

Objective: In the first part of the two-semester sequence, introductory topics from the chemistry of life processes will be discussed.

Class: M/W/F 10:00 a.m.-10:50 a.m. in Archives building presentation room **A03-0315**

Text: Berg J. M., Tymoczko J. L., Stryer L., Biochemistry, 7th edition, W. H. Freeman and Company, New York, 2012.

Prerequisite: Bio 111 and Chem 252+256 (or Chem 254). If you do not have this prerequisite, you should not be in the class. Talk to the instructors first.

Instructors:

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Course website: <http://alpha.chem.umb.edu/chemistry/biochm383/> and on the **Blackboard**

Proposed class schedule: (subject to change, excluding exam dates)

Date	Topic	Chapter	Instructor(s)
SEP 5 W	Announcements, Introduction	1	Sugumaran, Torok
SEP 7 F	Protein Composition and Structure	2	Sugumaran
SEP 10 M	Protein Composition and Structure	2	Sugumaran
SEP 12 W	Exploring Proteins and Proteomes	3	Sugumaran
SEP 14 F	Exploring Proteins and Proteomes	3	Sugumaran
SEP 17 M	DNA, RNA and the Flow of Information	4	Sugumaran
SEP 19 W	Exploring Genes and Genomes	5	Sugumaran
SEP 21 F	Hemoglobin: Portrait of a Protein in Action	7	Sugumaran
SEP 24 M	Hemoglobin: Portrait of a Protein in Action	7	Sugumaran
SEP 26 W	Exam #1 (Chapters 1-5 and 7)		Sugumaran
SEP 28 F	Enzymes: Basic Concepts and Kinetics	8	Sugumaran
OCT 1 M	Enzymes: Basic Concepts and Kinetics	8	Sugumaran
OCT 3 W	Catalytic Strategies	9	Sugumaran
OCT 5 F	Catalytic Strategies	9	Sugumaran
OCT 8 M	<i>Columbus Day Holiday</i>		
OCT 10 W	Regulatory Strategies	10	Sugumaran
OCT 12 F	Regulatory Strategies	10	Sugumaran
OCT 15 M	Carbohydrates	11	Sugumaran
OCT 17 W	Lipids and Cell Membranes	12	Sugumaran
OCT 19 F	Lipids and Cell Membranes	12	Sugumaran
OCT 22 M	Exam #2 (Chapters 8-12)		Sugumaran
OCT 24 W	Membrane Channels and Pumps	13	Torok
OCT 26 F	Membrane Channels and Pumps	13	Torok
OCT 29 M	Signal-Transduction Pathways	14	Torok
OCT 31 W	Signal-Transduction Pathways	14	Torok
NOV 2 F	Metabolism: Basic Concepts and Design	15	Torok
NOV 5 M	Metabolism: Basic Concepts and Design	15	Torok
NOV 7 W	Glycolysis and Gluconeogenesis	16	Torok
NOV 9 F	Exam #3 (Chapters 13-15)		Torok
NOV 12 M	<i>Veterans Day Holiday</i>		
NOV 14 W	Glycolysis and Gluconeogenesis	16	Torok
NOV 16 F	Glycolysis and Gluconeogenesis	16	Torok
NOV 19 M	The Citric Acid Cycle	17	Torok
NOV 21 W	The Citric Acid Cycle	17	Torok
NOV 22-25 Th-Su	<i>Thanksgiving Recess</i>		
NOV 26 M	Oxidative Phosphorylation	18	Torok

Nov 28 W	Oxidative Phosphorylation	18	Torok
Nov 30 F	The Light Reactions of Photosynthesis	19	Torok
DEC 3 M	Exam #4 (Chapters 16-18)		Torok
DEC 5 W	The Light Reactions of Photosynthesis	19	Torok
DEC 7 F	The Calvin Cycle and PPP	19	Torok
DEC 10 M	The Calvin Cycle and PPP	19	Torok
Dec 12 W	Classes end - Review		Sugumaran, Torok
DEC 14-20	Final Exam (Chapters 1-5 and 7-19)		Sugumaran, Torok
DEC 21 Fri	<i>Snow make-up day (if needed)</i>		

Homework:

Selected practice problems will be posted on the course website regularly.

Absence policy and exams:

Attendance to class is compulsory. Attendance is taken at the beginning of all classes. Four hourly exams and a cumulative final exam are scheduled for the semester. The lowest score from the four hourly exams will be dropped. There are no make-up exams. Your missed hourly exam will be your dropped exam. In case of any serious problems, contact us in advance.

Grading:

The final grade is based on the three best hourly exams (3X100 points total) and the final exam (200 points total). The grade equivalences are as follows:

<i>Points Earned</i>	<i>%</i>	<i>Grade</i>
500-450	>90	A
449-430	>86	A-
429-410	>82	B+
409-390	>78	B
389-370	>74	B-
369-350	>70	C+
349-330	>66	C
329-310	>62	C-
309-290	>58	D+
289-270	>54	D
269-250	>50	D-
below 250	<50	F

Accommodations

The University of Massachusetts Boston is committed to providing reasonable academic accommodations for all students with disabilities. This syllabus is available in alternate format upon request. If you have a disability and feel you will need accommodations in this course, please contact the Ross Center for Disability Services, Campus Center, Upper Level, Room 211 at 617.287.7430. <http://www.umb.edu/academics/vpass/disability/> After registration with the Ross Center, a student should present and discuss the accommodations with the professor. Although a student can request accommodations at any time, we recommend that students inform the professor of the need for accommodations by the end of the Drop/Add period to ensure that accommodations are available for the entirety of the course.

Code of Conduct and Academic Integrity

It is the expressed policy of the University that every aspect of academic life--not only formal coursework situations, but all relationships and interactions connected to the educational process--shall be conducted in an absolutely and uncompromisingly honest manner. The University presupposes that any submission of work for academic credit is the student's own and is in compliance with University policies, including its policies on appropriate citation and plagiarism. These policies are spelled out in the Code of Student Conduct. Students are required to adhere to the Code of Student Conduct, including requirements for academic honesty, as delineated in the University of Massachusetts Boston Graduate Catalogue and relevant program student handbook(s) http://www.umb.edu/life_on_campus/policies/code.