qualitative research; Paradigms; Sampling procedures; Types of measurement error; Methodologies appropriate for educational research; Recent developments in education research.

EDUC.7002 Conducting Research in Literacy Studies I - Credits: 3
This course provides doctoral students prior to their dissertation research with an opportunity to develop a research
proposal through an intensive literature review, writing and discussions. Based on a solid understanding of current research trends on literacy, culture and communication students will identify research questions and articulate theoretical perspectives that frame their research. Developing research design and analysis tools will also be a core element of this course as a part of the students; research proposals. Students will go through IRB application using the proposal developed in this course to actually conduct their research in the next semester.

EDUC.7010 Cognitive & Info Processing Theories of Learning, Dev & Inst (Formerly 01.701) - Credits: 3

This course covers the fundamentals of human memory and cognition. In addition to modern memory theory, imagination, problem solving, invention, complex learning and complex skills performance will be explored.

EDUC.7011 Seminar: Qualifying Paper Development (Formerly 05.701) - Credits: 1

The Qualifying Paper Development seminar provides the student with constructive feedback and scaffolding as he or she develops the qualifying paper. The one-credit option is for the student who anticipates developing and submitting the final draft of the qualifying paper in one semester.

EDUC.7012 Data Analysis (Formerly 07.701) - Credits: 3

Prerequisite: A descriptive statistics or research methods course satisfactory to the Program Faculty. This course covers basic statistics used in the analysis of educational research.

EDUC.7014 Conducting Research in Literacy Studies II - Credits: 3

This course will focus on the actual conduct of a research project. It may not be possible to complete a research project (data collection and analysis) in a single semester; however, some important aspects of a research project are expected, such as sample data collection using the research instruments developed in the previous semester, ongoing analysis and preliminary findings. Students are expected to receive approval from the IRB prior to the course and will begin data collection as soon as the semester begins.

EDUC.7020 Research Methods and Design (Formerly 07.702) - Credits: 3

Methods of data collection suitable for answering a variety of educational research questions. Considers both qualitative and quantitative strategies for research and evaluation needs. Prerequisite: 07.701 or acceptable substitute.

EDUC.7021 Seminar: Qualifying Paper Development (Formerly 05.702) - Credits: 2

The Qualifying Paper Development seminar provides the student with constructive feedback and scaffolding as he or she develops the qualifying paper. The two-credit accelerated option is for the student who anticipates developing and submitting the final draft of the qualifying paper in one semester.

EDUC.7030 Seminar: Qualifying Paper Development (Formerly 05.703) - Credits: 3

The Qualifying Paper Development seminar provides the student with constructive feedback and scaffolding as he or she develops the qualifying paper. The three-credit accelerated option is for TAs and RAs only.

EDUC.7040 Qualitative Research Methods (Formerly 07.704) - Credits: 3

This course concentrates on the use of qualitative methods for educational research. Strategies for conducting qualitative studies are described and techniques for analyzing and reporting findings are emphasized.

EDUC.7050 Survey Research (Formerly 07.705) - Credits: 3

Focusing on survey research methods, this course will familiarize students with the strategies, techniques, tactics, and issues in developing and administering questionnaires and interviews.

EDUC.7060 Intermediate/Advanced Data Analysis (Formerly 07.706) - Credits: 3

Mixed methods research and evaluation uses both quantitative and qualitative data and information to answer research and evaluation questions. Mixed methods research and evaluation integrates these two general methodologies to design more complete and powerful scholarship and produce more informative answers to research, instructional, and educational questions of both the formative and the summative kind. These questions may be research hypotheses, instructional program effects, or educational program and policy evaluations. This course is designed to meet the needs and goals of the students who enroll in it and is conducted by a learning contract model. Advanced univariate and multivariate design and statistical techniques will be selectively covered, including: meta-analysis, instrument design and development. It includes various
qualitative techniques and analytical models, such as
development and use of protocols, interviewing, content and
discourse as well as text analysis, analytic and observational
scoring procedures and systems, document analysis, policy
analysis. Scholarly text development such as histories, white
papers, or professional literature reviews will be included.

EDUC.7070 Writing for Professional Publication
(Formerly 07.707) - Credits: 3

In this course students will learn about the processes and the
resources relevant to writing, publishing and presenting
manuscripts for professional journals and conferences. There
will be an emphasis on student-developed work based upon
relevant topics in the students field of study. Instructor
permission required.

EDUC.7090 Measurement & Evaluation (Formerly
07.709) - Credits: 3

Basic measurement and evaluation theories and techniques are
surveyed, including achievement, attitudes, opinions, abilities,
personality, skills and trait variables. Emphasis is given to
methods of establishing reliability and validity of various
measures.

EDUC.7100 Research Planning: Leadership (Formerly
05.710) - Credits: 3

Research Planning: Leadership is a scaffolded-experience to
guide students in the development of their qualifying paper (the
second comprehensive exam), a structured review of the
literature. Only students who are at the appropriate stage of
their program may enroll with permission of the instructor.

EDUC.7101 Qualitative Research: Advanced Topics in
Analysis - Credits: 3

This course provides advanced knowledge of qualitative
research and the opportunity for candidates to conduct a pilot
study utilizing appropriate qualitative methodologies.

EDUC.7110 Research Experience I
Research Experience I - Credits: 3

The goals of Research Experience I are to provide students in
the Research and Evaluation in Education Program with
mentored experience in a hands-on research project.
Appropriate research experiences are those that allow the
students opportunities to increase their skills, Knowledge, and
experiences in the program goal areas. Students will work
approximately 10 hours a week on the designated research
project, meeting a minimum of 1 hour per week with the
research mentor.

EDUC.7120 Research Experience II - Credits: 3

Research Experience II will provide students in the Research
and Evaluation in Education program with mentored
experience in a hands-on research project. The project may be
a continuation of the work begun in Research Experience I or
may represent a different line of inquiry with different mentor.
Appropriate research experiences are those that allow the
student opportunities to increase their skills, knowledge, and
experiences in the program goal areas. Student will work
approximately 10 hours a week on the designated research
project, meeting a minimum of 1 hour per week with the
research mentor.

EDUC.7130 Research Writing Seminar - Credits: 3

The purpose of the Research Writing Seminar is to Provide
students with guidance in the preparation of their final
qualifying exam.

EDUC.7290 Directed Study: Leadership in Schooling
(Formerly 05.729) - Credits: 3

Participants will develop a focused line of investigation with
the supervision of a faculty member in the college. Approval of
advisor is required.

EDUC.7291 Directed Study: Language and Literature
(Formerly 06.729) - Credits: 3

Students will work on individually designed projects in
language arts and literacy in close cooperation with a faculty
member.

EDUC.7292 Directed Study: Mathematics and Science
Education (Formerly 04.729) - Credits: 3

Participants will develop a focused line of investigation with
the supervision of a faculty member in the college. Approval of
advisor is required.

EDUC.7420 Foundations of Program Evaluation -
Credits: 3

In this course the following topics will be considered:
Fundamentals of Evaluation Theory; Evaluating Evaluation
Approaches and Models: Explication and Application of
Specific Models; Evaluation Design; Evaluation Ethics;
Evaluation Procedures; Meta-evaluation.

EDUC.7430 Program Evaluation in Practice - Credits: 3
This course will further your knowledge of program evaluation by focusing on such topics as: Assessing the need for program evaluation; Working with stakeholders; Identifying, measuring and monitoring outcomes; Assessing impact; Social context of evaluation.

EDUC.7440 Program Evaluation and Public Policy - Credits: 3

The focus of this course includes: The relationship between evaluation and educational policies; Standards-Based evaluation; Responsive Evaluation; Evidence Based Evaluation; Cost Benefits Analysis Evaluation; Large Scale Evaluations: Issues in Planning; Large Scale Evaluations: Analyses; Evaluation of Public Programs and Related Policy; Utilization of Findings in Policy.

EDUC.7530 Doctoral Dissertation/Education (Formerly 05.753) - Credits: 3
EDUC.7531 Doctoral Dissertation/Education (Formerly 06.753) - Credits: 3
EDUC.7532 Doctoral Dissertation/Education (Formerly 04.753) - Credits: 3
EDUC.7560 Doctoral Dissertation/Education (Formerly 05.756) - Credits: 6

Doctoral candidates who have passed both required doctoral examinations (Comprehensive/Qualifying examinations) may register for dissertation credit. Candidates work with their chair and/or a committee member to advance their research. Part time candidates who wish to register for 6 credits of dissertation study in one semester must gain the permission of the instructor.

EDUC.7561 Doctoral Dissertation/Education (Formerly 06.756) - Credits: 6
EDUC.7562 Doctoral Dissertation/Education (Formerly 04.756) - Credits: 6
EDUC.7590 Doctoral Dissertation/Education (Formerly 05.759) - Credits: 9

Doctoral candidates who have passed both required doctoral examinations (comprehensive/Qualifying examinations) may register for dissertation credit. Candidates work with their chair of a committee member to advance their research. Only, full-time candidates, including TAs and RAs, and international students may register for 9 credits of dissertation study. Permission of Instructor is required.

EDUC.7591 Doctoral Dissertation/Education (Formerly 06.759) - Credits: 9
EDUC.7592 Doctoral Dissertation/Education (Formerly 04.759) - Credits: 9
EDUC.7600 Dissertation Research (Formerly 05.760) - Credits: 1

Doctoral candidates must be enrolled in this course if they have completed their required dissertation research and wish to defend their dissertation.

EDUC.7660 Continued Graduate Research (Formerly 05.766) - Credits: 6