CHEMISTRY, PHD

Johns Hopkins University was the first American institution to emphasize graduate education and to establish a PhD program in chemistry. Founding Chair Ira Remsen initiated a tradition of excellence in research and education that has continued until this day. The Hopkins graduate program is designed for students who desire a PhD in chemistry while advancing scientific knowledge for humankind.

The graduate program provides students with the background and technical expertise required to be leaders in their field and to pursue independent research.

Graduate students' advancement is marked by entrance exams, coursework, teaching, seminars, oral examinations, and an individual research project that culminates in a thesis dissertation. The thesis research project represents an opportunity for graduate students to make a mark on the world. Working in conjunction with a faculty member or team, individually tailored thesis projects enable students to think independently about cutting-edge research areas that are of critical importance. Thesis research is the most important step toward becoming a PhD scientist, and the program provides an outstanding base with a proven track record of success.

Graduate students make up the heart of the Chemistry Department, and the department strives to support students' individual needs. Each student is carefully advised and classes are traditionally quite small. Multidisciplinary research and course offerings that increase scientific breadth and innovation are hallmarks of the program. In addition to academic and technical development, the department also offers several outlets for professional and social development.

Admission Requirements

Application materials include:

- Academic transcripts
- Three letters of recommendation
- Statement of Purpose
- Resume/CV
- We encourage (but do not require) applicants to report scores for the GRE general and GRE chemistry subject tests. Applicants who feel that GRE scores support their case are welcome to include them. Our application review process is holistic, and the Graduate Admissions Committee believes that standardized test scores represent only one piece of a candidate's profile. Applicants for whom taking the GRE presents a burden or who feel it does not represent their skills are free to not include them.
- The application fee is $75. However, fee waivers may be requested for applicants that have documentation showing they are a part of SACNAS, MARCC, oSTEM and many other organizations. To access the full list to see if you qualify, go to the Krieger Graduate Admission and Enrollment (http://krieger.jhu.edu/graduate-admissions/apply/how-to-apply/#fees) page.

Assistance with the application process is available. Candidates with questions about the application process should contact the department's administrative staff at chem-admin@lists.jh.edu.

There are no fixed requirements for admission. Undergraduate majors in chemistry, biology, earth sciences, mathematics, or physics may apply as well as all well-qualified individuals who will have received a BA degree before matriculation. A select number of applicants will be invited to visit campus to tour our facilities and interact with our faculty members and their lab members over a weekend in March.

For further information about graduate study in chemistry visit the Chemistry Department website (https://chemistry.jhu.edu/).

Program Requirements

Normally, the minimum course requirement for both the MS and the PhD degrees is six one-semester graduate courses in chemistry and related sciences. Exceptionally well-prepared students may ask for a reduction of these requirements.

Requirements for the PhD degree include a research dissertation worthy of publication, and a knowledge of chemistry and related material as demonstrated in an oral examination. Each student must teach for at least one year.

Below is a list of the core Chemistry courses for graduate level students.

Code	Title	Credits
AS.030.442	Organometallic Chemistry	3
AS.030.449	Chemistry of Inorganic Compounds	3
AS.030.452	Materials & Surface	3
AS.030.453	Intermediate Quantum Chemistry	3
AS.030.601	Statistical Mechanics	3
AS.030.610	Chemical Kinetics	3
AS.030.619	Chemical Biology I	3
AS.030.625	Advanced Mechanistic Organic Chemistry I	3
AS.030.626	Advanced Mechanistic Organic Chemistry II	3
AS.030.677	Advanced Organic Synthesis I	3