

# Introductory Biochemistry, CHEM 3700, Spring 2009, 3 Credits

CRN# 11565

Section 1, MWF, 1:30-2:20 PM, Main 225

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**Office Hours:** Wed 2:30-3:30 PM (W241)

**Course Content:** In this course, we will cover in one semester the range of topics typically included in the field of biochemistry. Chem 3700 is appropriate for most pre-health professionals, and other pre-professionals who need a complete coverage of biochemistry in less depth. This course contrasts with the chemistry 5700/5710 series, where the same topics are covered in more depth over two semesters. The overall goal of Chem 3700 is to provide students with the big picture of all of the topics typically covered in biochemistry. Further, students will be given more detailed views of the major classes of biological macromolecules, the metabolic pathways used in energy and precursor production, and the information pathways. Prerequisites for the course include chemistry 2300 or 2320 or equivalent.

**Text:** The text used in the class is *Biochemistry* by Berg, Tymoczko, and Stryer, 6<sup>th</sup> edition, 2007, ISBN 0-7167-8724-5. Earlier editions of this book or other current biochemistry books should also work fine. Also used in the class will be *Metabolic Pathways*, 22<sup>nd</sup> ed., by D. E. Nicholson, Sigma-Aldrich (M3782).

**Blackboard:** The lecture notes, exam keys, grade sheet, etc. for this course will be available through the course Blackboard page. This site is found at [bb.usu.edu](http://bb.usu.edu). Blackboard username = Banner ID; Blackboard password = Banner pin. Only students who are registered for the class will have access to the course Blackboard page.

**Exams:** There will be three in-class (50 min) exams and a final (110 min) exam in this course. The three in-class exams are worth 99 points each and will cover material presented in lecture. The exams will have 33 multiple choice questions with each question worth 3 points. The final will have 66 multiple choice questions worth 3 points each for a total of 198 points. Approximately 33 questions on the final will cover lecture material since the third exam, with the remaining questions on the material covered on the three exams. All exams are closed book and are limited to the time assigned for the exam.

**Review Sessions:** Review sessions will be held before each exam. This is an hour long open question and answer review of material covered in class. No new information will be presented. All are from 5:30-6:30 PM: Jan 23 (Fri) ESLC 046; Feb 19 (Thurs) ESLC 046; Mar 26 (Thurs) ESLC 046; Apr 24 (Fri) Widt 007.

**Quizzes:** There will be 12 online quizzes offered throughout the semester. Each quiz will have 5 questions with each question worth 2 points. Quizzes will be taken online through Blackboard. You can take the quiz only during the open period for each quiz (Monday 8 AM to Saturday 10 PM). Once the quiz has closed, there will be no make-up. Each quiz can be taken up to three times, with the best grade earned being recorded. Questions will change for each try on the quiz. The grades for the top 10 quizzes will be recorded.

**Extra Credit:** You may earn up to 10 extra credit points based on correct responses to select questions asked and responded to in class using the iClicker system (register at [www.iclicker.com/registration](http://www.iclicker.com/registration)). Questions will be posed to the class throughout the semester and you will have the opportunity to register an answer. Ten of these questions will be randomly selected and one point will be given for a correct answer on each for a maximum of 10 bonus points. An iClicker can be purchased from the USU Bookstore.

**Grading:** Grades will be based on a total of 595 points. At a minimum, the University Grading Scale will be used: A 100-93%, A- to 90%, B+ to 87%, B to 83%, B- to 80%, C+ to 77%, C to 73%, C- to 70%, D to 60%, F below 60%.

1st Hour Exam .....	99 pts.
2nd Hour Exam .....	99 pts.
3rd Hour Exam .....	99 pts.
Comprehensive Final Exam .....	198 pts.
Ten quizzes worth 10 pts each .....	100 pts.
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Total	595 pts.

**Missed Exams:** Anyone missing one of the hour exams for legitimate reasons as specified in the USU General Catalog will be eligible to take the make-up exam offered on 4/17/09 **by appointment only**. This makeup exam will be comprehensive through the material covered to that date in the course. This is the only make-up exam that will be offered. Make up exams will only be given by approval of the instructor. You must contact me either before or within a week of the missed exam to schedule the make-up exam. Missed exams that are not made-up will be scored as zero.

**Assessment:** Assessment of the course will include a Course Evaluation (the blue forms administered by USU) at the end of the course and a mid-term Survey (administered by the Professor) seeking input on course direction and suggestions for improvement. Information from the Course Evaluation and Survey will be used to improve the course this year and in subsequent years.

**Provisions:** This course will adhere to the USU Academic Policies and Procedures Manual found at the web site <http://www.usu.edu/policies/> and in the student code <http://www.usu.edu/studentservices/studentcode/>. Any student with a disability who requires accommodation must contact the instructor. The disability must be documented by the Disability Resource Center. Course materials may be requested in alternative formats.

### Chemistry 3700, Spring 2009

Day	Date	Lecture	Module	Topic	Chapter	Sections	Notes
M	1/5	1	1	Introduction/Organic Review	1	1.1-1.3	No Quiz
W	1/7	2	2	Protein Structure and Function	2	2.1-2.6	
F	1/9	3					
M	1/12	4					Quiz 1
W	1/14	5					
F	1/16	6	3	Enzymes	8	8.1-8.5	
<b>M</b>	<b>1/19</b>			<b>Holiday</b>			<b>Quiz 2</b>
W	1/21	7			9	9.1	
F	1/23	8	4	Regulatory Strategies	7,10	7.1-7.2,10.1-10.4	
M	1/26	9	5	Nucleic Acids	4	4.1-4.2	No Quiz
<b>W</b>	<b>1/28</b>			<b>Exam 1</b>			
F	1/30	10	6	Carbohydrates	11	11.1-11.2	
M	2/2	11					Quiz 3
W	2/4	12					
F	2/6	13	7	Lipids and Membranes	12	12.1-12.5	
M	2/9	14			13	13.1-13.2	Quiz 4
W	2/11	15			14	14.1-14.2	
F	2/13	16	8	Metabolism	15	15.1-15.4	
<b>M</b>	<b>2/16</b>			<b>Holiday</b>			<b>Quiz 5</b>
<b>T</b>	<b>2/17</b>	<b>17</b>		<b>Monday schedule on Tuesday</b>			
W	2/18	18					
<b>F</b>	<b>2/20</b>			<b>Exam 2</b>			
M	2/23	19	9	Glycolysis and Gluconeogenesis	16	16.1-16.4	Quiz 6
W	2/25	20					
F	2/27	21	10	TCA Cycle	17	17.1-17.5	
M	3/2	22					Quiz 7
W	3/4	23	11	Ox Phosph.	18	18.1-18.4	
F	3/6	24					
M	3/16	25	12	Photosynthesis	19	19.1-19.5	Quiz 8
W	3/18	26					
F	3/20	27	13	Calvin/Pentose Phosphate	20	20.1-20.3	
M	3/23	28		Glycogen Metabolism	21	21.1-21.5	Quiz 9
W	3/25	29					
<b>F</b>	<b>3/27</b>			<b>Exam 3</b>			
M	3/30	30	14	Fatty Acid Metabolism	22	22.1-22.6	Quiz 10
W	4/1	31					
F	4/3	32	15	Amino Acid Metabolism	23	23.1-23.5	
M	4/6	33			24	24.1-24.2	Quiz 11
W	4/8	34	16	DNA Replication	28	28.1-28.5	
F	4/10	35					
M	4/13	36					Quiz 12
W	4/15	37	17	RNA Synthesis	29	29.1-29.4	
F	4/17	38			31	31.1-31.2	Make up exam
M	4/20	39	18	Protein Synthesis	30	30.1-30.5	No Quiz
W	4/22	40					
F	4/24	41					
<b>M</b>	<b>4/27</b>			<b>Final 11:30-1:20, Main 225</b>			