

Syllabus Chem 371-001: Biochemistry II
Department of Chemistry and Biochemistry

Instructor: Dali Liu Ph.D. Associate Professor
Office: FH-422
Phone: 773-708-3093
Lecture: Tu&Th 1:00 PM-2:15 PM, Dumbach Hall-117
Discussion: Tu 2:30 PM-3:20 PM, Flanner Hall-105
 Wed 2:45 PM-3:35 PM, Flanner Hall-105
Office Hours: Wed 1:30 - 2:30 PM (Or appointment at mutual conveniences.)
Email: dliu@luc.edu *A quick response outside of work hours may not be guaranteed.
Text Book: Biochemistry 8th Edition, by JM. Berg, JL. Tymoczko, L. Stryer

**This documents is subject to correction and update.*

Schedule of Lectures:

#	Day	Date	Topic	Chapter
Energy Metabolism (Continued...)				
1.	Tu	1/16	Photosynthesis	19
2.	Th	1/18	Photosynthesis	20
3.	Tu	1/23	Glycogen Metabolism	21
4.	Th	1/25	Glycogen Metabolism/ Fatty Acid Metabolism	21
5.	Tu	1/30	Fatty Acid Metabolism	22
6.	Th	2/1	Fatty Acid Metabolism/Review	22
7.	Tu	2/6	Test 1	19-22
Nitrogen Metabolism				
8.	Th	2/8	Protein Turnover/Amino Acid Catabolism	23
9.	Tu	2/13	Protein Turnover/Amino Acid Catabolism	23
10.	Th	2/15	Amino Acid Biosynthesis	24
11.	Tu	2/20	Amino Acid Biosynthesis	24
12.	Th	2/22	Nucleotide Biosynthesis	25
13.	Tu	2/27	Nucleotide Biosynthesis	25
14.	Th	3/1	Test 2	23-25
3/5-10 Spring Break No Class				
Biochemistry in Metabolic Control				
15.	Tu	3/13	The Biosynthesis of Membrane lipids and Steroids	26
16.	Th	3/15	The Integration of Metabolism	27
17.	Tu	3/20	Central Dogma	28-30
18.	Th	3/22	The Control of Gene Expression Prokaryotes	28-30
19.	Tu	3/27	The Control of Gene Expression Prokaryotes	31
3/29 Easter No Class				
20.	Th	4/3	The Control of Gene Expression Eukaryotes	32
21.	Tu	4/5	Test 3	26-27, 31-32
*Chapters 28-30 will be BRIEFLY reviewed but NOT included in Test 3.				
Biochemistry in Physiology and Biomedicine				
22.	Th	4/10	Sensory System	33
23.	Tu	4/12	The Immune System	34
24.	Th	4/17	The Immune System	34
25.	Tu	4/19	Molecular Motors	35
26.	Th	4/24	Drug Development	36
27.	Tu	4/26	Review	
28.	Fri	5/4	Final 1:00 PM-3:00 PM	19-27,31-36

Discussion Activities:

Discussion will be consisted of problem solving practice, contemporary topics in biochemistry, and exam reviews. The quality of the students' work done during discussion will be collected and checked in an unannounced fashion; the students whose work presents satisfactory quality may be awarded up to 5 extra points (in addition to 400 points total) each time an unannounced check is executed.

Week	Dates	Activity
1	1/16, 17	Syllabus Q&A
2	1/23, 24	Alternative Energy (Photosynthesis)
3	1/30, 31	Metabolic Diseases, Diabetes. (Glycogen and Fatty Acid metabolisms)
4	2/6, 7	Test Day/After Test Review
5	2/13, 14	Enzyme Replacement Therapy (Homeostasis)
6	2/20, 21	An Antimicrobial Approaches. (Amino Acid Metabolism)
7	2/27, 28	Review for Test 2 Q&A
	3/7	Spring Break
8	3/13, 14	Lipids, underrated biomolecule (Lipids Metabolism)
9	3/20, 21	Cancer Biochemistry (Nucleotides Metabolism)
10	3/27, 28	Epigenetics (Eukaryotic Gene Regulation)
11	4/ 3, 4	Review for Test 3 Q&A
12	4/10, 11	Autoimmune Diseases and anti inflammation. (Immunology)
13	4/17, 18	Neurodegenerative Diseases (Challenge in Biomedicine)
14	4/24, 25	Final Review Q&A

Tests:

The tests will be a mixture of multiple choices and short essays. The final assay question will be on the contemporary topics covered in the discussion sessions.

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Grading Policy: There are 3 tests and 1 final examination during the course. There will be 100 points possible on each of the three 50-minute tests. There will be 200 points possible on the 2-hour final. The final examination will be comprehensive. If the final counts 200 in total, then the lowest score of the first three will be dropped. Alternately, the final can be scaled back to 100 while keep the first three scores in your total score. Either way the highest possible total will be 400. The letter grade will be determined by **strictly and precisely** using the following scale:

Grading Sale:

A	360
A-	340
B+	320
B	300
B-	280
C+	260
C	240
C-	220
D+	200
D	180
F	160

Any request to move up the letter grade because “it is close” will be declined.

There will be NO make up exam if a student misses it. A missed exam will automatically count as the “drop”, and final will count 200 as mentioned previously. Exam dates cannot be moved ahead of schedule for individuals either.

All emergencies, such as severe weather, medical emergency or family death etc. will need written proof for special consideration. **In-semester travel for non-emergency reasons, such as family reunion, weddings or conferences etc. will not count as emergencies.**

Academic Integrity It should be obvious that all answers on examinations must arise from independent, honest efforts. Nothing less is acceptable at Loyola University Chicago. **Any student found cheating on any exam will receive an automatic “0” for the examination and that 0 cannot be dropped!** The cheating student will be brought to the attention of the Department Chair and the Dean of the College, who will decide if further disciplinary action is necessary. Students should realize that the school misconduct record is **permanent!** During Test, the proctor reserves the right to act preventively including moving certain students to a new location.

Classroom Behaviors It is incumbent upon the students to maintain a professionalism and code of conduct appropriate with the course material and course enrollment. Rude, disruptive behavior (such as talking during lecture) will not be tolerated. While it is acceptable to use laptops or tablets for taking notes, using electronic device for reasons unrelated to class is not permitted. Students surfing Internet will be asked to leave the classroom. Video recording is not permitted.

Sakai: The instructor plan to use the Sakai website (<https://sakai.luc.edu>) for all class notes and announcements. It is essential that you access the site regularly to do well in this class.