

# ACCELERATED HEALTHCARE SYSTEMS ENGINEERING, M.S.

## Program Details

Department: Seaver College of Science and Engineering  
 Modality: Hybrid  
 Concentrations: none  
 Semester Hours: 30 total  
 Total Years: 1

The Accelerated Master's Program in Healthcare Systems Engineering is a one-year program designed to allow LMU students to complete the master's degree in one year immediately following a bachelor's degree. Students in the Accelerated Master's Program complete one graduate-level course (HSEG 515) in the Spring of the senior year and receive both undergraduate and graduate credit.

## Objectives and Outcomes of Healthcare Systems Engineering Master's Program

1. Apply systems engineering, lean management, and project management principles to design, analyze, and improve healthcare delivery processes for efficiency, safety, and quality.
2. Integrate technical, operational, clinical, and data analytics knowledge to develop innovative, systems-based solutions across diverse healthcare environments.
3. Communicate complex technical and operational analyses through clear, concise, and persuasive presentations.
4. Collaborate effectively with multidisciplinary teams and industry partners to lead ethically responsible, data-driven healthcare improvement initiatives.
5. Demonstrate professional competence and ethical judgment through applied learning experiences, including a capstone project addressing real-world healthcare system challenges.

### Online and In-Person Courses

Courses for the Master's in Healthcare Systems Engineering are a combination of synchronous on-line and in-person sessions and field trips.

Capstone projects may require in-person activities and observations.

## Accelerated Master's Program for LMU Undergraduate Students

### Admission Requirements

- Current LMU student pursuing undergraduate degree and with senior standing
- Spring Semester Graduates:
  - See program website for application deadlines
  - Enroll in HSEG 515 in the spring semester of your senior year
  - Begin graduate studies in summer session II following graduation
- Fall Semester Graduates:
  - See program website for application deadlines
  - Successfully complete HSEG 515 in the spring semester prior to your graduation

- Begin graduate studies in either the spring semester or summer session II following your graduation
- Application to Graduate Admission. To apply online, visit <http://graduate.lmu.edu>
- Undergraduate GPA of at least 3.0 recommended. Lower GPA will be considered on a case-by-case basis
- Essay demonstrating passion for a healthcare career
- One letter of recommendation from an LMU professor

## Admission Policies

**Deferral Policy:** Students admitted into this graduate program may defer their admission offer for up to one year from the initial admission entry term. A formal request should be made by the student by contacting [SeaverGraduateAdmission@lmu.edu](mailto:SeaverGraduateAdmission@lmu.edu). Requests to defer past the one-year mark from the initial admission entry term are reviewed upon request, and the decision is left to the discretion of the Admission Committee.

**Appeal Process:** The appeal process should be sought after once an admission decision has been provided, and the applicant would like to be reconsidered. To explore the appeal process, the applicant should be prepared to present new evidence of admissibility via new/additional/updated documentation aside from what was presented during the initial admission submission. Such documentation can be in the form of final grades, providing proof of updated relevant course completion and grade/s, etc.

In addition to the documents provided, the student will be required to submit a short essay stating why they are interested in having their application be reconsidered and explain how the new/updated documentation provided shows improvement for admission reconsideration. The admissions team will review the submission of all new documentation and provide the applicant with an updated decision. To request more information about this process, candidates interested in this option may contact [SeaverGraduateAdmission@lmu.edu](mailto:SeaverGraduateAdmission@lmu.edu).

## Graduation Requirements

30 units. One course (HSEG 515 Healthcare Delivery Systems) must be taken in the senior year as an undergraduate elective, plus 9 HSE courses. Other 500-level courses taken as an undergraduate may not be repeated for graduate credit.

Code	Title	Semester Hours
<b>Core Courses</b>		
SYEG 510	Project Management	3
HSEG 515	Healthcare Delivery Systems (taken as an undergraduate elective in the Senior year included in the undergraduate tuition)	3
HSEG 535	Lean Healthcare	3
HSEG 605	Healthcare Systems Engineering	3
HSEG 625	Patient Safety and Quality Systems	3
HSEG 635	Advanced Lean Management of Healthcare	3
HSEG 665	Population Health and Big Data Analytics	3
HSEG 675	Healthcare Enterprise Informatics and Electronic Health Records	3
HSEG 695	Preparation for Capstone Project	0
HSEG 696	Project in Healthcare <sup>1</sup>	3

<b>Subtotal</b>	27
<b>Elective Course</b>	
Select one of the following:	3
HSEG 545 Healthcare Seminar <sup>2</sup>	
HSEG 655 Medical Devices and Integrated Systems <sup>2</sup>	
HSEG 565 Artificial Intelligence and Emerging Technology in Healthcare	
SYEG 668 Systems Engineering Modeling and Analysis <sup>2</sup>	
HSEG 699 Independent Studies <sup>2,3</sup>	
<b>Total Semester Hours</b>	<b>30</b>

<sup>1</sup> The Capstone Project HSEG 696 Project in Healthcare should be taken in the student's final Spring or Fall semester of the program.

<sup>2</sup> In any given year, between two and four of these elective courses will be offered depending on the number of students and their interests.

<sup>3</sup> HSEG 699 Independent Studies must be pre-approved by the Advisor.