Chemical Biology Program Handbook

Master's Degree

Version 2023-2024
Updated 2021-03-29

Note: A

Table of Contents

Important Contact Information:

Chemical Biology Program
Dr. Chris Arnatt
Associate Professor of Chemistry
Chemical Biology Program Coordinator
314-977-8290
chris.arnatt@slu.edu

College of Arts and Sciences

A. General Program Overview

E. Definition of Full-time Graduate Students

(a) All enrolled students holding fellowships, teaching, or research assistantships are defined as full time students regardless of hours registered.

(b) Students who are not on an assistantship and have not yet passed their oral

H. Review of Student Progress

Each student's progress will be rated annually by the Program Coordinator in collaboration with the research mentor. In order to be "satisfactory", ALL requirements below must be met. Students deemed unsatisfactory will not be eligible for assistantships (covered in section I).

A "satisfactory" rating requires:

- Maintained ≥3.0 GPA in lecture coursework (neither Intro to Research or Research Topics count as lecture coursework)
- Have no more than 2 grades of B- or below
- Maintained research effort expected in a 40 hour minimum work week resulting in, or appearing to show promise in leading to either (1) a publication in a peer-reviewed journal and/or (2) public presentation of results at a professional scientific conference. Note: this is not applicable to the coursework M.A.
- Maintained cordial and constructive relationship with primary and secondary mentors.
- Fulfilled teaching assistant responsibilities (for those on a TA).

An "unsatisfactory" rating will be given for any of the following:

- Cumulative GPA <3.0 in lecture coursework.
- More than 2 grades of B- or below.
- Clear lack of research ability. Note: this is not applicable to the coursework M.A.
- Lack of significant research progress.
- Failure to fulfill Teaching Assistant responsibilities.

I.

Center for Transformative Teaching and Learning (CTTL) or acquisition of a faculty teaching advisor).

- *"Unsatisfactory" rating on the student's progress*

Student progress will be rated each year. An "unsatisfactory" rating may preclude a student from receiving an assistantship renewal and may lead to termination from the program altogether. This includes research progress. It is expected that the student make significant research progress towards their degree. It is the expectation that by the end of the 2nd year, the student should have 1 published paper. An unsatisfactory rating may be given if this is not the case and the student's committee feels that the student has made inadequate research progress.

For incoming students and/or students without a prior Assistantship

1. English-speaking ability (as determined by the ESL Program). This aspect is required for effective teaching of undergraduate students as part of the Teaching Assistant's duties.
2. Academic standing. Includes undergraduate grade point average (GPA) and Graduate Record Examination (GRE) General Test scores.
3. Letters of reference and any additional materials (publications, presentations, etc.).
4. Students currently enrolled in the graduate program, but not supported by an assistantship, are in competition with the current applicant pool for Teaching Assistantship awards. In other words, that student does not receive priority simply due to being enrolled in the graduate program. However, the committee will solicit a letter from the student's mentor and examine current academic standing to aid in the decision process.

(iv) *Teaching Assistant Duties*

Teaching Assistants will be assigned by the Program Coordinator and Chairperson of the department to instructional duties in the courses, lectures, and laboratories offered by the department. The appointment is half-time, and teaching duties will not require more than 20 hours per week (thus allowing the student to spend substantial time in laboratory research). The duties will include instructional time in the classroom or laboratory, necessary preparation for class or lab, marking papers, and other instructional activities as required. Teaching Assistants must also arrange for reasonable "office hours" for meeting with undergraduate students, and inform their students of the time and place of office hours. The department will provide a suitable office or other place for Teaching Assistants to meet with their students.

Students who begin their assistantships/fellowships during the summer are required to begin their residence at this time. Students may be assigned teaching responsibilities. Students should contact the Program Coordinator to arrange their summer schedule as soon as they are notified that they have received an assistantship.

(v) *Teaching Assistantship evaluations*

Semester evaluations are to be completed by both faculty instructors overseeing the Teaching Assistant as well as by students being taught by the Teaching

    d. PPY 5410 – Molecular Pharmacology (3) OR PPY 5110 – Introduction to Pharmacology (1) plus PPY 5120 – Systems Physiology and Pharmacology I (2)
    e. Graduate Reading Course CHEB-5980 (3)
    f. Research Topics CHEB-5970 (3)
2. Electives (12 credit hours) selected from 5000 level courses selected in consultation with the Program Coordinator. Electives should be selected from Chemistry, Biology, Pharmacology or Biochemistry Departments.
3. Private oral examination

This program is intended for part-time students, usually from industry, who want a coursework M.A. degree, which can be partially completed at night. See the corresponding worksheet for more details.

<u>M.A. Program for students desiring to transition into a SLU Ph.D. program</u>

This program is intended for research students who want to eventually transition into a SLU Ph.D. program. This program does not require thesis research or the writing of a thesis. Students in this program transition into the Ph.D. program prior to completing the 30 hours required for a Master's degree and are NOT awarded a Master's degree. Below is an overview of the program. Also see the corresponding worksheet.

1. Core Requirements (18 credit hours)
    a. CHEB 5110 – Introduction to Chemical Biology Research I (1)
    b. CHEB 5120 – Introduction to Chemical Biology Research II (2)
    c. CHEB 5630 – Introduction to Chemical Biology and Biotechnology (3)
    d. CHEM 5470 – Introduction to Medicinal Chemistry (3)
    e. BIOL 5700 – Advanced Molecular Biology (3)
    f. PPY 5410 – Molecular Pharmacology (3) OR PPY 5110 – Introduction to Pharmacology (1) plus PPY 5120 – Systems Physiology and Pharmacology I (2)
    g. Research Topics CHEB-5970 (3)
2. Electives (6 credit hours) selected from 5000 level courses in consultation with student's research mentor. Electives should be selected from Chemistry, Biology, Pharmacology or Biochemistry Departments.

and give the mentor feedback on the

Worksheet for thesis-based M.S. in Chemical Biology (research-based)

The M.S. degree offers specialization in the field of chemical biology, with cross-disciplinary activity encouraged. It is a 30 credit-hour program described in detail in the Chemical Biology Master's Program Handbook. See the university 5/15 Td[M)-4 (a)1 (s.1 (5/15 4 (i)-6 Td[a2S[M)-4 (a)1 (s.1

(h)-110 (M)-1 (.S)-44(.)]TJ-0 924-ed M.S. M.S. M.S heet f

Worksheet for part-time M.A. in Chemical Biology

The part-time M.A. degree offers specialization in the field of chemical biology, with cross-disciplinary activity encouraged. It is a 30 credit-hour program designed for part-time students (not doing research) who are usually from industry and are interested in a coursework-based M.A described in detail in the Chemical Biology Master's Program Handbook. degree. See the university course catalog and departmental websites for more descriptions on the required and elective courses.

Requirement		Course Taken	Semester Completed (# credit hrs)
Example		*CHEM-5470*	*Fall 2019 (3)*
Core **(18 credit hrs)**	Chemical Biology CHEB-5630 (3)		
	Medicinal Chemistry CHEM 5470 (3)		
	Advanced Molecular Biology BIOL 5700 (3)		
	Pharmacology PPY 5410 (3) OR PPY 5110 (1) plus PPY 5120 (2)		
	Research Topics. Must be taken during the		

Worksheet for full-time M.A. in Chemical Biology

The majority of the students doing this program usually want to transfer into a SLU Ph.D. program at the end of their 2nd year. The procedure for doing this is outlined in the Chemical Biology Master's Program Handbook.

<table>
<tr><th colspan="2">Requirement</th><th>Course Taken</th><th>Semester Completed (# credit hrs)</th></tr>
<tr><td colspan="2" align="right">Example</td><td>CHEM-5470</td><td>Fall 2019 (3)</td></tr>
<tr><td rowspan="7">Core

(18 credit hrs)</td><td colspan="2">Intro to Chemical Biology Research I CHEB-5110 (1)</td><td></td></tr>
<tr><td colspan="2">Intro to Chemical Biology Research II CHEB-5120 (2)</td><td></td></tr>
<tr><td colspan="2">Chemical Biology CHEB-5630 (3)</td><td></td></tr>
<tr><td colspan="2">Medicinal Chemistry CHEM 5470 (3)</td><td></td></tr>
<tr><td colspan="2">Advanced Molecular Biology BIOL 5700 (3)</td><td></td></tr>
<tr><td colspan="2">Pharmacology PPY 5410 (3) OR PPY 5110 (1) plus PPY 5120 (2)</td><td></td></tr>
<tr><td>Research Topics. Must be taken during the summer between the 1st and 2nd year in the program for 3 credit hours. (CHEB-5970)</td><td></td><td></td></tr>
<tr><td rowspan="3">Electives (6 credit hrs)</td><td colspan="3">Selected from 5000 level courses in consultation with research mentor.</td></tr>
<tr><td>Elective 1 (3 credit hours)</td><td></td><td></td></tr>
<tr><td>Elective 2 (3 credit hours)</td><td></td><td></td></tr>
<tr><td colspan="3" align="right">Total # of hours (should be 24):</td><td></td></tr>
</table>