

Syllabus Chem 371-001: Biochemistry II (*This document is subject to correction and update.)

Instructor: Dali Liu Ph.D. Associate Professor
Office: FH-422
Phone: 773-708-3093
Pre-requests: Chem 370 Biochemistry I
Lecture: Tu & Th 1:00 PM-2:15 PM, Mundelein Center-204
Discussion: Tu 2:30 PM-3:20 PM, Life Science Building-215
 Th 2:30 PM-3:20 PM, Life Science Building-215
Office Hours: Wed 1:30 - 3:00 PM (Or appointment at mutual convenience.)
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
Sakai: It is essential that you access the site regularly in this class.

Schedule of Lectures:

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

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	1/15, 17	Syllabus Q&A
2	1/22, 24	Alternative Energy (Photosynthesis)
3	1/29, 31	Metabolic Diseases, Diabetes. (Glycogen metabolisms)
4	2/5, 7	Test Day/After Test Review
5	2/12, 14	Enzyme Replacement Therapy (Homeostasis)
6	2/19, 21	An Antimicrobial Approaches. (Amino Acid Metabolism)
7	2/26, 28	Review for Test 2 Q&A/After Test Review
	3/6	Spring Break
8	3/12, 14	<i>From Genomics to Proteomics & Metabolomics</i>
9	3/19, 21	Cancer Biochemistry (Nucleotides Metabolism)
10	3/26, 28	Epigenetics (Eukaryotic Gene Regulation)
11	4/ 2, 4	Review for Test 3 Q&A/After Test review
12	4/9, 11	Autoimmune Diseases and anti-inflammation. (Immunology)
13	4/16, 18	Neurodegenerative Diseases (Challenge in Biomedicine)
14	4/23, 25	Final Review Q&A

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. The final examination will be comprehensive. There will be 200 points possible on the 2-hour final. 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.

Make up Exam Rule **There will be NO makeup exam if a student misses it for non-emergency reasons.** 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 us 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

All students in this course are expected to have read and to abide by the demanding standard of personal honesty, drafted by the College of Arts & Sciences, which can be viewed at: <http://www.luc.edu/cas/advising/academicintegritystatement/> A basic mission of a university is to search for and to communicate the truth as it is honestly perceived. A genuine learning community cannot exist unless this demanding standard is a fundamental tenet of the intellectual life of the community. Students of Loyola University Chicago are expected to know, to respect, and to practice this standard of personal honesty. Academic dishonesty can take several forms, including, but not limited to cheating, plagiarism, copying another student's work, and submitting false documents. Any instance of dishonesty (including those detailed on the website provided above or in this syllabus) will be reported to The Chair of The Department of Chemistry & Biochemistry who will decide what the next steps may be. **(please specify what the punishments will be for transgressions).**

Student Accommodations

If you have any special needs, please let me know in the first week of classes. The university provides services for students with disabilities. Any student who would like to use any of these university services should contact the Student Accessibility Center (SAC), Sullivan Center, (773) 508-3700. Further information is available at <http://www.luc.edu/sac/>.

Accommodations for Religious Reasons

If you have observances of religious holidays that will cause you to miss class or otherwise effect your performance in the class you must alert the instructor ***within 10 calendar days of the first class meeting of the semester*** to request special accommodations, which will be handled on a case by case basis.

Loyola University Absence Policy for Students in Co-Curricular Activities (including ROTC):

Students missing classes while representing Loyola University Chicago in an official capacity (e.g. intercollegiate athletics, debate team, model government organization) shall be allowed by the faculty member of record to make up any assignments and to receive notes or other written information distributed in the missed classes.

Students should discuss with faculty the potential consequences of missing lectures and the ways in which they can be remedied. Students must provide their instructors with proper documentation (develop standard form on web) describing the reason for and date of the absence.

This documentation must be signed by an appropriate faculty or staff member, and it must be provided as far in advance of the absence as possible. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to give the student the opportunity to take the examination at another time. (<https://www.luc.edu/athletheadvising/attendance.shtml>)

Course Repeat Rule

Effective with the Fall 2017 semester, students are allowed only THREE attempts to pass Chemistry courses with a C- or better grade. The three attempts include withdrawals (W). After the second attempt, the student must secure approval for a third attempt. Students must come to the Chemistry Department, fill out a permission to register form or print it from the Department of Chemistry & Biochemistry website: <http://www.luc.edu/chemistry/forms/> and personally meet and obtain a signature from either the Undergraduate Program Director, Assistant Chairperson, or Chairperson in Chemistry. A copy of this form is then taken to your Academic Advisor in Sullivan to secure final permission for the attempt.