

## 2018 Fall Biological Chemistry Courses

Class No.	Course No.	Title	Instructor	Cr. Hrs.	Semester
2041	BLCHM 6050	Faculty Research Interest Seminar	-	0.5	TBD
<p>This course highlights faculty members and their research. Schedule will be announced in Fall.</p> <p><b>MWF 9:40-10:30AM, TBD</b></p>					
2042	BLCHM 6400	Genetic Engineering	TBD	2.0	Second Half Semester
<p>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.</p> <p><b>MWF 8:35-9:25AM, AEB 340</b></p>					
2043	BLCHM 6410	Protein & Nucleic Acid Biochemistry	Sigala	2.0	First Half Semester
<p>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 <a href="mailto:eloertscher@genetics.utah.edu">eloertscher@genetics.utah.edu</a>. For more information please go to: <a href="http://www.bioscience.utah.edu/curriculum/corecourses.html">http://www.bioscience.utah.edu/curriculum/corecourses.html</a></p> <p><b>MWF 10:45-11:35AM, ASB 210</b></p>					
2044	BLCHM 6450	Biophysical Chemistry	Buck-Koehntop	2.0	Second Half Semester
<p>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.</p> <p><b>MWF 9:35-10:40AM, CSC 1012</b></p>					
8605	BLCHM 6460	Protein Chemistry	Bandarian	2.0	First Half Semester
<p>This course 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.</p> <p><b>MWF 8:20-9:10 AM, JTB 130</b></p>					
7253	MBIOL 7570	Scientific Integrity & Ethics of Science Research	Figuroa/Washington	1.0	9/12/2018 to 11/14/2018
<p>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. Aug 31 – Nov 2.</p> <p><b>W 4:00-5:30PM, HSEB 1750</b></p>					
2046	BLCHM 7960	Research Lab Rotations	-	2.0	Full Semester

\*For questions regarding Fall courses please contact Jessica Betenson in the Bioscience Program Office ([jessica.betenson@utah.edu](mailto:jessica.betenson@utah.edu))