

# Molecular and Cellular Biology, PhD

LACELLPHD

In this flexible program, you'll tailor your experience to meet your specific professional goals. Through a wide variety of research and training opportunities led by world-class faculty, you'll come to understand the essential molecular functions at the core of all life.

## Program description

### **Degree awarded: PHD Molecular and Cellular Biology**

The Doctor of Philosophy program in molecular and cellular biology emphasizes interdisciplinary approaches in fundamental and highly applied molecular and cellular biology to answer basic and translational research questions. Students can tailor the program to their interests while gaining skills in the most innovative approaches and techniques.

Faculty have a wide variety of research interests and training opportunities for doctoral students interested in pursuing a degree that extends beyond the traditional boundaries of biological research. Participating faculty members and researchers are drawn from multiple departments, colleges, centers and institutes across the university, including:

- New College of Interdisciplinary Arts and Sciences
- School for Engineering of Matter, Transport and Energy
- School of Biological and Health Systems Engineering
- School of Human Evolution and Social Change
- School of Life Sciences
- School of Mathematical and Statistical Sciences
- School of Molecular Sciences

Participating faculty members are also based at partner institutions in the greater Phoenix area, including:

- Caris Life Sciences
- Mayo Clinic Arizona
- Phoenix Children's Hospital
- Translational Genomics Research Institute
- University of Arizona College of Medicine -- Phoenix

### **STEM-OPT for international students on F-1 visas**

This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those

interested in an OPT extension should [review ASU degrees that qualify for the STEM-OPT extension](#) at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

## At a glance

- **College/school:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)
- **STEM-OPT extension eligible:** Yes

## Degree requirements

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

### Required Core (6 credit hours)

MCB 555 Advanced Molecular and Cellular Sciences (3)

MCB 556 Advanced Molecular and Cellular Biology II (3)

### Electives or Research (54 credit hours)

### Other Requirements (12 credit hours)

BIO 543 Molecular Genetics and Genomics (3)

BIO 610 Introduction to Responsible Conduct of Research (RCR) in Life Sciences (1)

MCB 501 Seminar: Molecular and Cellular Biology Colloquium (8)

### Culminating Experience (12 credit hours)

MCB 799 Dissertation (12)

### Additional Curriculum Information

Students take MCB 501 eight times for one credit hour each. Courses listed under Other Requirements may be substituted with approval of the academic unit.

## Admission requirements

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

Applicants must have earned a bachelor's or master's degree in the biological sciences, 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 or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants must submit the following:

1. graduate admission application and application fee

2. official transcripts
3. academic record form
4. personal statement
5. curriculum vitae or resume
6. three letters of recommendation
7. 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.

Research experience is a desired qualification.

## **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](#)

## **Program learning outcomes**

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Able to review the literature relevant to the research question in molecular and cellular biology that they address in their dissertation.
- Able to execute a research plan of their own design that addresses a significant scientific question about molecular and cellular biology.
- Able to communicate the rationale and results of their research, both orally and in writing.

## **Career opportunities**

Graduates hold positions as researchers and leaders in nongovernmental organizations, biotech and pharma, and in federal and state agencies.

Career examples include:

- faculty member at a university or college
- leader of a nonprofit organization
- principal investigator or leader in a private, government or industrial lab

## **Contact information**

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[sols.grad@asu.edu](mailto:sols.grad@asu.edu)

480-965-1768

[Admission deadlines](#)