

HEALTHCARE SYSTEMS ENGINEERING (CERT)

This program was approved for students entering the university in the Summer 2025-Spring 2026 catalog year. For more information about catalog year, go to Catalog Year Information (<https://catalog.louisville.edu/undergraduate/university-wide-unit-specific-policies/catalog-year/>).

Graduate Certificate in Healthcare Systems Engineering

Unit: Speed School of Engineering (<https://engineering.louisville.edu/>) (GS)

Department: Industrial and Systems Engineering (<https://engineering.louisville.edu/academics/departments/industrial/>)

Academic Plan Code(s): HSENCGR, HSENCGR0

Program Information

This program can be completed 100% online. (<https://engineering.louisville.edu/academics/graduate-programs/cert-healthcare-systems-engr/>)

The graduate certificate in Healthcare Systems Engineering will provide a focused study of industrial and systems engineering skills and methods as applied to healthcare delivery systems and processes. Students who complete the certificate program will acquire skills in healthcare engineering, quality of care, patient safety, health IT, clinician support, healthcare analytics, and data visualization. The certificate program offers the field of industrial and systems engineering a focused program of study in the healthcare domain while also providing healthcare professionals an opportunity to acquire industrial and systems engineering skills as applied to health care delivery and process improvement.

This is a nine (9) credit hour certificate program.

Admission Requirements

The admission standards for the Graduate Certificate program in Healthcare Systems Engineering are as follows:

1. All admission applications for the Graduate Certificate program shall include the following:

- a. Completed graduate application (<http://louisville.edu/graduate/futurestudents/apply-materials/application/>) for the Graduate School,
- b. Application fee,
- c. Official transcript certifying at least a bachelor's degree. All transcripts not in English must be certified as authentic and translated verbatim into English.

2. The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution

3. The successful applicant will typically have an undergraduate grade point average of 2.75 or above (on a 4.00 scale). Applicants with a GPA between 2.5 and 2.75 may be considered for admission and will be required to submit additional application materials, including recommendation letters, a resume or personal statement, and prior

academic performance in specific classes. Such applicants may be considered for conditional admission, and we may require that specific academic standards be met in the first semester to achieve admission in good standing.

4. Applicants are required to have completed Calculus I or higher. To find out whether there is a need for remedial work and discuss available options at UofL, consult with the director or admissions consultant.

GRE scores are not required.

Students whose native language is not English or whose degree is from a non-US accredited institution are required to demonstrate proficiency in the English language as specified by the admission policies of the Speed School of Engineering.

Students can enroll in a Graduate Certificate program either as a non-degree seeking student or as a student simultaneously enrolled in a graduate degree program and this graduate certificate program. Students who wish to earn a graduate degree must meet all admission criteria for the degree program.

Certificate Requirements Program Requirements

A total of nine (9) credit hours are required.

Code	Title	Hours
ISE 682	Quality of Care and Patient Safety	3
ISE 684	Health IT and Clinician Support	3
ISE 662	Predictive Analytics for Decision Making I	3
Minimum Total Hours		9