Integrative Systems + Design
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University of Michigan
Founded in 1817
Consistently in top 10 U.S. universities
Ranked among the top 3 U.S. public universities
500,000+ alumni worldwide

College of Engineering
Top 10 in nearly every undergraduate and graduate program
381 tenured and tenured track faculty
127 research faculty
70,000 alumni

Integrative Systems + Design
Top 5 for online engineering graduate degrees
11 graduate degree programs; 1 dual degree
33 professional education programs
10 companies avg. per year for custom programs
About ISD

An academic home for comprehensive interdisciplinary degrees and professional education programs

- Faculty knowledge & experience
- Student support services
- Suite of cross-disciplinary programs
- Flexible, customized delivery
ISD Purpose & Mission

To educate leaders skilled in integrative systems + design who can think transformatively and create value in society and the workplace.

T-Shaped Experience

T-Shaped Education

T-Shaped Individual

INTEGRATIVE

MULTIDISCIPLINARY

TRANSFORMATIVE

ISD
Departments

Systems Thinking
Disciplines

Breadth
Depth
Country of Origin

ISD STUDENTS AROUND THE WORLD
(on campus and online)
OUR DEGREES
Why should I get an MEng DEGREE?

**Breadth** across disciplines

**Depth** within your specialization

**Industry Practice** action-based capstone project designed for the practical application of new knowledge
Create Value and Innovate with A Global Team on YOUR CAPSTONE PROJECT

Teams are made up of students from around the world

Work on high-impact, value-added industry projects

All MEng degree programs culminate with a capstone project

Winter 2013 8 Industry-University Teams
$2.7M First Year Savings for Company Sponsor
ISD Graduate Degrees

Programs with Online Delivery Option

- Automotive Engineering MEng
- Energy Systems Engineering MEng
- Global Automotive and Manufacturing Engineering MEng
- Manufacturing MEng
- Systems Engineering + Design MEng

- Manufacturing DEng
- Manufacturing MEng + MBA
- Design Science MS and PhD

Programs with Online Delivery Option
ISD Learning Environment

• Combines classroom and online audiences
  – Integrates working professionals with on campus graduate students
• Has a global reach
• Uses latest technology
• Facilitated by passionate, dedicated faculty and staff
Flexible and Convenient Learning

- Fits your schedule
- Available 24/7
- View without internet connection – watch lectures where you want, when you want
- Speed up playback to save time or slow down to improve comprehension
- Pause, rewind, save for later
Online Learning: Lectures

- Same as on campus
- Presented in classroom to group of students
- Made available within 24 hours
- Professor notes incorporated into slides
• Segmented lectures that include interactive content to enhance learning
Master of Engineering in Automotive Engineering
Automotive Engineering

- Emphasizes engineering fundamentals and practice with focus on recent advances in automotive engineering
- Graduates will gain strengths in:
  - Modern automotive systems
  - Engineering fundamentals
  - Enhanced interdisciplinary skills
  - Teamwork skills necessary to guide product and process development in this rapidly evolving field
Master of Science in Design Science
MASTER OF SCIENCE IN DESIGN SCIENCE

- Perfect fit for students who want to expand their career paths by meeting the growing need for the interdisciplinary design of complex products, devices, and systems
- Each student defines a custom program of study tailored to his or her background and design interests in consultation with a program advisor

Established 2015
Doctor of Philosophy in Design Science
DOCTOR OF PHILOSOPHY IN DESIGN SCIENCE

- One of the first programs to bring disciplines together to solve the world's design challenges
- Engages in the systematic pursuit of design knowledge across all fields by emphasizing the quantitative, qualitative, and analytical study of design principles and methods

Established 2006
Master of Engineering in Energy Systems Engineering
ENERGY SYSTEMS ENGINEERING

• Developed to prepare engineers to design and implement energy systems for innovative applications by acquiring
  • Strengths in their engineering discipline
  • Breadth in relevant engineering and science
  • Understanding of the critical role of the environment in energy systems, including economic factors
• Covers basic management issues
• Enables students to develop their ability to lead project teams
Master of Engineering in Global Automotive and Manufacturing Engineering
GLOBAL AUTOMOTIVE AND MANUFACTURING ENGINEERING

The Master of Engineering in Global Automotive and Manufacturing Engineering prepares students to work virtually and collaboratively and develop the competency to build and lead global teams. It offers global content, integrates core elements of both automotive design and manufacturing, and provides students with an opportunity to develop depth in an engineering specialty as well as breadth in engineering and knowledge of basic management issues.
Master of Engineering in Manufacturing Engineering

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Doctor of Engineering in Manufacturing
MANUFACTURING ENGINEERING

• Motivated by the need for technical leaders in the manufacturing environment who have
  • Depth in their own engineering disciplines
  • Breadth across engineering disciplines
  • Knowledge of basic management issues
  • Ability to lead project teams
• Mixture of Engineering and Business Courses
• Dual-degree option with MBA available (not online)
• Doctoral degree available (not online)
• Tauber Institute collaboration option available
MANUFACTURING ENGINEERING

Master of Engineering in Manufacturing (MEng)
isd.engin.umich.edu/degree-programs/manufacturing-engineering/

Joint MBA/MEng in Manufacturing (with Ross School of Business)
isd.engin.umich.edu/degree-programs/manufacturing-engineering-mba/

Sequential 5-Year BSE/MEng in Manufacturing (SUGS)
isd.engin.umich.edu/degree-programs/manufacturing-engineering-sgus/

Doctor of Engineering in Manufacturing
isd.engin.umich.edu/degree-programs/manufacturing-engineering-doctorate/
Master of Engineering in Systems Engineering + Design
Program Overview

SYSTEMS ENGINEERING + DESIGN

• Objective is to prepare engineers with knowledge and capabilities in the analysis, design, and operation of complex engineered systems
• Students will develop:
  • A broad systems engineering perspective
  • Depth in an engineering discipline
  • Breadth across disciplines

Established 2014
Any Questions?
Deadlines to Apply!

- **November 1**\(^{st}\) is the deadline for Online Applications Winter 2019
- **December 15**\(^{th}\) for Design Science Applications Only
- **January 15**\(^{th}\) for On-Campus Applications Fall 2019
Next Steps

We encourage you to learn more about Integrative Systems + Design by visiting our website: isd.engin.umich.edu.

For questions, please contact:
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Visit us online at isd.engin.umich.edu