

Courses

Contact information

IOWA STATE UNIVERSITY

Department of Industrial and
Manufacturing Systems Engineering

Intro/Core

(Required first year)

- IE 563. Engineering Management Theory
- IE 565. Systems Engineering & Analysis

Core

(Required)

- IE 564. Decision Analysis in System Design
- IE 570. Systems Engineering & Project Management
- IE 585. Requirements Engineering

Electives*

(Select 5 courses/15 credits)

Manufacturing Courses

- IE 448. Manufacturing Systems Engineering
- IE 541. Inventory Control & Production Planning
- IE 561. Continuous Quality Improvement of Process
- IE 572. Design & Evaluation of Human Computer Interaction
- IE 577. Human Factors

Engineering Courses

- IE 452. Introduction to Systems Engineering
- IE 503. Introduction to Sustainable Production Systems
- IE 560. Engineering Risk Analysis
- IE 582. Enterprise Modeling and Integration
- ME 525. Optimization Methods for Complex Designs
- Aer E 554. Methauristic Optimization & Modelling for Complex System Design
- Aer E 563. Intro to Multidisciplinary Design Optimization
- Aer E 568. Large-Scale Complex Engineered Systems

Software Courses

- IE 581. e-Commerce Systems Engineering

One Graduate-Level Course of Your Choice

* Elective courses are subject to change by IMSE Department



Systems Engineering

www.imse.iastate.edu

- MASTER OF ENGINEERING -

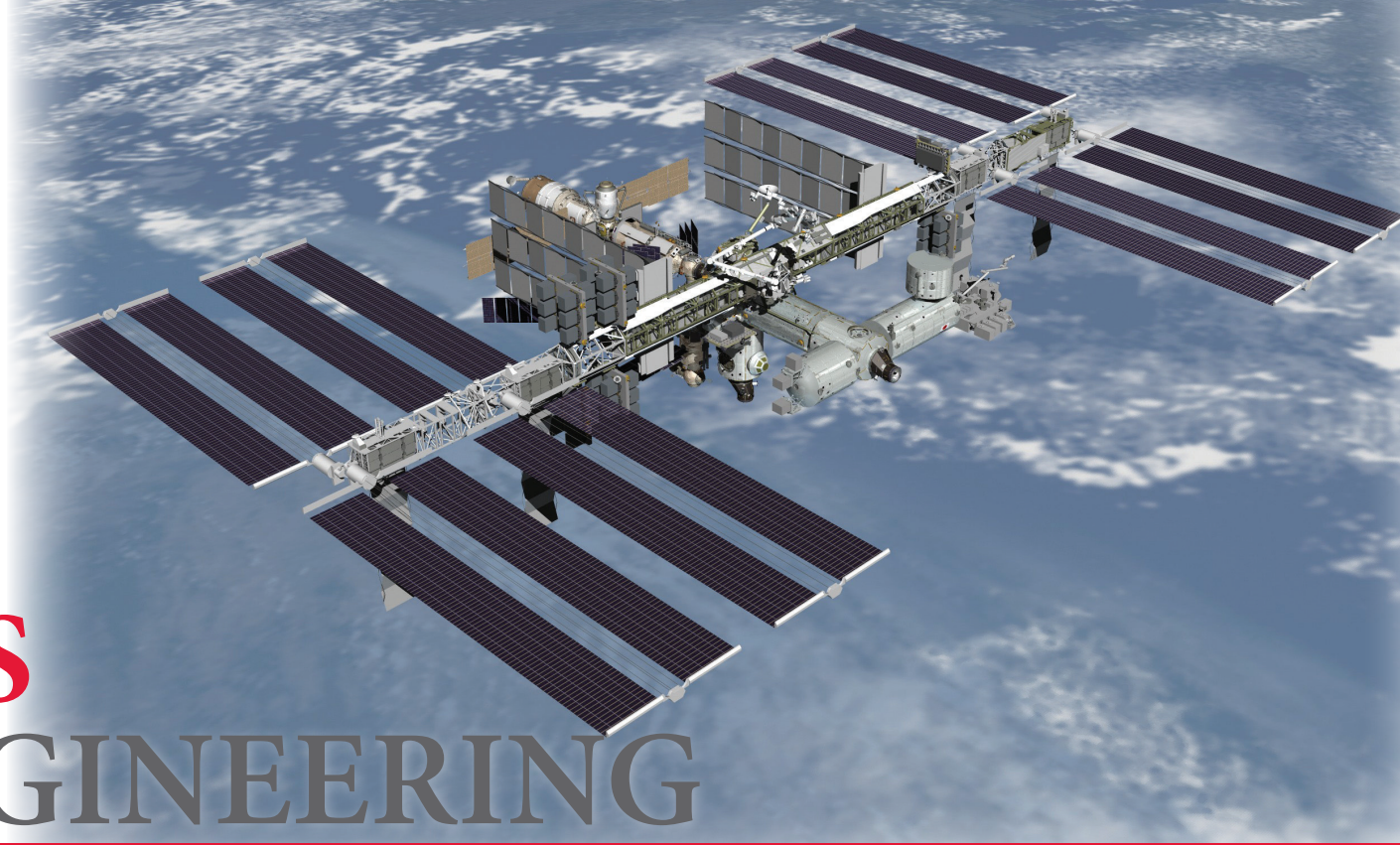
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The International Council of Systems Engineering (INCOSE) defines Systems Engineering as follows:

Systems Engineering (SE) is a design and management discipline that is very useful in the designing and building of large or complex systems. It is a discipline that was conceived of and introduced by the U.S. Government and was developed to counteract the difficulties encountered in the engineering of increasingly large, complex, and interdisciplinary technological systems.



SYSTEMS ENGINEERING

This Master of Engineering in Systems Engineering program is designed to enable engineers to develop the analytical abilities needed to design and manage complex systems. The intent of this program is to extend the ability of engineers to work across disciplinary boundaries and to develop their management and leadership capabilities for today's work environment. Iowa State University offers both online and on-campus courses, so you can fulfill your professional obligations and enhance your educational credentials.

Complete your degree for under \$22,000*

**expected total cost of all courses required for the program as of 2017.*

"The Systems Engineering program has given me a new perspective of the things that surround me. I have learned to critically analyze problems and have become a better decision maker"

- Silvia Quintero, graduate student
in systems engineering

Admission requirements

Unrestricted admission requires (1) a 3.0 grade point average from an ABET accredited undergraduate engineering program, (2) two years of engineering experience or current full-time employment as an engineer, (3) calculus, engineering statistics, and engineering economy. A GRE is not required.

Applicants for admission to the Systems Engineering program apply through the Graduate College at ISU.

Each applicant must submit:

- Application and application fee
- Official academic transcript
- Three letters of recommendation
- Resume

Students enrolling full-time into the program must have two years of work experience as an engineer. Students enrolling part-time into the program must be currently employed as an engineer.

Application should be submitted as early as possible before the beginning of the term for which admission is sought. Applicants may apply for admission to the Systems Engineering program online through the Graduate College website at:

www.admissions.iastate.edu/apply/graduate.php