

CHEMISTRY (CHEMISTRY)

CHEMISTRY 206 Laboratory Rotation in Chemistry and Chemical Biology (1-10 Units) Fall, Winter, Spring, Summer

Instructor(s): Staff

Prerequisite(s): Consent of instructor.

Restrictions: More than 4 rotations requires consent of the Program Director.

Activities: Lab science

A laboratory rotation course to familiarize new students in the Graduate Program in Chemistry and Chemical Biology with various approaches to research in the pharmaceutical sciences.

School: Graduate Division

Department: Chemistry And Chemical Biology Program

May the student choose the instructor for this course? Yes

Does enrollment in this course require instructor approval? No

Course Grading Convention: Letter Grade

Graduate Division course: Yes

Is this a web-based online course? No

Is this an Interprofessional Education (IPE) course? No

May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

Repeat course for credit? Yes

CHEMISTRY 219 Special Topics in Basic and Translational Chemical Biology (3 Units) Fall, Winter, Spring

Instructor(s): Staff

Prerequisite(s): None. Completion of 1st year curriculum in Chemistry and Chemical Biology or another experimental biology graduate program is helpful, but not essential.

Restrictions: Chemistry and Chemical Biology graduate students, other graduate and professional students with interest in Chemical Biology. Permission from instructor is required.

Activities: Lecture, Independent Study

Each course offering will focus on the literature of a current area of Chemical Biology research. Students will be expected to read assigned papers critically before class and then be prepared to ask questions. In addition, each student will select a paper and lead that discussion. To further enhance the educational mission, each student will work with the instructor and other faculty coaches in preparing their presentation.

School: Graduate Division

Department: Chemistry And Chemical Biology Program

May the student choose the instructor for this course? Yes

Does enrollment in this course require instructor approval? No

Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

Graduate Division course: Yes

Is this a web-based online course? No

Is this an Interprofessional Education (IPE) course? No

May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

Repeat course for credit? Yes

CHEMISTRY 221 Research Conf in Chem, Chem Biol & Biophysics (1 Units) Fall, Winter, Spring

Instructor(s): Jason Gestwicki

Prerequisite(s): Graduate standing in the CCB program.

Restrictions: None.

Activities: Seminar

A series of weekly research conferences by visiting lecturers, on the broad topics of chemistry and chemical biology. In this course, students attend the seminar and then engage in a lively discussion session. In addition, a subset of students each week will also attend lunch with the visiting speaker.

School: Graduate Division

Department: Chemistry And Chemical Biology Program

May the student choose the instructor for this course? No

Does enrollment in this course require instructor approval? No

Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

Graduate Division course: Yes

Is this a web-based online course? No

Is this an Interprofessional Education (IPE) course? No

May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes

Repeat course for credit? Yes

CHEMISTRY 223 Scientific Communication Seminar (1 Units) Fall, Winter, Spring*Instructor(s):* Jason Gestwicki*Prerequisite(s):* None.*Restrictions:* None.*Activities:* Seminar

This seminar will provide graduate students with a forum in which to develop seminar and poster presentation skills; critically organize and critically review scientific data; and analyze and question oral scientific presentations.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** Yes**CHEMISTRY 225 Graduate Research Opportunities (1 Units) Fall, Winter, Spring***Instructor(s):* Jason Gestwicki*Prerequisite(s):* None.*Restrictions:* None.*Activities:* Seminar

A series of weekly presentations of the research interests of the basic science faculty in the CCB program. The purpose is to acquaint new graduate students with the research in these laboratories, so that they can make informed decisions about collaborations, research rotations and thesis laboratory projects.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** Yes**CHEMISTRY 243 Chemical Biology (5 Units) Fall***Instructor(s):* Charles Craik*Prerequisite(s):* None*Restrictions:* None*Activities:* Lecture

The basics of chemical biology will be discussed, with a particular emphasis on how chemical methods can be used to understand and manipulate complex biochemical and biological phenomena. Discussion periods will focus on applications in a range of topics, including macromolecular structure, protein function and signaling mechanisms. This course includes didactic lectures from experts in chemical biology, along with journal club discussions and the preparation and defense of an original proposal.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** Letter Grade**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** No**CHEMISTRY 244 Reaction Mechanisms (3 Units) Winter***Instructor(s):* Ian Seiple*Prerequisite(s):* Graduate standing or consent of instructor.*Restrictions:* None*Activities:* Lecture

This course is designed to develop the student's knowledge of organic mechanisms. This interactive course involves some lectures, but enforces student learning through intensive arrow pushing sessions with students at the board. Topics include electrocyclic reactions, Woodward-Hoffman rules, sigmatropic reactions, migration reactions, neighboring group effects, carbanions and free radicals, carbenoids, nitrenes, six-membered heterocyclic rings, five-membered heterocyclic rings.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** Letter Grade**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** No

CHEMISTRY 250 Research (1-8 Units) Fall, Winter, Spring, Summer*Instructor(s):* Staff*Prerequisite(s):* CHEMISTRY 225*Restrictions:* NA*Activities:* Project

In this course, students will work together with a primary research advisor to select a research question and design a project workplan that will be carried out by the student. Through this activity, the student will gain experience in research strategy, learn techniques associated with modern biomedical research and practice how to interpret results. At the conclusion of the course, the student will present on their progress.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** Yes**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** No**CHEMISTRY 266 Research Planning Conference (1 Units) Fall, Winter, Spring***Instructor(s):* Staff*Prerequisite(s):* Consent of instructor*Restrictions:* None

Discussion and practice of research problem formulation and experimental design. Sessions are organized around students' interests by faculty within the area of specialization.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** Yes**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** Letter Grade**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** Yes**CHEMISTRY 297 Chemistry and Chemical Biology Journal Club (1 Units) Fall, Winter, Spring***Instructor(s):* Jim Wells*Prerequisite(s):* None.*Restrictions:* None.*Activities:* Seminar

Readings and conferences based on topics in chemistry and chemical biology. Students are required to present in journal club, once in the first year and once in the second year. This experience will assist students in perfecting communication skills of the scientific literature.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** No**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** Yes**CHEMISTRY 311 Curricular Development and Academic Leadership (0.5-4 Units) Fall, Winter, Spring***Instructor(s):* Jason Gestwicki*Prerequisite(s):* None*Restrictions:* CCB students only*Activities:* Seminar, Workshop, Lab skills, Discussion

The Curricular Development & Academic Leadership course will offer training and leadership to prepare graduate students in scientific leadership roles in the classroom and beyond. Students will have a hands-on approach to structuring and executing a curriculum. Students must submit an application prior to course enrollment.

School: Graduate Division**Department:** Chemistry And Chemical Biology Program**May the student choose the instructor for this course?** No**Does enrollment in this course require instructor approval?** Yes**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)**Graduate Division course:** Yes**Is this a web-based online course?** No**Is this an Interprofessional Education (IPE) course?** No**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes**Repeat course for credit?** No