

# Pharmacology, M.S.

The Master of Science in Pharmacology (MSP) is a two-year, 100% online degree program geared toward teaching students the fundamental principles of pharmacology; mechanisms of drug action; current topics in drug discovery; and strategies, techniques, and critical thinking skills needed for drug research.

The MSP degree is designed to meet the needs of working professionals and non-traditional students by providing educational access and flexibility in an online format. It is well-suited to meet the goals of individuals who are seeking leadership positions within their organizations in a variety of fields or to enhance their competitiveness for admission to other advanced degree programs.

The curriculum emphasizes both theoretical and practical applications and an interdisciplinary approach that serves not only as excellent pathways to career advancement, but also provides a solid foundation from which to pursue doctoral study in related fields.

Our Pharmacology faculty are among the best in the field, recognized both nationally and internationally for their scientific research and publications. A number of faculty have worked in and/or founded pharmaceutical companies and hold patents relative to drug discoveries they made.

The MSP prepares students for careers in academic research institutions, in the biotechnology and pharmaceutical industry, in federal and state agencies, and in private research institutions.

The online MSP program is targeted to working professionals in the pharmaceutical industry and related fields. The program is open to any non-traditional student who can benefit from the flexibility and convenience of online, distance learning, including California, U.S. and international students.

Applicants will have a B.S. degree and may have more work experience than a typical student who moves directly from undergraduate to graduate study.

Admission requirements include:

- A bachelor's degree from a recognized and accredited academic institution with degree standards equivalent to UC
- A minimum cumulative undergraduate GPA of 3.0
- A minimum of two years of undergraduate coursework related to biology and/or chemistry
- A minimum of one year of laboratory experience (e.g. employment, research, coursework)
- **English Language Proficiency:** All graduate applicants, except those who have earned an undergraduate or master's degree from an institution at which English was the sole language of instruction according to the World Higher Education Database, are required to demonstrate English proficiency for admissions consideration. If English is not the sole language of instruction listed or if no language is listed at all, the waiver does not apply and the applicant is required to take and pass an approved English proficiency test (TOEFL or IELTS).
  - TOEFL (minimum score of 80)
  - IELTS (minimum overall score of 7)

**Note: The GRE exam is NOT required.**

To apply to the program, applicants must complete the UCI Graduate Division's online application (<https://apply.grad.uci.edu/apply/>) for admission and upload the following materials:

- Personal statement: The personal statement should include a personal history describing your professional and academic achievements, and in particular, your laboratory and research experience; current and future goals, specifically how and why the MSP will help you achieve them; and your understanding of the challenges of online learning and your readiness to participate in this type of instructional modality.
- Three letters of recommendation uploaded to the application directly by individuals who can evaluate your academic and/or professional achievements, describe your strengths and weaknesses, and comment on your character, integrity and motivation.
- Unofficial transcripts uploaded to the application. (Official transcripts will be requested by the Graduate Division if you are admitted and plan to enroll.)
- Non-refundable application fee

**The priority deadline for applications is March 1. The final deadline to apply is June 15.**

## Requirements

The program consists of 13 required courses (39 units) to be completed sequentially over two years of study (six quarters).

A. Complete the following:	
PHARM 270	Applied Pharmacology <sup>1</sup>
PHARM 271	Principles of Pharmacology
PHARM 272	Receptors and Drug Targets
PHARM 274	Research Techniques in Pharmacology

PHARM 276	Experimental Design and Data Analysis
PHARM 277	Ethics in Scientific Research
PHARM 278	Concepts in Drug Discovery
PHARM 279B	Special Topics in Pharmacology II
PHARM 280	Master's Project in Pharmacology
PHARM 281	Neuropharmacology
PHARM 282	Behavioral Pharmacology
PHARM 283	Cardiovascular Pharmacology
PHARM 284	Endocrine, Respiratory, and Gastrointestinal Pharmacology

<sup>1</sup> Students take PHARM 270 at the beginning of the first year; it is an accelerated five-day in-residence course offered on the UCI campus.

The capstone paper is written while the student is enrolled in PHARM 280. The student, in consultation with their faculty mentor, selects a topic of interest in pharmacology. The final product will be evaluated by the mentor and the course director for acceptability in meeting the capstone requirement.

Students submit an application for advancement to candidacy in the fifth quarter of study. The capstone research project and required courses for the fifth and sixth quarters must be completed before the degree will be conferred. The normative time to degree is two years.