



# **HEALTHCARE SYSTEMS ENGINEERING**

**Master of Science, Industrial Engineering**

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UNIVERSITY OF CENTRAL FLORIDA • ORLANDO, FL





## DESIGN THE **FUTURE** OF PATIENT CARE

Prepare yourself for a career helping health care organizations build an ecosystem of successful project delivery and effective decision-making with an online Healthcare Systems Engineering degree from UCF's College of Engineering and Computer Science. An online Healthcare Systems Engineering degree offers students the quantitative analysis, management and systems engineering tools required to tackle the challenges of a changing health care industry. Students will be distinctly positioned to enhance the systems capability of the health care sector and improve patients' lives. Classes are offered for seven-week terms with students enrolled in one class per term. Following that schedule, UCF's online Healthcare Systems Engineering program can be completed in just two years.



## Program highlights

**ONLY FULLY ONLINE MASTER'S PROGRAM IN  
HEALTH CARE SYSTEMS ENGINEERING IN THE U.S.**



**TWO-YEAR DEGREE**



**SEVEN-WEEK CLASSES**



**ADMISSIONS IN FALL AND SPRING**



**NO GRE REQUIREMENT**



**EXPERIENCE IN THE HEALTH CARE FIELD  
NOT REQUIRED**

### STUDENT TESTIMONIAL

*"I can say without a doubt in my mind that the education at UCF is first class. I have been commended on my knowledge various times, and for that, I have my dedicated teachers to thank."*

**- ETHLING HERNANDEZ**

# Why choose UCF?

## Scholarship

Many online Healthcare Systems Engineering students qualify for financial assistance and support.

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**To explore all options for funding your graduate education, visit UCF's Funding Your Graduate Degree website.**

<http://funding.graduate.ucf.edu>

## ACCESS. INNOVATION. IMPACT.

UCF works with top curriculum curators and designers to create online courses and programs — such as the online Healthcare Systems Engineering program — that provide the best learning experience possible for both our traditional and nontraditional students. The Princeton Review and *Forbes* consistently rank UCF's educational offerings as some of the best in the nation in terms of overall educational value.

Aside from UCF's online Healthcare Systems Engineering program, UCF offers a range of other online degrees, including bachelor's degrees, graduate degrees, graduate certificates, undergraduate minors, undergraduate certificates and 2+2 baccalaureate completion programs. For those who are driven to advance their careers and pursue a high-quality, online education, UCF is the right choice.

UCF specializes in providing high-quality distance learning options for talented students and working professionals who are unable to attend our Orlando campus or our 10 regional locations.



# Why Healthcare Systems Engineering?

The future of health care requires individuals who dream big and have a passion for implementing, managing and refining systematic changes to improve patient care and save organizational resources.

## OPPORTUNITIES FOR CHANGE

U.S. health care is in a state of flux, and many hospitals are struggling to adapt. New technologies have radically enhanced the clinical, medical and biological sciences, but the health care industry's organizational practices and operational systems are lagging behind.

Never before has there been such a pressing need — or better opportunity — for fully trained and accredited health care systems engineers with master's degrees. Employment opportunities for trained engineers will increase over the coming decades, and individuals with the appropriate engineering skills and the drive to succeed will receive meaningful rewards.



## Why is the HSE degree at UCF unique?

**W**hile other schools offer two-year master's degrees in systems engineering, UCF is one of the only major universities in the entire country to offer a health care engineering master's program that is completely online, making it ideal for working professionals — especially nurses, engineers and physicians — who are already established in the industry and are looking to advance into leadership roles.



With seven-week classes and no GRE requirement, this program offers students the opportunity to pursue an education without neglecting their current responsibilities. Additionally, previous health care experience is not required, though a previous degree related to engineering or health care management is recommended.

# Who should choose the program?

Due to its remote nature, the online Healthcare Systems Engineering program is ideal for health care professionals, such as physicians and nurses, who feel the need to transition into health care administration or executive leadership roles to restructure the organizational aspects of the industry.

## LEADERS OF THE CHANGE IN HEALTH CARE

The online Healthcare Systems Engineering program is designed for students who are eager to make a positive impact on the health care industry's organizational systems and processes. The perfect candidate for this program is an individual who has some understanding of or experience in the health care industry or a background in systems engineering, even though a health care background is not required.

The online Healthcare Systems Engineering program is also perfect for industrial, biomedical and mechanical engineers, who typically make up as much as **50 percent** of online Healthcare Systems Engineering program enrollments. UCF's online Healthcare Systems Engineering program offers these engineers the opportunity to transition into an industry that is currently experiencing incredible growth. Pre-med students seeking a better understanding of the industry and undergraduates keen on beginning a career will also find UCF's online Healthcare Systems Engineering program attractive.





## Curriculum overview

**HSC 6636:** Issues in the Health Professions

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**EIN 6551:** Systems Engineering

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**EIN 6357:** Advanced Engineering Economics

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**EIN 5117:** Management Information Systems

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**ESI 5359:** Risk Assessment and Management

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**ESI 5219:** Engineering Statistics

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**ESI 5531:** Discrete Systems Simulation

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**ESI 6609:** Industrial Engineering Analytics in Health Care

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**ESI 6224:** Quality Management

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**EIN 5140:** Project Engineering (Capstone)



# Career opportunities

**D**emand is extremely high for health care engineers. For instance, regional employer demand for individuals with health care systems engineering training increased by an incredible **141 percent** from 2010 to 2011. From 2011 to 2012, total employer demand increased by 40 percent. The online Healthcare Systems Engineering program focuses heavily on optimization techniques and system analytics, providing students with highly marketable skills. For example, more than 42 percent of the job postings for health care systems engineers require skills related to “optimization,” “business processes” and “process design.”

Individuals with a health care systems engineering degree often go on to work in respected consulting positions. For instance, one study noted that nearly 5 percent of regional job postings related to health care systems engineering included the words “specialist” or “consultant.” As noted, there is a pressing need for trained health care systems engineers, and an online Healthcare Systems Engineering degree can help an enterprising professional establish a successful administrative and leadership career within the health care industry.

## Career opportunities include:

<b>Health Systems Engineer</b>	<b>Process Improvement Engineer</b>
<b>Hospital Process Engineer</b>	<b>Quality Engineer</b>
<b>Industrial Health Care Engineer</b>	<b>Senior Control Engineer</b>
<b>Performance Improvement Engineer</b>	<b>Supplier Quality Engineer</b>

# Accreditation

## SACSCOC

The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) recognized the University of Central Florida, granting accreditation to award degrees at the associate's, baccalaureate, master's, specialist and doctoral levels. UCF's Academic Program Quality unit within the Office of Academic Affairs can also provide additional information concerning the university's SACSCOC accreditation.



# Online support

## GET CONNECTED

UCF Online students work hard to achieve their career and educational goals. At the UCF Online Connect Center, we strive to help students realize their potential by providing them with high-quality information and technology guidance.

UCF Online students have access to a wide array of digital resources and learning tools. No matter where they are, students are able to instantly access all of the resources they need to succeed with their online course-work. The UCF Online Connect Center is here to help students excel during their time at UCF.



**With 20 years of innovation in educational technology, UCF provides high-quality distance learning options for those who cannot attend classes at the main Orlando campus or our 12 Central Florida regional locations. Online courses are designed to provide the highest-quality learning experience for both traditional and nontraditional students.**

# Ready to apply?

## APPLICATION CHECKLIST:

Applicants to the online Healthcare Systems Engineering program, in addition to providing the documents listed by the general admission requirements, must provide the following:



- ☐ An official transcript (sealed envelope) for each college or university that you previously attended.
- ☐ A résumé of at least one page or, at most, two pages in length.
- ☐ Students who attend a college or university outside of the U.S. must provide course-by-course evaluations. The only evaluations UCF recognizes and accepts are from Josef Silny & Associated, Inc. or World Education Services (WES).
- ☐ A goal statement, noting clearly how the online Healthcare Systems Engineering program will benefit you as a working professional. The statement should be at least one page in length, double-spaced, 12-point font.

## Deadlines:

Fall • **June 15, 2017**

Spring • **Nov. 15, 2017**

## FOR MORE INFORMATION:

-  [UCF.EDU/ONLINE](http://UCF.EDU/ONLINE)
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