

Online Healthcare Systems Engineering

Master of Science and Graduate Certificate Tracks

INDUSTRIAL ENGINEERING AND MANAGEMENT SYSTEMS ucf.edu/online/hse



Help healthcare organizations spearhead systemic change for efficient patient care.

The future of healthcare will need leaders who dream big and are passionate about improving patient care and reducing overall cost. Our programs provide individuals the opportunity to gain the specialized skills needed to foster operational change within healthcare organizations. These programs can help students realize their leadership potential, fuel their passion for healthcare innovation and provide them with the necessary tools needed to make systemic change a reality.

What is the healthcare systems engineering program?

Designed to train future healthcare professionals to implement, manage and introduce systemic changes, the healthcare systems engineering program provides the tools to improve patient care while enhancing the utility of organizational resources. Expand your skills by choosing from either the 15-credit Graduate Certificate or 30-credit Master of Science degree. Students from the certificate track can continue directly into the MS track.

In addition, MS track students will also earn their certificate upon graduation. An accelerated MS option is available for international students (F-1 visa) and students with an engineering background. This accelerated pathway is not available online, will be completed in one year and only admits in the fall.

Potential career opportunities include:

Healthcare Management Engineer, Operational Excellence Project Manager, Systems Redesign Consultant, Lean Specialist, Process Improvement Consultant, Continuous Improvement Specialist and Healthcare Analyst

Highlights

- Three available options
 - Master of Science traditional 100%
 Online, complete in as little as 2
 years
 - Master of Science accelerated campus base, complete in 1 year
 - · Graduate Certificate 100% Online, complete in as little as 1 year
- Seven-week classes
- No GRE requirement

- Traditional and Graduate Certificate admission in Fall and Spring
- Accelerated pathway admits only in Fall
- Designed for working professionals
- High-demand/high-wage jobs
- Support from start to finish by coaches in the UCF Online Connect Center

Foster change by implementing systems engineering principles into the operations of healthcare organizations.

Our graduate certificate and master's curriculum are tailor-made to meet the needs of a broad range of working professionals.

Curriculum Overview

The master's curriculum consists of ten, three-credit hour required courses. MS track students will earn their certificate upon completion of their degree. Graduate certificate students will be required to take three, three-credit hour courses along with a choice of two, three-hour elective courses. Credits earned from the HSE graduate certificate can be applied directly towards earning a master's in the HSE track.

Certificate Required Courses

CERTIFICATE CURRICULUM

■ Elective Option One - Choose One

■ Elective Option Two - Choose One

HSC 6636	Issues and Trends in the Health Profession
EIN 5115	Engineering MIS Control Systems in Healthcare
ESI 6551	Systems Architecture
EIN 6358	Engineering Economic Analysis in Health Systems
ESI 6609	Industrial Engineering Analytics in Healthcare
ESI 6252C	Managing Engineering Risk in Health Systems
ESI 6251C	Engineering Quality in Health Systems
EIN 6893	Healthcare Systems Engineering Capstone
ESI 5250	Engineering Statistics in Health Systems
ESI 5526C	Discrete Event Simulation in Health Systems

By graduation, students will be able to help healthcare organizations to:

- Conduct analyses of large-scale social and ecological systems across the healthcare sector
- Assess and mitigate risks throughout organizational processes and relationships
- Analyze risks to individual and public health impacted by issues in the healthcare system
- Bring evidence-based thinking and analysis to process and system change
- Develop and manage a quality management system across an organizational setting
- Plan and conduct change initiatives that directly impact quality and costs

- Design and build detailed computer simulations of healthcare organizations and health technology assessments
- Adapt information systems to improve management planning and control



How do I apply?

Admission Requirements

In addition to the university's general requirements, applicants must provide:

- One official transcript in a sealed envelope
- Resume or curriculum vita
- Goal statement
- Two letters of recommendation
- For international students: Please contact the program directly to discuss admission requirements.
 See go.ucf.edu/hse-international for more information.

For detailed admissions requirements or to learn more about the program visit **ucf.edu/online/hse** to request additional information.

Contact

Enrollment Coach 855-903-8576 online@ucf.edu

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UNIVERSITY OF CENTRAL FLORIDA College of Engineering and Computer Science Industrial Engineering and Management Systems Healthcare Systems Engineering Track

