

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

**Instructor:** Dali Liu Ph.D  
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**Lecture:** MWF 2:45-3:35 pm, Dumbach Hall 117  
**Discussion:** Monday 11:30 AM-12:20 PM, Mundelein 408  
 Wednesday 11:30 AM-12:20 PM, Cudahy Hall 206  
**Office Hours:** Monday 3:45-4:45 pm, Wednesday 3:45-4:45 pm  
**Text Book:** Biochemistry 7<sup>th</sup> Edition, by JM. Berg, JL. Tymoczko, L Stryer

*\*This documents is subject to correction and update upon finding errors.*

**Schedule of Lectures:**

#	Day	Date	Topic	Chapter
1.	M	1/13	Photosynthesis	19
2.	W	1/15	Photosynthesis	19/20
3.	F	1/17	Photosynthesis	20
	<b>M</b>	<b>1/20</b>	<b>MLK Day No Class</b>	
4.	W	1/22	Glycogen Metabolism	21
5.	F	1/24	Glycogen Metabolism	21
6.	M	1/27	Fatty Acid Metabolism	22
7.	W	1/29	Fatty Acid Metabolism	22
8.	F	1/31	Fatty Acid Metabolism	22
9.	M	2/3	Review for test 1	19-22
10.	W	2/5	Test 1	19-22
11.	F	2/7	Protein Turnover/Amino Acid Metabolism	23
12.	M	2/10	Protein Turnover/Amino Acid Metabolism	23
13.	W	2/12	Amino Acid Biosynthesis	24
14.	F	2/14	Amino Acid Biosynthesis	24
15.	M	2/17	Nucleotide Biosynthesis	25
16.	W	2/19	Nucleotide Biosynthesis	25
17.	F	2/21	The Biosynthesis of Membrane lipids and Steroids	26
18.	M	2/24	The Biosynthesis of Membrane lipids and Steroids	26
19.	W	2/26	Review for Test 2	23-26
20.	F	2/28	Test 2	23-26
	<b>MWF</b>	<b>3/3-8</b>	<b>Spring Break No Class</b>	
21.	M	3/10	DNA replication, repair and recombination.	28
22.	W	3/12	RNA synthesis and Processing	29
23.	F	3/14	Protein Synthesis	30
24.	M	3/17	Protein Synthesis	30
25.	W	3/19	The Control of Gene Expression Prokaryotes	31
26.	F	3/21	The Control of Gene Expression Prokaryotes	31
27.	M	3/24	The Control of Gene Expression Eukaryotes	32

28. W	3/26	The Control of Gene Expression Eukaryotes	32
29. F	3/28	Review for Test 3	28-32
30. M	3/31	Test 3	28-32
31. W	4/2	Sensory System	33
32. F	4/4	Sensory System	33
33. M	4/7	The Immune System	34
34. W	4/9	The Immune System	34
35. F	4/11	Molecular Motors	35
36. M	4/14	Molecular Motors	35
37. W	4/16	Drug Development	36
<i>FM</i>	<i>4/17-21 Easter Holiday No Class</i>		
38. W	4/23	Review for Final	33-36
39. F	4/25	Review for Final	19-32
40. Th	5/1	Final 1:00 PM-3:00 PM	Part I (33-36) & Part II (19-32)

### Discussion Activities:

There will be an opportunity in all discussion sections for you to ask questions but most of these sections (except the ones the week before a test) will have activities planned for them, such as scientific design exercises. The discussions will be on Wednesdays and Fridays at 11:30 am. You should attend the one that you are registered for.

Week	Dates	Activity
1	1/13 & 15	Syllabus, Q & A on Class Organization.
	<i>1/20 &amp; 22</i>	<i>No Discussion, MLK Day</i>
2	1/27 & 29	Photosynthesis and Alternative Energy
3	2/3 & 5	Metabolic Diseases, Obesity, Diabetes.
4	2/10 & 12	Nutritional and Beyond.
5	2/17 & 19	Antimicrobial Approach.
6	2/24 & 26	lipids, underrated biomolecule
	<i>3/3 &amp; 5</i>	<i>Spring Break</i>
7	3/10 & 12	Biochemistry vs. Molecular Biology.
8	3/17 & 19	Chemistry of Genetics
9	3/24 & 26	RNA and short RNA, RNAi.
10	3/31 & 4/2	Epigenetics
11	4/7 & 9	Immunology and Beyond.
12	4/14 & 16	Drug Discovery
	<i>4/21 &amp; 23</i>	<i>No Discussion</i>

**Grading Policy:**

There are 3 tests and a final examination. There will be 100 points possible on each test and 200 on the final. The final will include two Parts: Part I will be mandatory covering 33-36; PART I will count as 100 points in the total. PART II will be optional covering 19-32; Part II can be used to replace the lowest score of the first 3 tests. Or it will be dropped if the score of the Part II is the lowest comparing to those of the first 3. **The total points possible will be 400.**

Re-scheduling tests will be ONLY considered in cases of family death, severe health issues or extreme weather conditions. In cases of those emergencies, the students have to provide written documents for evidence. **Warning!! Travel confliction will NOT be counted as emergency!!** If you miss a test for any non-emergent reason, your final's possible total will automatically count as 200 points.

**\*\*\*This class will have ZERO TOLERANCE towards any conduct of academic dishonesty!\*\*\*** Any student caught cheating will receive an automatic "0" for the test/exam, which will count as 1/4 of the total points! The cheating incident will be reported the Department and the Dean of the College; a permanent record will be retained at University; further actions of discipline may be taken by the School.

**Grading Sale:**

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

**The cut-off will be strictly excuted! Being close will NOT be a reason for grade adjustment!**

**Sakai:**

I 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.

**Help Sessions:**

Students can make individual appointments or email the instructor for help. The instructor will respond as early as he can upon receiving the request. However, the promptness of the response is subject to instructor's daily schedule. Response on holidays and weekends will ONLY be provided at instructor's best availability and will not be guaranteed.