

PhD in Chemical Engineering

Admission Requirements

The department reviews each applicant on an individual basis. Complete transcripts of all undergraduate and any graduate work must be submitted. In addition to meeting the Graduate College minimum requirements, applicants must meet the following program requirements:

- **Baccalaureate Field** Engineering or natural science.
- **Grade Point Average** At least 3.00/4.00 for the final 60 semester hours (90 quarter hours) of undergraduate study, for the master's program, and at least 3.50 for the doctoral program. In exceptional cases, applicants with averages below 3.00 but above 2.75 may be admitted on limited standing if they show evidence of substantial ability to complete the program successfully.
- **Test Required** None
- **Minimum English Competency Test Score**
 - **TOEFL iBT** 80, with subscores of Reading 19, Listening 17, Speaking 20, and Writing 21, **OR**,
 - **IELTS Academic** 6.5, with 6.0 in each of the four subscores, **OR**,
 - **PTE-Academic** 54, with subscores of Reading 51, Listening 47, Speaking 53, and Writing 56.
- **Letters of Recommendation** Three required.
- **Personal Statement** Required.

Degree Requirements

In addition to meeting the minimum requirements of the Graduate College, students must also meet the following program requirements:

Entering with BS in Chemical Engineering

- **Minimum Semester Hours Required** 108 from the baccalaureate.
- **Coursework** At least 24 semester hours must be at the 500 level.

Code	Title	Hours
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Required Core Courses (6 courses, 24 hours)

CHE 501 or CHE 502	Advanced Thermodynamics Fluid Phase Equilibria	
CHE 510 or CHE 511 or CHE 512	Separation Processes Advanced Mass Transfer Microhydrodynamics, Diffusion and Membrane Transport	
CHE 520 CHE 527	Transport Phenomena Advanced Chemical Reaction Engineering	
CHE 531 & CHE 545	Numerical Methods in Chemical Engineering and Mathematical Methods in Chemical Engineering	

Electives (6 courses, 24 hours)

All courses at the 400 level or above.		
CHE 595	Seminar in Chemical Engineering Research (one semester hour each term, to a maximum of 4 hours)	

Research Credit

CHE 599	Ph.D. Thesis Preparation (60 semester hours)
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Examinations

- *Qualifying Examination*: Not required.
- *Preliminary (Research) Examination*: Required; oral.

Dissertation Required.

- **Other Requirements** Each student must present a seminar based on his or her research in CHE 595 at least once.

Entering with MS in Chemical Engineering

- **Minimum Semester Hours Required** 76 from the MS. 32 semester hours are given for the MS.
- **Coursework**

Code	Title	Hours
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Courses (6 courses, 24 hours including CHE 595)

Seminar in Chemical Engineering Research (1 semester hour each term, to a maximum of 4 hours). Courses in the core requirement above, not completed in the prior degree, must be taken. No course from prior degree may be repeated. At least 24 semester hours must be taken (or given credit from prior degree) at the 500 level. Electives, if needed, must be 400 level or above.

Research Credit

CHE 599	Ph.D. Thesis Preparation (52 semester hours)
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Examinations

- *Qualifying Examination*: Not required.
- *Preliminary (Research) Examination*: Required; oral.

Dissertation Required.

- **Other Requirements** Each student must present a seminar based on his or her research in CHE 595 at least once.