

Chemistry C230: Protein Chemistry, Enzymology, and Bio-organic Chemistry

This course will cover the chemistry of enzyme-catalyzed reactions. The first half of the course will focus on mechanisms of enzymatic transformations and methods used to study enzymes. The second half of the course will focus on the role of enzymes in metabolic pathways and natural products biosynthesis as well as their application to metabolic engineering and synthetic biology

Instructor	Michelle Chang
Office	125 Lewis Hall
E-mail	mcchang@berkeley.edu
Class schedule	Tu Th, 9:30-11:00 am in 433 Latimer
Textbook	None required
Grading	Grading will be based on attendance (33%), in-class presentation (33%), and problem sets (33%).
Final exam	No final exam

Lecture Schedule (Dates are approximate)

Lecture	Date	Topic
1	Jan 18	Introduction to enzymes
2	Jan 20	Enzyme catalysis
3	Jan 25	Enzyme kinetics
4	Jan 27	Experimental methods: Pre-SS kinetics
	Feb 1	No class
5	Feb 3	Experimental methods: Proteases I
6	Feb 8	Experimental methods: Proteases II
7	Feb 10	Organic cofactors I
8	Feb 15	Organic cofactors II
9	Feb 17	Organic cofactors III
10	Feb 22	Metalloenzymes
11	Feb 24	No class
12	Mar 1	Introduction to metabolic engineering/Primary metabolism and biofuels
13	Mar 3	Introduction to natural products/Shikimate/chorismate pathway
14	Mar 8	Polyketides
15	Mar 10	Isoprenoids
16	Mar 15	Class presentations
17	Mar 17	Class presentations