BIOCHEMISTRY (BIOCHEM)

BIOCHEM 198  Supervised Study  (1-6 Units)  Fall, Winter, Spring, Summer
Instructor(s): Staff
Prerequisite(s): Consent of instructor.

Restrictions: None.
Activities: Independent Study

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department.

School: Medicine
Department: Biochemistry And Biophysics
May the student choose the instructor for this course? Yes
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade, P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
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? No
Repeat course for credit? No

BIOCHEM 200A  Structure of Macromolecules  (3 Units)  Fall
Instructor(s): Dyche Mullins
Prerequisite(s): Calculus, physical chemistry, organic chemistry, and an advanced course in biology.

Restrictions: Instructor approval required for non-Tetrad students.
Activities: Lecture

Training in the fundamental principles governing the behaviors of biological macromolecules and the use of modern techniques in the study of these behaviors. Topics covered are: thermodynamics (entropy, equilibrium, cooperative interactions); kinetics and catalysis; structure and function of macromolecules (DNA, membranes, proteins) by X-ray and electron optics; kinetics and structure of cooperative enzymes and systems of biological control. Special emphasis on small group discussion format.

School: Graduate Division
Department: Biochemistry And Molecular Biology Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? Yes
Course Grading Convention: Letter Grade, 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

BIOCHEM 210  Special Topics  (3 Units)  Fall, Winter, Spring
Instructor(s): Staff
Prerequisite(s): None

Restrictions: First-year graduate students. All other graduate and professional students with permission of Program and instructor.
Activities: Lecture, Independent Study

Discussion of selected areas in biochemistry, biophysics, and biomathematics.

School: Graduate Division
Department: Biochemistry And Molecular 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

BIOCHEM 201A  Biological Regulatory Mechanisms  (4 Units)  Winter
Instructor(s): Joachim J. Li
Prerequisite(s): Calculus, physical chemistry, organic chemistry, introductory biochemistry, an advanced course in biology, and Genetics 200A.

Restrictions: Instructor approval required
Activities: Lecture, Project, Workshop

Understanding the molecular basis for fundamental regulatory principles underlying biological processes. Topics covered are: DNA replication, RNA transcription, genome structure and organization, protein translation.

School: Graduate Division
Department: Biochemistry And Molecular Biology Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? Yes
Course Grading Convention: Letter Grade, 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

BIOCHEM 200A  Biological Regulatory Mechanisms  (4 Units)  Winter
Instructor(s): Joachim J. Li
Prerequisite(s): Calculus, physical chemistry, organic chemistry, introductory biochemistry, an advanced course in biology, and Genetics 200A.

Restrictions: Instructor approval required
Activities: Lecture, Project, Workshop

Understanding the molecular basis for fundamental regulatory principles underlying biological processes. Topics covered are: DNA replication, RNA transcription, genome structure and organization, protein translation.

School: Graduate Division
Department: Biochemistry And Molecular Biology Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? Yes
Course Grading Convention: Letter Grade, 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
BIOCHEM 215 Laboratory Rotation (3 Units) Fall, Winter, Spring, Summer
Instructor(s): Kaveh Ashrafi
Prerequisite(s): Consent of instructor

Restrictions: Must be enrolled in the Tetrad Graduate Program
Activities: Laboratory

A laboratory rotation course to familiarize new departmental graduate students with various approaches to biochemical and biophysical research.

School: Graduate Division
Department: Biochemistry And Molecular 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

BIOCHEM 221 Selected Topics (1 Units) Fall, Winter, Spring
Instructor(s): Kaveh Ashrafi
Prerequisite(s): None

Restrictions: Must be a current Tetrad student
Activities: Seminar

Presentations of selected topics in biochemistry by graduate students in the Department of Biochemistry.

School: Graduate Division
Department: Biochemistry And Molecular 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, 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

BIOCHEM 241 Startup 101 (3 Units) Winter
Instructor(s): Charles S. Craik
Prerequisite(s): No

Restrictions: No
Activities: Lecture, Project

This course examines how to build impactful, scalable life science/healthcare businesses from a science/technology base. Guest lectures will be delivered by entrepreneurs, investors and industry experts on topics such as opportunity recognition, business models, intellectual property, clinical/regulatory, reimbursement, capital and investor presentations. The final session will be an opportunity to pitch to investors for feedback. Enrollment is by application.

School: Graduate Division
Department: Biochemistry And Molecular 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

BIOCHEM 250 Research (1-8 Units) Fall, Winter, Spring, Summer
Instructor(s): Staff
Prerequisite(s): Completion of 2 quarters of Biochem 215 in the year prior

Restrictions: Students must be in year 2 or above
Activities: Laboratory, Independent Study

The course is intended to give students hands-on experience in investigation of a fundamental question in biology using modern techniques and approaches in Biochemistry. The scope of the research project, formulation of hypothesis, and the necessary experimental approaches taken to test the hypothesis will be determined based on active input from the student and the lab's Principle Investigator. The student is expected to become increasingly independent in each of these aspects of the project.

School: Graduate Division
Department: Biochemistry And Molecular 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