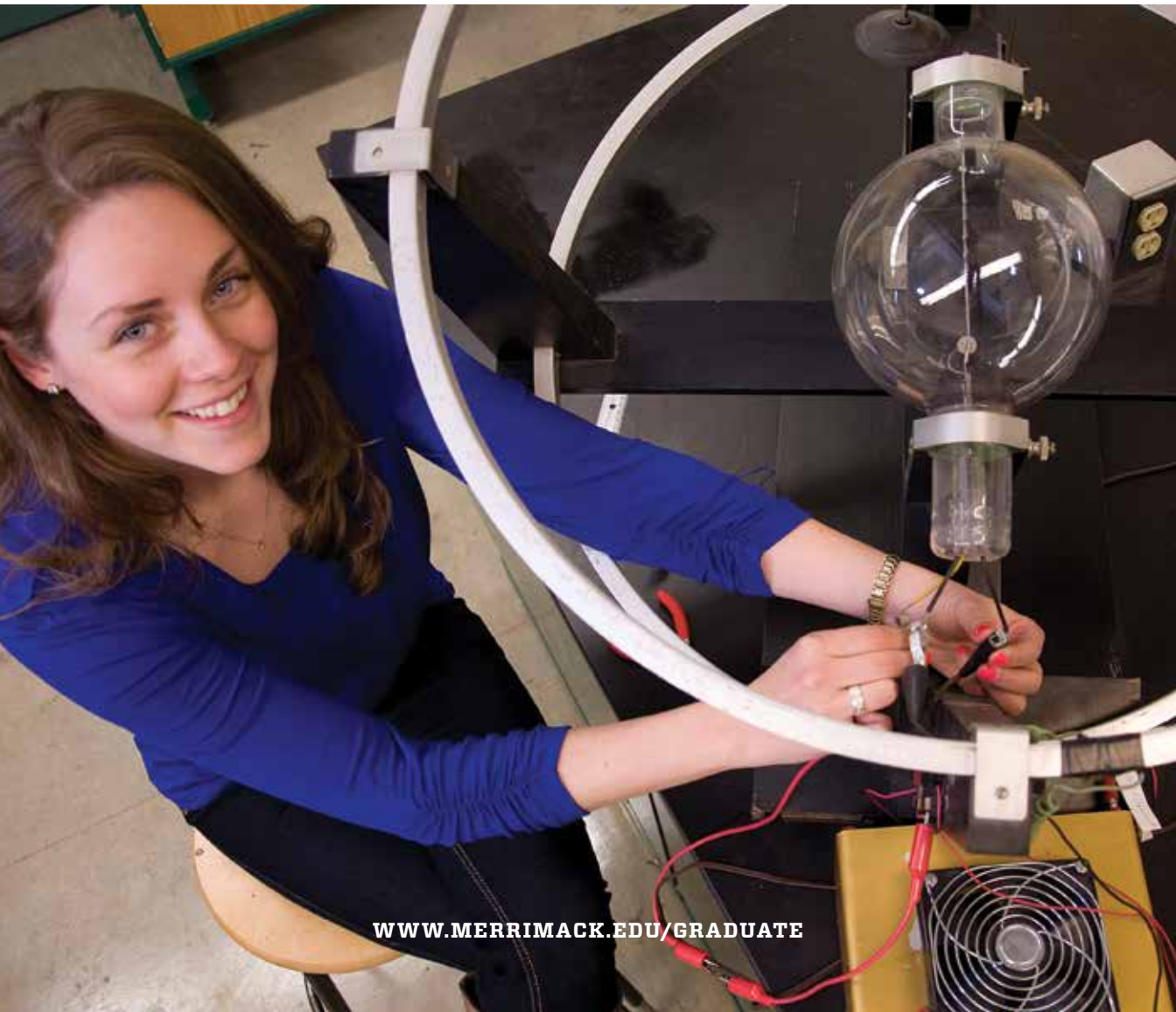
Merrimack COLLEGE

SCHOOL OF **SCIENCE & ENGINEERING**

MASTER OF SCIENCE IN

MECHANICAL ENGINEERING

The Master of Science in Mechanical Engineering is ideal for individuals who would like to work on challenging problems requiring the integration of science, engineering, and socio-economic knowledge. Merrimack's curriculum covers a broad scope of topics to prepare you to deal with the "big picture." Students learn to work and think analytically and are given the tools to oversee complicated and interdisciplinary projects.



Professional Experience

Our graduate programs are designed to help students reach their ultimate goal – whether it's improving their professional status, obtaining a promotion, or shifting into a more enriching, high growth field. Merrimack's graduate students can take advantage of a wide range of career planning resources and services to meet their needs. Students have the opportunity to participate in co-ops or internships which help them gain relevant work experience, apply their classroom skills in real-world settings, test drive different career options, and identify their own personal strengths and areas for career growth.

Graduate Assistantships

A limited number of Graduate Assistantships or Teaching Assistantships may be available on a competitive basis. Graduate students will be considered for teaching assistantships upon review of their application. Assistantships may take the form of paid hourly work and/or partial tuition scholarship.

Financial Aid

Merit based scholarships are available and will be awarded based on the overall strength of the application materials. Graduate students enrolled at least half-time (a minimum of four credits per semester) may qualify for financial aid in the form of Unsubsidized Federal Stafford Loans. For additional information, visit www.merrimack.edu/financialaid.

Career Opportunities

From conception and design to production and marketing, almost everything sold on the market today involves mechanical engineering. Mechanical engineering is a highly versatile degree allowing graduates to work in the following fields:

- robotics & prosthetics
- superconductivity
- centrifuges
- rocket propulsion systems
- air conditioning
- Materials Science

Companies who employ mechanical engineers include: General Electric, Boston Scientific, General Motors, Ford, Boeing, Pratt & Whitney, IBM, and Lockheed Martin.

Admission Requirements

- Bachelor of Science in Mechanical Engineering or Mechanical Engineering Technology from an accredited college or university
- Bachelor of Science in another engineering field (i.e. environmental engineering, chemical engineering, mechanical engineering, electrical engineering, engineering management) with required prerequisite course work or approved equivalent:
  - Machine Design
  - Dynamics and Vibration
  - Materials Science
  - Heat and Mass Transfer
- Bachelor's degree from an accredited college or university in a related field (i.e. math, physics, chemistry, biology) with required prerequisite course work or approved equivalent:
  - Calculus I- III
  - Differential Equations
  - Applied Statistics
  - Physics I and II
  - Chemistry I
  - Mechanics I and II
  - Fluid Mechanics
- Prerequisite coursework can be taken at any accredited college/university, including Merrimack College. Prerequisite coursework must be completed with a grade of B or better prior to enrolling in classes. For questions about prerequisite coursework, please contact graduate@merrimack.edu.
- Standardized test scores are not required to apply, though we encourage them from students who have taken standardized tests.
- International applicants whose native language is not English are required to submit test scores. Merrimack requires a TOEFL minimum score of 84 on the internet-based test (with a minimum score of 21 on the writing subset). For IELTS, Merrimack requires a minimum score of 6.5 (with no band below 6.0). For the Pearson Test of English Academic, Merrimack requires a minimum score of 56.

DEGREE REQUIREMENTS

The Master of Science in Mechanical Engineering combines four-credit foundational courses with electives for a total of 32 credits.

- Introduction to Systems Engineering
- Numerical Methods

and one from the following:

- Finite Elements
- Project Management
- Engineering Management
- Life Cycle Costing

ELECTIVES (20 CREDITS)

A minimum of two electives must be taken from available graduate level electives offered (see sample list below). Students may take all five electives from this list if they choose. A maximum of three electives can be chosen from the business curriculum of the Girard School of Business. A maximum of two electives may be transferred in.

- Advanced Mechanics/FEM
- Instrumentation/Robotics
- Mechanical Behavior of Polymers
- Energy Systems
- Solar and Direct Energy Conservation
- Windpower Systems
- Advanced Fluid Mechanics
- Discrete Time Signals and Systems
- Digital Architecture
- Energy, Generation, Conservation and Technology
- Sustainable Energy: the Engine of Sustainable Development
- Finite Elements

SPECIALIZATION OPTION — ENGINEERING MANAGEMENT

The Master of Mechanical Engineering program offers the option of a specialization in Engineering Management which includes three elective courses in management.

Engineering management provides graduates with both technical and managerial skills, combining a typical engineering education (technical) with key elements of a typical management or business education (managerial).

FOR QUESTIONS OR ADDITIONAL INFORMATION, PLEASE CONTACT

Office of Graduate Admission
graduate@merrimack.edu
978-837-3563

Merrimack
COLLEGE

315 Turnpike Street
North Andover, MA

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