

Chemistry, PhD

LACHEMPHD

Chemistry contributes to solving a broad range of scientific problems in fields like energy, disease diagnosis and treatment, and materials design and production. In this degree program, you can generate molecular solutions to problems of all scales, create new scientific knowledge and develop skills to tackle complex challenges.

Program description

Degree awarded: PHD Chemistry

The PhD program in chemistry in the School of Molecular Sciences provides students with the training they need to solve molecular scale problems and to be successful independent scientists who can contribute to current challenging societal issues.

Students earning a doctorate in chemistry from the School of Molecular Sciences are trained in the foundation disciplines of analytical, organic, physical, inorganic, environmental or geological chemistry, and most also choose to join transdisciplinary research teams that work on larger, mission-based contemporary problems in areas such as:

- energy and sustainability
- frontiers of chemical measurement
- fundamental molecular science
- geologic and biospheric science
- materials and nanoscience
- medicine and health
- structure function and dynamics

Students should visit the department's [prospective student webpage](#) to learn more about this doctoral program and the [graduate research webpage](#) to learn about the advanced transdisciplinary research being conducted in the school.

The doctoral program in chemistry prepares students for professional careers in industry, government and academia.

At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)

Degree requirements

84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

six graduate-level courses (12--18)

enrollment in a BCH 501 or CHM 501 seminar (8)

CHM 792 Research (46--52)

CHM 799 Dissertation (12)

Additional Curriculum Information

The program consists of coursework and seminars selected by the student in consultation with the student's supervisory committee and based on the student's area of research.

Qualifying exams consisting of a written comprehensive exam, an oral comprehensive exam and a prospectus are required to advance to candidacy. Students must successfully defend their dissertation during a public final oral defense.

Students must also maintain a minimum GPA of 3.00 (scale is 4.00 = "A") or better.

Admission requirements

Applicants must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in chemistry, biochemistry or a closely related field from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. personal statement

4. three letters of recommendation
5. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide proof of [English proficiency](#) regardless of their current residency.

In addition to the admission application, applicants must complete an online supplemental application to the School of Molecular Sciences. The supplemental application is available 24 to 48 hours after submission of the admission application. The personal statement and contact information for the letters of recommendation are submitted as part of the supplemental application. Information about the supplemental application can be found on the School of Molecular Sciences website. Applications lacking a supplemental application are not reviewed.

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Application deadlines

Fall

[expand](#)

Career opportunities

Professionals with training achieved in pursuit of a graduate degree in chemistry or biochemistry have opportunities in five general areas: industry (research and development, quality control), academia (high school and higher education), government (research, policy), nonprofits (policy, public education) and entrepreneurship (consulting, startups). In addition to specialized technical skills, graduates possess high-demand skills like critical thinking, teamwork and collaboration, time management and many other vital skills.

Some career examples include:

- chemistry lecturer
- environmental science specialist
- government scientist
- materials scientist
- military scientist
- research and development scientist
- research group leader
- science consultant
- university professor

The American Chemical Society also provides helpful resources and a more exhaustive list of possible careers at <https://www.acs.org/careers/chemical-sciences.html>.

Contact information

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