

[Emphasis - Chemical Engineering](#)

- [Ph.D. in Engineering Science](#)
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Ph.D. in Engineering Science Description

The Ph.D. in engineering science is offered in a number of emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience, computer science, electrical engineering, electromagnetics, environmental engineering, geology, geological engineering, hydrology, mechanical engineering, and material science and engineering.

Minimum Total Credit Hours: 54

Course Requirements

A student must complete the requirements for one of the emphasis areas. All doctoral programs require completion of a comprehensive examination, dissertation prospectus, and a dissertation. See the department chair or adviser for specific requirements for an emphasis area.

Emphasis - Chemical Engineering Description

A Ph.D. in engineering science with emphasis in chemical engineering prepares graduates to apply chemical engineering science (transport phenomena, thermodynamics, chemical reaction engineering, and applied mathematics). It enables them to independently execute complex projects and pursue successful careers in engineering, medicine, law, professional education, public policy, the military, management, and sales. It further equips them with the experience to conduct research—generating and disseminating new knowledge.

Course Requirements

The Ph.D. with an emphasis in chemical engineering requires no specific courses beyond those specified for the M.S. degree. A total of 90 credit hours are required, and specific course work is stipulated by the candidate's advisory committee. Each student is required to conduct a semester-long investigation of a research or design problem in an area other than his or her dissertation area.

Other Academic Requirements

Before undertaking the dissertation, the student must pass three three-hour written comprehensives and an oral examination.

