DOCTOR OF ENGINEERING IN MANUFACTURING SYSTEMS (DEMS)
A DEGREE OF DISTINCTION

Lawrence Technological University’s Doctor of Engineering in Manufacturing Systems (DEMS) program was designed for engineers who seek a high level of technical competence in a field that is key to the global economy. Where once the master’s degree was seen as the ultimate credential, an increasing number of industry leaders recognize the depth and breadth of competence afforded through preparation at the doctoral level.

Lawrence Tech’s DEMS program is unique in these aspects:

- Students are practicing engineers working full-time in the Detroit metropolitan area – the hub of one of the leading and most technologically advanced manufacturing regions in the world;

- The program requires an internship similar to the medical profession. These industry internships engage you to help solve real manufacturing systems problems;

- Each DEMS participant works closely with two advisors – an academic advisor who provides state-of-the-art knowledge about engineering principles, and an industrial advisor who provides significant industrial experience and support.

“Completing the DEMS will be the greatest investment I have ever made in my future - one I am sure will have phenomenal returns.”

Adam Aleweih
Senior Engineer, Tank Automotive and Armament Command

“In the competitive global manufacturing marketplace, the most effective engineers will need to possess skills in many competencies in order to design and produce the best quality products at the least cost. Through past coursework at LTU, I have identified and implemented many product and process improvement opportunities for my employer.”

Brian Pospy
Program Manager, FCI Automotive - North America Armament Command
A World of Opportunity

Lawrence Tech’s DEMS degree program is designed to offer you the skills and abilities to develop as a future engineering leader in manufacturing systems. Courses offer in-depth knowledge about materials, processes, systems, computer-integrated manufacturing, quality, productivity, economics, and management. The core courses hone in on specialized skills and competencies:

• Design of Experiments – How to effectively conduct research with a minimum number of experiments and obtain the maximum amount of information;

• Manufacturing Systems Simulation – How to build mathematical models for any manufacturing system and provide answers to “what-if” questions in order to optimize manufacturing system performance, even before acquiring the system;

• Design for Reliability/Design for Manufacturability – How to design to maximize reliability and manufacturing goals;

• How to model and design processes for optimization, quality, and profit;

• How to formulate successful strategic plans.

Curriculum Requirements

Number and Distribution of Credit Hours

Lawrence Tech’s DEMS requires applicants to complete the following 84 credit hours beyond their bachelor’s degree in engineering:

I. 24 credits: Foundation in Manufacturing Systems (MEMS or equivalent)

1. EME6103 Engineering Materials
2. EME6203 Manufacturing Processes
3. EME6303 Computer Integrated Manufacturing
4. EME6403 Quality Control
5. EME6503 Manufacturing Productivity
6. EME6603 Engineering Economics
7. EME6703 Manufacturing Systems
8. MGT6013 Leadership and Manufacturing

II. 18 credits: Doctor of Engineering in Manufacturing Systems (DEMS) Core

1. EME7103 Design of Experiments
2. EME7203 Manufacturing Systems Simulation
3. EME7303 Design for Reliability
4. EME7403 Design for Manufacturing
5. EME7503 Process Control
6. EME7603 Strategic Planning

III. 12 credits: Electives

IV. 30 credits: Dissertation--EME800X

“I chose the DEMS program because it offered knowledge from the very first class that I could apply to my work. Other programs I researched offered only the traditional model of solving a theoretical problem that may or may not have a real world application.”

Christopher Pung
Project Engineer, Delphi Automotive Systems

“The DEMS program demands discipline, but promotes excellence. Together with professional work experience, it lays a foundation for lifelong learning and continual professional and personal growth. My experience at LTU has taught me the importance of integrity, maintaining competitiveness, attention to detail, and increased productivity.”

Lisa Sacino
Product Engineer, DaimlerChrysler Corp.

“Lawrence Tech has impacted my life beyond what I could have imagined. I now look forward to attending class, even after a full day of work. I know that the knowledge and techniques I already have, and will obtain in the program, will propel me to greater success.”

Gary Kraus, Jr.
Process Control Engineer, Daimler Chrysler Corp.
INFORMATION REQUEST CARD

Yes, please send me information on:

❑ DEMS degree program  ❑ Other ________________________________

Please call at  ❑ Home (_____) ______________________  ❑ Work (_____) ______________________

E-mail ________________________________

Name (Mr. Ms.) ___________________________________________

Last First Middle Initial

Address ________________________________________________________________________________

City/State/Zip ______________________________________________

Employer ___________________________________________________

Previous College(s) __________________________________________

Date(s) of Graduation __________________________ Degree/Major ___________________________

High School ____________________________________________ Year of Graduation _____________

Admissions: Getting Started

Applicants must be engineering leaders who have abilities to identify society’s needs and the creativity to solve problems economically. DEMS is designed for engineers with a high level of technical competence. A master’s degree in engineering (with at least a 3.4 GPA) is preferred. Applicants must demonstrate strong potential for success based upon:

• Transcripts of engineering studies;
• Three letters of recommendation;
• Resume;
• Essay outlining applicants goal to achieve DEMS;
• Personal interview.

For more information about or to apply to Lawrence Tech’s DEMS program, contact the Office of Graduate Admissions, 248.204.3160, or email: admissions@ltu.edu.
Lawrence Tech in Brief

Lawrence Technological University, enrolling some 5,000 students, is among Michigan's largest independent universities. Nearly 50 degree programs are offered at the associate, baccalaureate, master's, and doctoral levels through Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management. LTU's full-service 115-acre campus in Southfield offers a complete range of modern academic, residential, and recreational facilities along with plenty of free parking. Extension and corporate on-site programs are also offered. Lawrence Tech was founded in 1932.

NOTICE OF NON-DISCRIMINATORY POLICY
Lawrence Technological University adheres and conforms to all federal, state, and local civil rights regulations, statutes and ordinances. No person, student, faculty, or staff member will knowingly be discriminated against relative to the above statutes. LAWRENCE TECHNOLOGICAL UNIVERSITY IS AN EQUAL OPPORTUNITY EMPLOYER.