

CHEMICAL ENGINEERING, PH.D.

Learning Outcomes

- Students will acquire and demonstrate expertise in selected core subject areas of chemical engineering: chemical process analysis, thermodynamics, fluid flow analysis, mass transfer and reactor design by earning a grade of B or better.
- Students will acquire a working knowledge of various areas of chemical science and technology and in allied fields, including other engineering disciplines, the sciences, and mathematics. They will successfully complete three elective courses; these courses will be approved by their advisors and the Graduate Director.
- Students will gain exposure to advances at the frontiers of knowledge in chemical science and technology. All PhD students are required to attend periodic departmental seminars by registering for a one-credit seminar class each semester.
- Students will acquire the ability to identify pertinent research problems, to formulate and execute a research plan, to generate and analyze original research results, and to communicate those results through oral presentations and written publications submitted to refereed archival journals.
- Students will acquire the basic skills needed for life-long learning and professional development. The ability to perform research and apply it to practical use is demonstrated by successful completion of a doctoral research project and related dissertation. Writing an article suitable for publication in peer-reviewed journals is a necessary skill, which students demonstrate by having three such articles accepted for publication prior to the granting of the PhD. A Graduate Symposium is held each year by the Department at which students present their research results to the Department Industrial Advisory Board.