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Welcome New Graduate Students

Welcome to the Medicinal Chemistry & Pharmacology Graduate Gateway Program. As the Graduate Program Director, I am here to help you reach your goal, that is, to successfully complete your first year of your graduate studies and to transition to your chosen “home” department—Chemistry, Pharmacology, Pharmaceutical Sciences, or Molecular Biology & Biochemistry.

These four disciplines encompass the main scientific disciplines involved in the drug discovery process; as such, I see our program as having the important responsibility of training researchers to become future leaders in drug discovery. This is a high stake for students (and their teachers). You have been selected to join our Program because we believe that you can become a successful scientist.

Your year in the MCP program will provide you with a unique opportunity for you to learn about these disciplines, and in so doing, to identify the laboratory you would like to join. You will have several classes and will also rotate through two laboratories. These rotations should give you the tools to help you to identify the project to which you would like to devote your research. After your first year, and your transition to the department in which you will ultimately earn your degree, you will begin to focus on your dissertation project and prepare for your comprehensive exam, a rite of passage that formally declares you ready for thesis work.

The following years will be spent mostly in the lab, carrying out research for your Ph.D. thesis. The length as well as the requirements for your Ph.D. will depend on your effort and on your abilities to analyze and solve problems. Ultimately these requirements will be defined by your thesis advisor and your thesis committee. (I have often been asked for guidelines regarding time to degree and Ph.D. requirements. My answers to these questions are that a Ph.D. is rarely done in less than five years and that I expect my students to have at least two published or accepted manuscripts in high caliber journals before defending their thesis).

One day you will stand before your thesis committee and you will defend your Ph.D. That day you will be awarded the highest degree that can be awarded, and I hope that you will not forget that Ph.D. stands for philosophical degree, which means that it is awarded for the yearning of wisdom, in science but also in life. I hope that your Ph.D. studies will be a time when you will have time to reflect on life’s complexity while applying the scientific method to extend and enrich our knowledge of it.

Stephen Hanessian, Ph.D.
Professor and Graduate Program Director
Registration

1. Each student is required to be enrolled in a minimum of 12 units and a maximum of 16 units of graduate or upper division courses each quarter. You will need approval from the Dean of Graduate Studies for more than 16 units.
2. You are responsible for registering for courses to ensure that your fees are paid by the appropriate deadline each quarter; otherwise, you may have to pay a late fee (see Schedule of Classes for details on due dates).
3. Graduate Division has a policy that any student who is not enrolled by the end of the 3rd week of the term will be dropped from the graduate program! NO EXCEPTIONS! To continue, the student would need to re-apply following the procedures required for any new student (on-line application, application fee, letters of recommendation, GRE scores, etc.). To prevent this from happening, please ensure that you are registered before the 3rd week of the term. The reason for this policy is that campus receives funds from the UC Office of the President based on the number of enrolled students, and that number is determined by the census at the end of the 3rd week of each term, which means that students who are not registered by then do not count in the census. The policy is designed to ensure that all students who plan to continue enroll in time for the census.
4. Before registering for courses, you may need authorization codes for some courses you plan on taking. See the Student Affairs Coordinator to receive your codes.
5. Students search for courses online using UCI's Web Schedule of Classes (WebSOC) and register in classes through UCI's WebReg.

You will be receiving a monthly stipend from the department. If you fill out an "Earnings Disposition Form" you will receive this stipend via direct deposit.

The fees paid by the department on your behalf include mandatory Graduate Student Health Insurance (GSHIP). If you have insurance coverage from a different source, we would appreciate it if you could let us know; if you do not need UCI’s insurance coverage, we will ask you to file an insurance waiver so that the department does not pay for duplicate coverage.

If you have any other questions concerning registration, payment of fees, foreign student or non-resident problems, please see the Student Affairs Coordinator and she will be happy to answer your questions or send you to someone who can help.
Statement of Legal Residence

The Residence Deputy at UCI sends out an e-mail to all admitted students who indicate, via their Statement of Intent to Register (SIR), that they are accepting their admission offer. This e-mail note requests that you complete and submit your SLR online and provides you with both your UCI Student ID Number and your "Application ID Number" that you will need to enter to complete the SLR online. Please note that the "Application Number" is different than your "Electronic Application ID Number," so be sure to use the Application ID Number you receive in the e-mail regarding SLR. Also, please be sure that you submit your completed SIR as soon as you have made your decision, because the Residence Deputy cannot send your information about SLR completion until after your SIR has been received and processed.

All students are required to complete a Statement of Legal Residence (SLR). To complete the Statement of Legal Residence form online, please visit the Office of the Registrar's website at https://www.reg.uci.edu/slr/Welcome.do.

The Statement of Legal Residence (SLR) is an important step used to make a determination of residence classification for tuition fee purposes. All students are required to file a SLR form with the Office of the Registrar regardless of whether the student expects to be classified as a California resident or not. It is very important to complete your SLR in a timely manner. Your fees and tuition amounts are determined on the basis of your SLR information. Therefore, you can not enroll in classes before your SLR is completed, received and processed by the University.

All students must establish California residency before the start of Fall Quarter of their second year. California residents receive preferential tuition rates. If you fail to establish residency, you may be asked to pay the difference between resident and non-resident tuition rates.

The requirements for establishing California residency are included on the Petition for Resident Classification form: http://www.reg.uci.edu/residency/downloads/reclass_grad.pdf.
Academic Standards

Each student was selected for admission into the MCP after an extensive application review process. You were chosen because the faculty believes you have demonstrated the motivational and intellectual qualities to perform well in our program. We fully expect every student to perform well and to be successful in his/her graduate career.

The following is an excerpt from the University of California, Irvine catalog concerning the academic standards for graduate students:

For a graduate student, only the grades A+, A, A-, B+, B, and S represent satisfactory scholarship and may be applied toward advanced degree requirements. However, upon petition, a UCI course in which a B- is earned may be accepted in partial satisfaction of the degree requirements if the student had a grade point average of at least 3.0 in all courses applicable to the degree. Graduate students may not apply courses graded Pass or Not Pass toward any degree or satisfactory progress requirements. A grade point average below the B level (3.0 on a 4.0 scale) is not satisfactory, and a student whose grade point average is below that level is subject to academic disqualification.

Any student who does not uphold these academic requirements may be subject to academic probation and/or disqualification.

The following are indications of unsatisfactory academic progress:

- An overall grade point average below 3.0
- A grade point average below 3.0 in two successive quarters
- Fewer than 24 units completed and applicable toward the advanced degree requirements in the last three quarters
- Failure to complete required courses or examinations satisfactorily within the period specified by the MCP program
- Failure to pass the Comprehensive Exam in two attempts
- Failure to progress academically within the Normal Time to Degree framework specified
  ⇒ The appropriate faculty committee's evaluation that there has not been satisfactory progress toward completion of the thesis or dissertation.

Additionally, the academic requirements of the MCP program include the requirement that you successfully matching with a faculty advisor no later than Spring Quarter.

Any graduate student who has not demonstrated satisfactory academic progress is not eligible for academic appointment/employment and may not receive fellowship support or other awards.
# MCP Curriculum

## MCP Course Requirements: All Core Classes + at least 2 electives.

### YEAR 1

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
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<tbody>
<tr>
<td><strong>Core Classes</strong></td>
<td>PharmSci 250A Topics in PharmSci&lt;br&gt;PharmSci 223 Biological Macromolecules&lt;br&gt;Pharm 254 Methods in Pharmacology&lt;br&gt;Lab Rotation #1</td>
<td>PharmSci 250B Topics in PharmSci&lt;br&gt;PharmSci 277 Medicinal Chem&lt;br&gt;Lab Rotation #2</td>
<td>PharmSci 250C Topics in PharmSci&lt;br&gt;Chemistry 399 (TAship)&lt;br&gt;Lab Rotation #3 (optional)</td>
</tr>
<tr>
<td>MB&amp;B Electives</td>
<td>MB 211 Biomolecular Structure Methods&lt;br&gt;(offered every other year)&lt;br&gt;MB 204 Protein Structure &amp; Function</td>
<td>MB 203 Nucleic Acid Structure &amp; Function</td>
<td>MB 206 Regulation of Gene Expression&lt;br&gt;BioChem 212 Signal Transduction &amp; Growth Control</td>
</tr>
<tr>
<td>Pharmacy Electives</td>
<td>Pharm 252 Neurotransmitter and Drug Receptors</td>
<td></td>
<td>Pharm 255 Chemical Transmission</td>
</tr>
</tbody>
</table>

*Students must transfer to a home department by the end of the Spring Quarter.*

### YEAR 2

Comprehensive Exam

### YEAR 3

Commence Dissertation Research<br>Advance to Candidacy

### YEARS 4-5

Complete dissertation research
Required Courses

Core Courses:

PharmSci 223 Biological Macromolecules (4). Introduction to nucleic acid and protein structure, dynamics, and function. Topics include analytical methods, molecular evolution, folding, and catalysis.

PharmSci 250A-B-C Current Topics in Pharmaceutical Sciences (1-1-1) Intended to expose students to the primary literature and current research in the field of Pharmaceutical Sciences. Students analyze and present information for discussion. Guest speakers from academia and industry may participate throughout the quarter. Prerequisite: Enrollment in the MCP Gateway Program or consent of instructor. Satisfactory/Unsatisfactory only.

PharmSci 277 Medicinal Chemistry (4) Fundamentals of medicinal chemistry covering diverse aspects of drug design, discovery, synthesis, and development. Molecular basis of drug action with an emphasis on the structure-to-function continuum.

Pharmacology 254 Introduction to Pharmacology (4). Lecture, four hours. Introduction to the concepts and techniques in pharmacology. Molecular biology, in vitro pharmacology, biochemical pharmacology, behavioral pharmacology, in vivo pharmacology, histochemistry, electrophysiology

PharmSci 280 Graduate Research (1 to 12)

Ethics Requirement: (Choose one of the following)

Pharm 257 Ethics in Research (1)- offered every other summer (next available, summer 2016). Students enroll the following fall quarter for credit.

Chem 200 Conduct of Research (2)- offered every fall

UCI Responsible Conduct of Research (RCR) 2011 (no units earned)- offered online through the UC Learning Center and can be taken at any time (https://uc.sumtotalsystems.com/sumtotal/learner/search?searchText=RCR)
Elective Courses

Student must complete 2 elective courses, in addition to the required core courses. Courses to be chosen from the following lists:

**Chemistry Department:**
- Chemistry 201 Organic Reaction Mechanisms
- Chemistry 202 Organic Reaction Mechanisms II
- Chemistry 203 Organic Spectroscopy
- Chemistry 204 Organic Synthesis I
- Chemistry 205 Organic Synthesis II
- Chemistry 218 Metallobiochemistry
- Chemistry 219 Chemical Biology
- Chemistry 221A Fundamentals of Molecular Biophysics

**Molecular Biology & Biochemistry Department:**
- Molecular Biology 203 Nucleic Acid Structure & Function
- Molecular Biology 204 Protein Structure & Function
- Molecular Biology 206 Regulation of Gene Expression
- Molecular Biology 211 Biomolecular Structure Methods
- BioChemistry 212 Signal Transduction & Growth Control

**Pharmaceutical Sciences Department:**
- Pharm Sci 274 Nanomedicine
- Pharm Sci 263 Pharmacogenomics and Epigenetics
- Pharm Sci 275 Discovery Computing Techniques
- Pharm Sci 278 Stem Cell Therapy

**Pharmacology Department:** (can be substituted for the Pharm 254 requirement)
- Pharmacology 252 Neurotransmitter and Drug Receptors
- Pharmacology 255 Chemical Transmission

**Departmental Seminars**

Departmental seminars are given by invited speakers and occasionally by our own faculty and post-docs. These seminars are a great opportunity to see and hear scientists talk about their work; these sessions are mandatory.
Research Rotations

You will be devoting the majority of your professional time over the next few years to laboratory research. It is essential for both your professional development and your overall well-being that you spend that time in an environment that is stimulating and of personal interest to you. Rotations are intended to aid you in choosing this environment.

The rotation programs consist of a series of short research projects in selected faculty members’ laboratories. **Two rotations are required, during the Fall and Winter quarter of your first year.** A third rotation during the Spring quarter is optional if the student has not decided on a faculty mentor. The amount of time spent in the laboratory working on your rotation research should be negotiated with the faculty member whose lab you are rotating through. (If you wish to change your lab rotations please notify the Graduate Program Coordinator). You should be able to make adequate progress in the lab as well as complete your course work.

The purpose of this program is to obtain exposure to several areas of research and techniques. To obtain the maximum benefit from this program, it is best to familiarize yourself with each faculty member’s research and then consult with that faculty member about available space and a proposed project. It is advisable that this be done as soon as possible after arriving on the campus.

After the rotations, students must consult with the faculty member with whom they wish to pursue their dissertation research. Many factors will influence your decision such as the exciting research conducted in a particular lab, funding availability, and availability of positions. In order to officially be placed in a lab, a Departmental/Research Advisor Choice Form must be completed and filed with the Program Coordinator. You will be sent a copy of this form early in the Spring Quarter. This form ensures that funding availability has been confirmed with both the selected research advisor and the Department Manager.

Once students have been placed in a lab, they are free to change labs at any time as long as they can find a mentor who is willing to take them and fund them.
Funding

Funding will be guaranteed to students for the duration of the MCP program as long as they maintain good academic standing (see pg. 6). Funding beyond year 1 is not guaranteed and is based on the students ability to secure a Graduate Advisor by June 30.

Fellowships

Why would you want to waste your valuable time (when you could be studying for all those hard classes and doing research) applying for a fellowship? The first reason is that it is MANDATORY for all students in the department to apply for one fellowship at some time in their graduate career. Another reason is that it is great experience to write a grant or fellowship and figure out early in the game exactly what it takes to become funded. After all, upon receiving a Ph.D., many of us won’t be able to do research unless we can obtain one or more of these elusive grants. A third reason is that it looks great for the department if many of the students are funded by outside money. Another reason is that it is a nice feeling to know you have your own money - not to mention that it is a wonderful addition to your now short, but ever growing curriculum vitae (CV). And finally, the more students are funded by outside sources, the better chance you have to petition the department for raises in your stipends!

All eligible first year students are encouraged to apply for an NSF, Howard Hughes and Office of Naval Research Fellowship (a file of these applications is maintained by the Student Affairs Coordinator in the Department of Pharmaceutical Sciences Administrative Office). The initial deadline is early November. So if you are eligible, talk to your mentor about how to apply. You do not need to know what your thesis dissertation will be about in order to apply for the three above mentioned fellowships. However, students who do have a thesis dissertation project should apply for a National Institute of Health (NIH) or PhRMA fellowship. Almost all of these applications can be found online. Just visit the website of the Office of Research, http://www.research.uci.edu.

Another great link to look into funding is GrantsNet (http://www.grantsnet.org). Use this as a resource for a great list of funding opportunities.

In addition to the office of SPA, and the fellowships mentioned above, here is a list of reference works for other sources of support located in the Langston Library on the main campus:

♦ Grants Register
♦ Grants for Graduate Students
♦ Directory of Financial Aid/Minorities
♦ Directory of Financial Aid/Women
♦ Peterson’s Grants for Graduate Students
Fellowships (Cont.)

Procedures for Proposal Submissions

1. Notify the Pharmaceutical Sciences Department’s Contracts and Grants administrative office of any planned proposal submissions no less than 4 weeks prior to the Agency deadline. If the submission is an electronic one, you must share your login and password with the administrative staff so that they can complete the administrative pages of the proposal (see specifics below). You cannot submit your own proposals even if the agency allows for this. This procedure ensures all Institutional policies are being adhered to.

2. The department will work with you to prepare a budget (even if the Agency does not require one). UCI requires a budget for all proposal submissions.

3. The administrative staff will work with you to complete the following internal and/or Agency forms for you: Kuali Coeus. Financial Disclosures, Agency Face Page or Summary form, Budget pages (if required by the Agency), Ongoing and Completed Research for either Section D. of the BioSketch (if NIH format) and/or Other Support (if required by the agency).

4. It is your responsibility to work with your faculty mentor on the submission of your proposal. You should not be altering information on your mentor’s BioSketch or Other Support pages as this information belongs to the faculty member and should only be altered by them. You are responsible for ensuring any Letters of Recommendation submitted prior to institutional review.

5. All proposals must go through the internal signature process 10 full business days prior to the Agency deadline. The process is as follows: submit to the Department Chair for signature. Then, the proposal is sent to the Dean. A draft version of the science may be submitted to the Dean’s Office, but all pieces of the proposal must be present, i.e., The Dean’s Office will accept a draft version but not an incomplete version. Finally, the proposal will go to UCI’s Sponsored Project Administration (SPA). All documents must be FINAL form to be submitted to SPA one (1) business day before Sponsor’s deadline. Only after SPA has approved and signed off can the proposal be submitted to the Agency via SPA or department administrators.
The following are the policies and procedures of the Medicinal Chemistry and Pharmacology Graduate Gateway Program. Under exceptional circumstances one or more of these policies may be waived with approval of the graduate program director/advisor.

**General**

1. If you are accepted into our program with funding, you are guaranteed financial support by the department as long as you are in good academic standing. (see Academic Policies and Procedures to determine what our department and the university consider good academic standing)

2. Even though you are guaranteed funding by our department, it is still mandatory that you apply for independent funding. If fellowship funding is received the department funding will be reduced or eliminated, depending on the amount of the award, in order to maintain equitable stipend levels for all students.

3. Students are not allowed to have concurrent employment while they are enrolled in the Graduate Program.

4. In order to be issued keys to the different labs and rooms in the department, you must obtain permission from the P. I. Keys are then checked out to you at the front desk in the administrative office (147 BSA).

5. Each student is required to pick-up mail from their mail box and read their e-mail everyday and be responsible for any information sent out.

**Academic**

1. Each student must adhere to the following:
   
   A. GPA of 3.0 or higher. Graduate Division policy states that any student falling below a 3.0 GPA will lose their stipend as well as their GSR appointment.
   
   B. Any student that receives a grade of B- or lower will be required to retake the course.

2. Each student is responsible for knowing when each class starts. For example, the medical courses do not follow the traditional quarter system. Please be aware of all of your class start times before the actual quarter starts.
Academic (cont.)

3. If a student is admitted under provisional status, they have until the end of their first academic year to clear that provisional status, i.e. turn in final transcripts, GRE scores, etc.

4. Policies within a particular course are to be determined by the Course Director.

5. All course waivers need to be approved by the Graduate Committee.

6. Student electives are to be approved by the Graduate Program Director/Advisor before enrollment.

7. It is the student’s responsibility to secure a position in a faculty advisor’s lab and new home department by the end of the Spring Quarter. Failure to do so may result in the dismissal of the student. To request an extension you will need to obtain an Exception Request form from the Student Affairs Coordinator and receive approval from the Department Chair.

Teaching Assistantships

1. All MCP students are required to TA for a minimum of 1 quarter during their first year, typically in the spring, unless specified by a student’s fellowship.

2. All international students, including those with Permanent Resident status, must meet the English Language Proficiency requirement as specified by UCI Graduate Division. The only exemptions to this exam are given to students who have:
   - US citizenship
   - Completed a four-year high school degree in the US
   - Citizenship in a country where English is either the primary or dominant language, as approved by UCI Graduate Council.

3. English Language Proficiency Requirement:
   - A score of 26 or higher on the speaking component of the TOEFL ibt
   - A score of 8 or higher on the speaking module of the IELTS, or
   - A score of 50 or higher on the SPEAK exam at UCI.
Important Contacts

**Graduate Program**
Andrej Luptak - Graduate Advisor  
(949) 824-9132  
aluptak@uci.edu

Saengthong Douangdara - Student Advisor  
(949) 824-7314  
sdouangd@uci.edu

Brittany Betancourt - Student Advisor  
(949) 824-0878  
betanco@uci.edu

**Department of Pharmacology Administration**
Ellen O'Bryant - Assistant Chair  
(949) 824-1385  
eobryant@uci.edu

Trinh Tran - Director of Finance  
(949) 824-5630  
ttran4@uci.edu

Tracy Calvert - Human Resources Coordinator  
(949) 824-5365  
tclavert@uci.edu

Purchasing & Operations Coordinator  
(949) 824-1239  
pharmpur@uci.edu

**Campus Resources**
Office of Graduate Studies  
(949) 824-4611  
http://www.grad.uci.edu

Graduate Student Health Insurance (GSHIP)  
Mary Jo Gallegos - GSHIP Coordinator  
(949) 824-2388

UCI Career Center  
(949) 824-6881  
http://www.career.uci.edu

UCI Counseling Center  
(949) 824-6457  
http://www.counseling.uci.edu
Frequently Asked Questions

- How many units of 280 Research should I take?
  - There is no set amount of Research that you are required to take. Usually students will take any amount of units left over from the required courses that they have to take. For example if you are taking 10 units of required courses, you can take 2 units of 280 Research to hit your minimum amount of units per quarter (12).

- How do I reserve the Pharmaceutical Sciences Conference Rooms?
  - We have 2 conference rooms available for reserve on a first come, first served basis. Visit the Pharm Sci website for contact information (http://www.pharmsci.uci.edu/faculty-resources.php). One exception to this rule is if the room is needed for any Pharmaceutical Sciences related courses, these take priority over all other reservations.

- Where do I register for courses?
  - After searching the Schedule of Classes online at WebSOC (http://websoc.reg.uci.edu/perl/WebSoc), students can register for courses online at WebReg (http://www.reg.uci.edu/registrar/soc/webreg.html). Remember to also obtain authorization codes for courses in Pharmacology from the Student Affairs Coordinator.

- How do I apply for a fellowship?
  - Please refer to page 11 for more information on applying for fellowships. If you have any additional questions, please contact the Student Affairs Coordinator.

- How often should I meet with the Graduate Program Director/Advisor?
  - All first year students should arrange a meeting with the Graduate Program Director/Advisor every quarter to discuss their progress in the program. All other students can arrange a meeting as necessary to discuss their progress and any issues they may have.

- Does UCI offer child care services?
  - Yes, you can contact UCI Child Care Services at (949) 824-2100 or visit their website at: http://www.childcare.uci.edu/. Contact them as soon as possible, as there may be a waitlist to enroll your child for child care.

- I am a foreign student and need help acclimating to UCI and U.S. culture, whom do I go to?
  - A great resource for all foreign students is the UCI International Center (http://www.ic.uci.edu). The UCI International Center, “counsels and assists international students, faculty, researchers, staff and scholars with immigration, orientation, employment and adjustment needs throughout their stay at the University of California, Irvine. In addition, the IC staff brings together international and American members of the UCI community for a variety of cultural, educational, social and recreational activities.”
  - The UCI Cross Cultural Center is another great resource to meet various organizations and clubs that focus on making transitions to UCI life easier as well as getting involved on campus. Please visit http://www.ccc.uci.edu/ and click on Organizations to learn more.
  - Acclimating is also a team effort in the Medicinal Chemistry and Pharmacology program; faculty mentors, fellow students, and staff can all help answer any questions you may have in regards to UCI or U.S. culture in general.