CHEMISTRY (PH.D. PROGRAM)

Admission Requirements

Admission to this program is contingent upon admission to the Graduate School (http://bulletins.wayne.edu/graduate/general-information/admission). All applications for admission to the doctoral program in chemistry and all adjustments in the program subsequent to admission must have the approval of the Graduate Officer of the Department of Chemistry.

A minimum undergraduate grade point average of 3.0 in chemistry and cognate science is required except by special permission of the Departmental Committee on Graduate Study. An applicant having a master’s degree from another institution must show a grade point average of at least 3.25. An applicant having a lower average must earn the master’s degree with a superior academic record before acceptance as a doctoral applicant.

Questions regarding requirements should be addressed to the Academic Services Officer. The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit, and the remainder of which must include the following:

1. A minimum of six courses (eighteen credits) in graduate course work of which at least nine credits must be in chemistry courses at the 7000 level or above; not less than six credits shall be from outside the major division of specialization. A student who does not pass any proficiency examinations upon entrance to the program will be required to pass an additional graduate course, for a total of seven courses (twenty-one credits). Additional courses beyond the required six or seven, may be specified by the student’s Ph.D. advisor or committee to address deficiencies or to develop expertise in one or more specific research areas.

Effective, Fall 2011, minors are not required for graduation from the Ph.D. program. Many departments offer minors and graduate students may complete minors at their own discretion. A minor may be satisfied by two courses (at least six credits) taken outside the major division of specialization. The minor requirement may be satisfied in any one of the following ways:

a. **Outside Minor** may be satisfied by a minimum of six credits in related fields outside chemistry (biology, chemical engineering, computer science, mathematics, physics, etc.) with appropriate courses at the 5000 level and above.

b. **Distributed Minor** may be satisfied by a minimum of six credits taken in chemistry, or three credits taken in chemistry and three credits taken in a related field. The chemistry credits must be at the 7000 level; the outside credits must be at the 5000 level or above.

c. **Concentrated Chemistry Minor** may be satisfied by a minimum of six credits at the 7000 level in a single division outside the major division (including 7000-level courses taken to satisfy proficiency requirements).

2. **Credit by Examination:** Well-prepared students may receive up to nine credits by passing the final examinations in 6000- or 7000-level courses. These may be in either the major or minor fields.

3. **At least four credits of graduate seminar:**
   - CHM 8800 Seminar in Analytical Chemistry 1
   - CHM 8810 Seminar in Organic Chemistry 1
   - CHM 8820 Seminar in Inorganic Chemistry 1
   - CHM 8830 Seminar in Physical Chemistry 1
   - CHM 8840 Seminar in Biochemistry 1

4. At least one credit in CHM 8850.

5. One credit in CHM 6740.

6. Thirty credits in Ph.D. research involving independent research under the direction of a faculty member in the Department. The thirty credit dissertation registration requirement is fulfilled by registering for the courses:
   - CHM 9991 Doctoral Candidate Status I: Dissertation Research and Direction 7.5
   - CHM 9992 Doctoral Candidate Status II: Dissertation Research and Direction 7.5
   - CHM 9993 Doctoral Candidate Status III: Dissertation Research and Direction 7.5
   - CHM 9994 Doctoral Candidate Status IV: Dissertation Research and Direction 7.5

   (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

7. Satisfactory completion of a ‘Pre-Oral’ examination based on the student’s doctoral research is required prior to the final writing of the dissertation.

8. Submission of a satisfactory research dissertation.

**Academic Scholarship:** All course work must be completed in accordance with the regulations of the Graduate School (http://bulletins.wayne.edu/graduate/general-information/academic-regulations) and the College of Liberal Arts and Sciences (http://bulletins.wayne.edu/graduate/college-liberal-arts-sciences/academic-regulations).

**Candidacy:** In order to become a candidate for the Ph.D. degree, an applicant must successfully complete both a written and oral qualifying examination. The written examination consists of a series of short cumulative examinations administered seven times per year, of which a student must obtain five passes within thirteen attempts (three of which must be in the major division). The oral examination includes the major field and covers minor and cognate fields as well. Any additional requirements set by the Graduate School or the department must be completed. Copies of such requirements may be obtained from the Chairperson of the Departmental Committee on Graduate Study.