

CHEMISTRY, PH.D.

The Department of Chemistry and Biochemistry offers programs leading to the Ph.D. degree, with concentrations in analytical, biological, inorganic, organic, and physical chemistry. The Ph.D. program is flexible and is designed to maximize research opportunities and to encourage interdisciplinary research. Master of Science degrees in the same areas of concentration are awarded. The Master of Arts in Teaching in Science (Chemistry and Biochemistry Option) and the Interdisciplinary Master of Arts in Science (Chemistry and Biochemistry Option) are offered in cooperation with the College of Education.

On average, the Ph.D. degree is earned in less than five years. Thirty tenure-track and research faculty teach and supervise the research of the department's approximately 130 graduate students and 30 postdoctoral fellows. Each year, around 30 new students are added to the program. Generally, 15-20 Ph.D. and four M.S. degrees are awarded per year.

The Ph.D. and M.S. degree programs prepare students for careers in industry, government, and academic settings.

Learning Outcomes

1. Doctoral students in Chemistry will identify and conduct original research.
2. Doctoral students in Chemistry will effectively communicate in their field of study through oral and written components.
3. Doctoral students in Chemistry will critically and creatively solve problems in their field of study.
4. Doctoral students in Chemistry will conduct ethical research in a responsible manner.
5. Doctoral students in Chemistry will demonstrate attributes of professional development consistent with expectations within their field of study.

Admissions Requirements

An applicant must have a baccalaureate degree or its equivalent from an accredited college or university. The applicant's academic record must indicate adequate preparation for graduate study in the Department of Chemistry and Biochemistry. Generally, to be considered for admission, a student should have a minimum grade point average of 3.00 in the sciences on a 4.00 scale. Graduate Record Examination (GRE) scores are not required for admission but are welcomed as supporting information and for additional award opportunities. These guidelines are flexible, and slight deficiencies in one area can be compensated by strengths in another. In addition, applicants whose native language is not English must obtain a minimum score of 88 on the TOEFL exam or 7 on the IELTS exam.

Degree Requirements (60 Post Baccalaureate Hours)

Course Work

A Ph.D. candidate, while earning a minimum of 60 hours of course work beyond the baccalaureate degree, must complete:

Five 700-Level courses

(CHEM 701, CHEM 790, CHEM 791, CHEM 898, and CHEM 899 may not be used to satisfy this requirement.)

Two Semesters of Thesis Research

Course	Title	Credits
CHEM 790	Introduction to Research	3
CHEM 791	Introduction to Research	3
Total Credit Hours		6

Present Two Divisional Seminars

Course	Title	Credits
CHEM 701	Seminar	1
CHEM 701	Seminar	1
Total Credit Hours		2

Course	Title	Credits
CHEM 898	Research in Chemistry II (Minimum of 12 credits)	12
Total Credit Hours		12

At Least 12 Credit Hours of the Following Must be Completed

Course	Title	Credits
CHEM 899	Dissertation Preparation	12
Total Credit Hours		12

Note: Students must include additional hours on a program of study to total a minimum of 60 post baccalaureate hours, with the guidance of an academic advisor. Students must also complete an oral and written comprehensive exam. The Oral Comprehensive Exam consists of a description of the dissertation research progress to date and future plans. The Written Comprehensive Exam consists of an original research idea.

Detailed departmental degree requirements are outlined in the Department of Chemistry and Biochemistry's Graduate Student Handbook, which is available on the website. An electronic copy can be requested from the graduate director.