Mechanical Engineering

The 21st century poses a number of challenges, but to the mechanical engineer, these challenges represent opportunities to make a difference for future generations. Whether it means helping to protect the environment, improve transportation, or develop sustainable energy sources, the prospects for employment and advancement remain strong. Mechanical engineering is one of the broadest disciplines in the engineering industry, and exciting positions are opening up in a wide variety of fields, from agriculture and aerospace to medical and manufacturing.

Why Mechanical Engineering at Lawrence Tech?
Keeping up with advancing technology can be crucial to your success as a mechanical engineer. Many employers consider a master’s degree essential, and Lawrence Technological University graduates are among the most sought-after engineers in the area. The Master of Science in Mechanical Engineering aims to expand your technical knowledge, improve your communication skills, and ultimately enhance your opportunities to attain administrative or managerial positions in the industry. The program also prepares you to continue your education even further, should you choose to pursue a doctoral degree.

Lawrence Tech’s MS in Mechanical Engineering features a comprehensive curriculum structured to fully prepare you for careers in such fields as combustion engines, emissions, energy systems, manufacturing processes and systems, structural analysis, powertrain systems, dynamics, vibrations, and fluid mechanics.

Developed for full-time students and professionals who are graduates of ABET-accredited undergraduate engineering programs, the MS in Mechanical Engineering is a 30-credit-hour program designed to accommodate your busy schedule. Courses are offered in the evenings, and the degree can be completed in approximately two years.

Depending on your goals, you can choose between the course work-only option, which consists of six core courses and four electives, or the thesis option, which consists of six core courses, two electives, and a thesis. This option, in which you choose a topic in conjunction with your employer, requires approval from the Mechanical Engineering Graduate Committee.

Curriculum
Your 30-credit-hour program consists of:

Course Work-Only Option
Core Courses 18
Transport Phenomena
Internal Combustion Engines
Mechanical Vibrations
Advanced Mechanics of Materials
Engineering Analysis 1
Applied Thermodynamics
Electives 12
Choose from the following areas:
Thermal/Fluid Systems
Solid Mechanics, Dynamics, and Vibration Systems
Energy Systems
Manufacturing Systems
Automotive Systems
Mechatronics Systems
Total Credit Hours 30

Thesis Option
Core Courses 18
Electives 6
Thesis 6
Total Credit Hours 30
Both options allow you to pursue a concentration from the following areas: thermal/fluid systems; solid mechanics, dynamics, and vibration systems; energy systems; manufacturing systems; automotive systems; or mechatronics systems.

**Getting Started**
Admission to Lawrence Tech’s MS in Mechanical Engineering program is competitive. Applicants must:

- Hold a Bachelor of Science in Mechanical Engineering from an ABET-accredited college or university. Individuals with an undergraduate degree in a different engineering field may also be admitted on a provisional basis.
- Have a minimum undergraduate overall GPA of 3.0.
- Provide two letters of recommendation, including one from a former professor and one from a corporate supervisor.
- Provide official transcripts of all completed college work.
- Submit a completed graduate application form.

For more information, contact Lawrence Tech’s Office of Admissions at 800.CALL.LTU or admissions@ltu.edu. For specific questions about the Master of Science in Mechanical Engineering program, call 248.204.2572.

Lawrence Technological University produces leaders with an entrepreneurial spirit and a global view. That’s why Lawrence Tech graduates are known for top job placement and higher starting salaries. Your benefits:

- Intensive leadership-driven programs that embrace theory and practice
- Faculty with current industry experience, not just book smarts
- Convenient schedules that include day, evening, weekend, and online classes
- Well-connected career placement services
- A high-tech, wireless 102-acre campus that’s commuter friendly, with recreation, housing, and meal service options

Explore nearly 100 undergraduate, master’s, and doctoral programs in Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management.