

Objective: In the second part of the two semester sequence, topics from metabolism, DNA replication and repair, transcription, translation and other special areas of biochemistry will be discussed.

Class: M/W/F 10:00 a.m. - 10:50 a.m. in Wheatley W01-0004.

Prerequisites: BIOCHM 383 and BIOL 210/212.

Text:

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

Instructor:

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Office Hours: Wed 11:00 a.m.-12:00 noon & Fri 11:00 a.m.-1:00 p.m. Other times by appointment.

Course website:

<http://alpha.chem.umb.edu/chemistry/biochm383/> and on the [Blackboard Learn](#).

Proposed class schedule:

(subject to change, except exam dates)

Date	Topic	Chapter
JAN 28 M	Announcements	
JAN 30 W	The Calvin Cycle and Pentose Phosphate Pathway	20
FEB 1 F	The Calvin Cycle and Pentose Phosphate Pathway	20
FEB 4 M	The Calvin Cycle and Pentose Phosphate Pathway	20
FEB 6 W	Glycogen Metabolism	21
FEB 8 F	Glycogen Metabolism	21
FEB 11 M	Glycogen Metabolism	21
FEB 13 W	Fatty Acid Metabolism	22
FEB 15 F	Fatty Acid Metabolism	22
FEB 18 M	Presidents Day (Holiday)	
FEB 20 W	Fatty Acid Metabolism	22
FEB 22 F	Exam #1	
FEB 25 M	Protein Turnover and Amino Acid Catabolism	23
FEB 27 W	Protein Turnover and Amino Acid Catabolism	23
MAR 1 F	Protein Turnover and Amino Acid Catabolism	23
MAR 4 M	The Biosynthesis of Amino Acids	24
MAR 6 W	The Biosynthesis of Amino Acids	24
MAR 8 F	The Biosynthesis of Amino Acids	24
MAR 11 M	Nucleotide Biosynthesis	25
MAR 13 W	Exam #2	
MAR 15 F	Nucleotide Biosynthesis	25
MAR 17-24 (Su-Su)	Spring Vacation	
MAR 25 M	Biosynthesis of Membrane Lipids and Steroids	26
MAR 27 W	Biosynthesis of Membrane Lipids and Steroids	26
MAR 29 F	The Integration of Metabolism	27
APR 1 M	The Integration of Metabolism	27
APR 3 W	The Integration of Metabolism	27
APR 5 F	DNA Replication, Repair and Recombination	28
APR 8 M	Exam #3	
APR 10 W	DNA Replication, Repair and Recombination	28
APR 12 F	RNA Synthesis and Processing	29
APR 15 M	Patriots Day (Holiday)	
APR 17 W	RNA Synthesis and Processing	29
APR 19 F	Protein Synthesis	30
APR 22 M	Protein Synthesis	30

Date	Topic	Chapter
APR 24 W	Sensory Systems	33
APR 26 F	Sensory Systems	33
APR 29 M	Sensory Systems	33
MAY 1 W	Exam #4	
MAY 3 F	Molecular Motors	35
MAY 6 M	Molecular Motors	35
MAY 8 W	Drug Development	36
MAY 10 F	Drug Development	36
MAY 13 M	Drug Development	36
MAY 15 W	Review	
MAY 20-24 (M-F)	Final Exam Period	

Homework:

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

Exams:

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 me 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:

Section 504 of the Americans with Disabilities Act of 1990 offers guidelines for curriculum modifications and adaptations for students with documented disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center for Disability Services, M-1-401, 617-287-7430. The student must present these recommendations and discuss them with each professor within a reasonable period, preferably by the end of Drop/Add period.

Student Conduct:

Students are required to adhere to the University Policy on Academic Standards and Cheating, to the University Statement on Plagiarism and the Documentation of Written Work, and to the Code of Student Conduct as delineated in the University Catalog and Student Handbook. The Code is available online at:

http://www.umb.edu/life_on_campus/policies/code/