

2020 Fall Biological Chemistry Courses

Class No.	Course No.	Title	Instructor	Cr. Hrs.	Semester
17126	BLCHM 6050	Faculty Research Interest Session	Kay	0.5	First Half Semester
Presentations on research interests of faculty in the Biological Chemistry Graduate Program.					
<i>Days/times/locations to be arranged by instructor</i>					
17125	BLCHM 6400	Genetic Engineering	Ducker/Miller	2.0	Second Half Semester
This course covers essential techniques used in genetic engineering. Assuming modest background in biology, the course introduces fundamental aspects of molecular biology including mechanisms for storage of information in DNA and transfer of this information to RNA and protein molecules. Manipulations of DNA molecules to rearrange or remodel genetic information (cloning) are described from both theoretical and practical viewpoints. Topics covered include the use of restriction endonucleases, amplification of DNA sequences using the polymerase chain reaction (PCR), detection of DNA and RNA using hybridization (Southern and Northern blotting), properties of cloning vectors and their use in constructing genomic and cDNA libraries, DNA sequencing and sequence analysis, creating and detecting mutations in DNA and introducing these mutations into a genome, and expression and characterization of proteins.					
<i>MWF 8:35AM-9:25AM, Widtsoe Building (JWB) 335</i>					
1904	BLCHM 6410	Protein & Nucleic Acid Biochemistry	Bass/Sigala	2.0	First Half Semester
The Biochemistry course covers the structure and function of nucleic acids and proteins, as well as the thermodynamics and kinetics of their interactions with each other and with other biologically important molecules. It is expected that all students have taken an undergraduate course in Biochemistry, and you may find it useful to review chapters discussing the above-mentioned subjects in an undergraduate Biochemistry textbook. You will also need to have a basic working knowledge of kinetics and thermodynamics. (So, if you are not comfortable working with equilibrium constants, free energies, and rate constants, please review these topics in an undergraduate chemistry text.) There are no required texts for this class; readings from various texts will be made available to the class. Some professors may administer a pre-quiz at the start of their lectures to make sure you are adequately prepared for the material to be covered. To receive further details and updates, please contact eloertscher@genetics.utah.edu . For more information please go to: http://www.bioscience.utah.edu/curriculum/corecourses.html					
<i>MWF 10:45AM-11:35AM, Eyring Chemistry Building (HEB) 2004</i>					
1905	BLCHM 6450	Biophysical Chemistry	Swanson-Voth	2.0	Second Half Semester
Topics covered include: Basics of thermodynamics and statistical mechanics, with applications in biochemistry; transport phenomena; enzyme kinetics and inhibition; kinetic isotope effects; principles and applications of absorbance, fluorescence, and CD spectroscopies.					
<i>MWF 9:35AM-10:40AM, Warnock Engineering Building (WEB) 1230</i>					
7642	BLCHM 6460	Protein Chemistry	Bandarian	2.0	First Half Semester
This is a one half semester course which focuses on the mechanisms of chemical reactions involving peptides and proteins and methods for their study. Subject matter includes enzyme mechanisms, chemical modification of proteins and cofactor chemistry. Prerequisite: organic chemistry.					
<i>MWF 8:20AM-9:25AM, Warnock Engineering Building (WEB) L104</i>					
6514	MBIOL 7570	Case Studies and Research Ethics	Havstad	1.0	9/16/2020 to 11/11/2020
An examination of research integrity and other ethical issues involved in scientific research. Topics may include scientific fraud, conflicts of interest, plagiarism and authorship designation, and the role of science in formulating social policy. This course is designed for graduate students, post-docs and regular faculty in the sciences.					
<i>W 4:00PM-5:30PM, Online</i>					
17924	BLCHM 7960	Research Lab Rotations	-	2.0	Full Semester

*For questions regarding Fall courses please contact The Bioscience Program Office (bioscience@genetics.utah.edu)