

MSP STUDENT HANDBOOK

**POLICIES
AND PROCEDURES**

for the

**MASTER OF SCIENCE
IN
PHARMACOLOGY
(MSP) Online Program**

**Department of
Pharmaceutical Sciences
University of California, Irvine**

Fall 2019

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I. INTRODUCTION

Purpose

The purpose of this handbook is to provide students and faculty with a reference and guide to the policies, procedures, and traditions that pertain to the online graduate Master of Science in Pharmacology (MSP program) in the Department of Pharmacology. *It will be revised as necessary and posted online for all faculty and entering students; however, in instances of conflict between this guide and either official university publications or more current policy, the latter take precedence.*

Program Overview

The MSP program is strongly aligned with the mission, purpose and strategic plan of the University of California, University of California, Irvine (UCI), the College of Health Sciences, and the UCI Department of Pharmaceutical Sciences. The MSP online program was designed for working professionals in the pharmaceutical industry and related fields who are seeking an advanced degree while continuing their full-time employment. It is open to any student preparing for advanced study in biomedical-related fields. The overall purpose of the program is to provide students with expertise and the latest scientific knowledge and research skills in the field of pharmacology.

Departmental Contacts

Graduate Affairs Officer: Kellie Geldreich, pharmsci-grad@uci.edu, 949-824-7362

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II. ADMINISTRATIVE POLICIES AND PROCEDURES

Registration

A typical MSP graduate student load is 6 units per quarter, with the exception of the first quarter which includes an additional one-week, in-residence 3-unit course (online alternative available).

Students register for courses using UCI's Web Schedule of Classes (WebSOC). You may enroll in classes by logging in to [WebReg](#) with your UCInetID and password from any computer that has access to the internet and a web browser.

During the registration period (exact dates found by logging in to [StudentAccess](#)), you may enroll in classes before paying tuition and fees. However, tuition and fees must be paid on time in order to avoid being dropped from classes and the assessment of late charges. *The final deadline* for paying tuition and fees late and/or enrolling late is *Friday, 4 p.m. at the end of the third week of instruction*. Failing to pay tuition and fees and enroll by this final deadline will result in the loss of student status.

Standards for Scholarship for Graduate Students

Assessment of students will be handled in different ways online. While not an exhaustive list, quizzes, submission of written assignments, and participation in asynchronous discussion forums are common formats. Each of these assessments is connected to a central online gradebook. Faculty can download student work, grade it, and upload comments or a revised document. Similarly faculty and TAs can grade students' discussion forum posts qualitatively as well as quantitatively. Quizzes are typically machine-graded but can also contain human-graded components such as essay questions.

University policy specifies that only the grades A, A-, B+, B, and S represent satisfactory scholarship for a graduate student. **Individual grades below a "B" as well as an overall GPA below the B level (3.0 on a 4.0 scale) is not considered satisfactory, and any student whose GPA is below that level for two or more quarters will be subject to disqualification from further graduate study.** Students should try to avoid Incomplete (I) grades in their courses wherever possible, as having multiple incompletes on their record can adversely affect faculty evaluations of their academic progress. If not made up within one year, the "I" grade is turned to an "F" on the student's record. Graduate students are not allowed to enroll in graduate courses (numbered 200 and above) for the P/NP grade option.

Credit for Graduate Courses Taken Elsewhere

Graduate students in the online Master of Science in Pharmacology program are not able to petition to have a graduate course that is taken elsewhere count toward their degree requirements at UCI.

Evaluation of Student Progress

All graduate students will be formally reviewed at an annual evaluation meeting by their faculty advisor. These meetings usually take place during the Spring Quarter. This evaluation will be based upon course grades and other available performance data. The faculty may recommend that such students continue toward their degrees or formally withdraw from the program. In some cases, a recommendation for a later reevaluation may be made in order to obtain further information or to allow the student to make up specific deficiencies. In such cases students will receive a letter from the MSP Program Director summarizing the recommendations and/or requirements that have been

specified by the faculty. All students may read their evaluations, discuss them with their advisors, and add written comments if they wish.

Minimum Standards for Graduate Student Mentoring

The UCI Graduate Council has approved a set of minimum standards for communicating degree requirements, time-to-degree policy, and monitoring individual student progress toward the degree. The practices outlined below are now official policy. They are largely included in documents such as the Graduate Division's *Graduate Policies and Procedures Handbook* and the Academic Senate Graduate Council's Graduate *Mentoring, Advising and Monitoring of Academic Progress Policy*.

Mentoring is an active and sustained relationship-based process for the formal and informal transmission of knowledge and psychosocial support relevant to professional development. The mentor is attentive to the future of the student and serves as an advocate on his or her behalf. The following are minimum standards for mentoring:

- Make students aware of mentoring standards. Develop a graduate program handbook, made available to graduate students upon or before their arrival on the campus. This should be updated annually.
- Hold an orientation for all new graduate students, where program requirements, including normal time-to-degree, are clearly outlined and provided in writing. It is expected that these requirements will be included in the student handbooks as well.
- Require a minimum of one meeting – in person whenever feasible --- between each graduate student and his/her mentor each quarter in which the student is enrolled. However, as this is an on-line program, in person meetings may be conducted via Skype, Facetime, etc.
- Ensure that students are being advised regarding academic progress and mentored regarding professional development. It is common for the faculty advisor to also serve as students' mentor; however departments may enhance mentoring through peer mentoring, professional development workshops, and other activities.
- Guidance regarding both academic and nonacademic careers should be provided.

Students who feel they are not receiving adequate mentoring should consult with the MSP Director so that they can discuss remedies and take appropriate action.

Academic Leave of Absence

A leave of absence may be granted to students who, for compelling and legitimate reasons (e.g., health-related, family, financial), must interrupt their program of graduate study. Ordinarily, the student begins the process of requesting a leave of absence by consulting with his or her faculty advisor and other individuals in advisory or counseling roles. The student completes the Leave of Absence form <http://www.grad.uci.edu/forms/index.html> indicating the reason(s) for and proposed duration of the requested leave. The student

must meet with the MSP Program Director to discuss the requested leave. The Director may consult with relevant faculty before reaching a decision on the requested leave of absence. Graduate students at UCI are eligible for a **maximum leave of three quarters**. Students who fail to enroll after an approved leave of absence has expired will lose graduate standing and must apply for readmission to the graduate program.

Withdrawal

A withdrawal can officially terminate a student's affiliation with the University of California, Irvine. Formal reapplication may be required for readmission. **For more information, please refer to the Graduate Policies and Procedures:** <http://www.grad.uci.edu/academics/academic-policies/index.html>. Withdrawal forms are available from the Graduate Affairs Officer. If you are contemplating withdrawing from your graduate degree program, please consult the MSP Program Director.

Conditional Status/Disqualification

Students may be placed on conditional status for **unsatisfactory progress** toward the completion of degree requirements. Unsatisfactory progress may include, but not be limited to the following:

- 1) a grade lower than a "B" in one or more required courses
- 2) an overall grade point average below 3.0
- 3) an overall grade point average of below 3.0 for two successive quarters
- 4) failure to complete courses or examinations satisfactorily within the period of time specified by the graduate program
- 5) failure to pass a required course in two attempts.

The faculty of the Department of Pharmaceutical Sciences may initiate procedures to place the student on conditional status. In such cases the student typically will receive written notice of the deficiencies and a deadline for remedying these deficiencies (i.e., for completing specific degree requirements). Failure to meet this deadline can result in a petition to the Dean of Graduate Division to disqualify the student from graduate study in the MSP Program.

Unprofessional conduct, such as sexual harassment of students, staff, and/or faculty either in-person or online, is unacceptable and may represent grounds for placing a student on conditional status. Please refer to the following website for more information: <http://www.oeod.uci.edu/>

Academic dishonesty of any form (e.g., plagiarism, cheating, falsification of data) is absolutely unacceptable and at the graduate level leads to petitioning the Dean of Graduate Division for immediate dismissal from the program and the University. Please refer to the UCI General Catalogue for more information:
<http://catalogue.uci.edu/graduatedivision/#academicpolicies>

III. **ACADEMIC POLICIES AND PROCEDURES**

MSP Degree Requirements

The Master of Science in Pharmacology will follow the requirements of UC’s Masters Plan II. The MSP program requires 39 units of graduate courses which satisfies the 36 unit requirement of Plan II. However, in lieu of a comprehensive exam, MSP students will be required to write an extensive “capstone” research paper in the second year.

Usual Timetable for Graduate Study

The program consists of 12 online courses (2 online courses per quarter to be completed sequentially over two years of study, i.e., 6 quarters), plus a one-week in-residence required course that is scheduled right before the Fall quarter of the Year 1.

Fall	Winter	Spring
YEAR 1		
PHARM 270 Applied Pharmacology (3) 1 week on-campus course		
PHARM 271 Principles of Pharmacology (3) online	PHARM 281 Neuropharmacology (3) online	PHARM 274 Research Techniques in Pharmacology (3) online
PHARM 272 Receptors and Drug Targets (3) online	PHARM 282 Behavioral Pharmacology (3) online	PHARM 276 Experimental Design and Data Analysis (3) online
YEAR 2		
PHARM 283 Cardiovascular Pharmacology (3) online	PHARM 280 Masters Project in Pharmacology (3) online	PHARM 278 Concepts in Drug Discovery (3) online
PHARM 284 Endocrine, Respiratory and GI Pharmacology (3) online	PHARM 277 Ethics in Scientific Research (3) online	PHARM 279 Special Topics in Pharmacology (3) online

Required Courses

- PHARM 270 ***Applied Pharmacology (3 units)***. 1 week (4-5 days, 40 hrs) **in residence** course offered on the UCI campus. Introduction to pharmacological techniques and current research problems; includes laboratory demonstrations and research seminars. An online alternative is available if necessary

Online Required Courses

- PHARM 271 ***Principles of Pharmacology (3 units)***. Online. Principles of pharmacology: pharmacodynamics, pharmacokinetics, pharmacogenetics, drug interactions and toxicity.
- PHARM 272 ***Receptors and Drug Targets (3 units)***. Online. Molecular basis of drug-receptor interaction. Receptor properties including gene and protein structure, signaling mechanisms, trafficking and physiological effects: G-protein linked receptors, ligand-gated ion channels, receptor tyrosine kinases, nuclear receptors, and ligand regulated transcription factors.
- PHARM 274 ***Research Techniques in Pharmacology (3 units)***. Online. Experimental techniques and model systems used in pharmacological research. Receptor analysis, bioassay, molecular biology, in vitro pharmacology, biochemical pharmacology, imaging, electrophysiology, in vivo pharmacology, disease models.
- PHARM 276 ***Experimental Design and Data Analysis (3 units)***. Online. Experimental design, data analysis and interpretation. Population and sample statistics, hypothesis testing, analysis of variance, nonparametric statistics, and power calculations.
- PHARM 277 ***Ethics in Scientific Research (3 units)***. Online. Ethical conduct in research including data handling, authorship, conflict of interest, animal rights and handling of misconduct.
- PHARM 278 ***Concepts in Drug Discovery (3 units)***. Online. Critical steps involved in discovery and optimization of a new drug. Target selection, relationship of molecular structure to pharmacological activities, screening methods, strategies to identify lead compounds, and preclinical characterization necessary for development of the drug for clinical trials.
- PHARM 279 ***Special Topics in Pharmacology (3 units)***. Online. Topics of current interest in pharmacology; discussion of recent research publications.

- PHARM 280 **Masters Project in Pharmacology (3 units)**. Online. Capstone research paper on topic of interest in pharmacology.
- PHARM 281 **Neuropharmacology (3 units)**. Online. Autonomic and central nervous system pharmacology, including major drug classes and therapeutic uses. Mechanisms underlying chemical signaling processes in the brain and peripheral nervous system, including neurotransmitter synthesis, inactivation and receptor action.
- PHARM 282 **Behavioral Pharmacology (3 units)**. Online. Pharmacology of integrative function and behavior. Drug treatment of pain. Mechanisms of reward, addiction and drugs of abuse.
- PHARM 283 **Cardiovascular Pharmacology (3 units)**. Online. Basic understanding of drugs used in the prevention and treatment of cardiovascular disease. Mechanisms of action, clinical and adverse effects.
- PHARM 284 **Endocrine, Respiratory and Gastrointestinal Pharmacology (3 units)**. Online. Basic understanding of drugs used in endocrine, respiratory and gastrointestinal conditions, including hormone replacement, contraceptives, and drugs for diabetes, asthma, obesity, ulcer and gastric reflux. Mechanisms of drug action, clinical and adverse effects.

Note: Students enrolled in the degree program must receive grades of no lower than “B” in all courses required for the degree. Students are also required to maintain an overall GPA of at least 3.0.

Capstone Course

In lieu of qualifying exams or a thesis, MSP students will be required to complete a capstone course (Pharm 280) in their second year. As part of the course, students will write an independent research proposal as the culmination of their coursework in the MSP program. This capstone project will demonstrate how the knowledge and skills learned in the MSP can be applied to a research project. Each student will select a topic of interest in pharmacology and work with a faculty mentor during the course. The student will write an original research proposal that must include an appropriate literature background, novel hypotheses, and sound experimental design for testing the hypotheses. The student will also present their proposal to fellow students and faculty in a PowerPoint video for evaluation and feedback. The final project must be evaluated and approved by a committee of at least two faculty members that have a primary or secondary affiliation with the Department of Pharmaceutical Sciences.

Advance to Candidacy

Students must advance to candidacy at least one quarter prior to the quarter in which they will be receiving the MS in Pharmacology degree. The Application for Advancement to Candidacy can be obtained by contacting the Graduate Affairs Officer (pharmsci-grad@uci.edu) and must be completed, signed and submitted back to the Graduate Affairs Officer in enough time to meet the Graduate Division Dean's quarterly deadline. Deadlines and final degree paperwork are available on the Graduate Division website at: <http://www.grad.uci.edu/academics/advancement-to-candidacy/>

IV. ADDITIONAL INFORMATION

International Students

The Office of International Students provides a variety of services to international students, including assistance with visa and immigration forms and interpretation of government regulations. Information is also available about housing, tutoring, registration, financial aid, and student activities. International students are strongly encouraged to stay in contact with the International Center: <http://www.ic.uci.edu>

Additional Resources

Graduate Division Website: <http://www.grad.uci.edu/>

Office of Equal Opportunity and Diversity: <http://www.eod.uci.edu/>

Office of the University Ombudsman: <http://www.ombuds.uci.edu/>

Wellness, Health and Counseling Services: <http://www.chs.uci.edu/>