

Course Syllabus, Autumnal Term 2015 C.E. (Last Updated 02 October 2015 C.E.)

BCH371: Modern Concepts in Biochemistry

Section Number 78469

20 August - 04 December 2015 C.E.

Lecture: TR 09:00 - 10:15 CLCC180

Course Description:

BCH371 involves a detailed examination of the chemical structure, conformation, and function of proteins, carbohydrates, lipids, and nucleotides, as well as an analysis of the energetics, enzymes, and control of the metabolic pathways by which these molecules are degraded or synthesized. Pre-requisite: BIO 353; CHM 234. Credit is allowed for only BCH 371 or LSC 394 (Modern Concepts in Biochemistry).

Instructor Information:

Ty C.M. Hoffman, Ph.D.

ty@asu.edu

Office Hours: FAB N181E, M 16:25 - 17:25; R 10:30 - 11:30; and by appointment via email

Course Website:

As stated on Blackboard, you will be using my own (non-Blackboard) website, which you can always access via Blackboard. The URL for the general site is:

<http://www.public.asu.edu/~thoffman>

From that site, you can find the link to your specific section. Be sure to bookmark the site, so you can access it even if Blackboard is down. You are REQUIRED to check the website daily, even if nothing changes. The website includes (or will include) various resources to help you succeed. It is also where official announcements will be posted (whether I make those announcements in class or not). Failure to notice an announcement posted on the website will not be a valid excuse, so check the website frequently. You must still visit Blackboard to access individualized or private information, including your scores.

Rules Consent Form

You will not receive any credit for this course unless you electronically submit the Rules Consent Form found on the website. I cannot overstate how important it is to fully read and understand that form. You can easily receive a zero if you take this lightly. Believe me; it happens every semester.

Supporting Text (See note about textbooks on the course website):

Biochemistry: A Short Course (2nd ed.), by Tymoczko, et. al. (ISBN 1429283602)
1st Edition is ISBN 0716758407

Attendance and Punctuality:

I expect you to attend every lecture. Doing so is important to earning a satisfactory grade. You will lose points for not attending. I also expect you to appear in the classroom early enough so that you are completely ready to begin the activity at the scheduled beginning of class. If you walk through the door at the time the class is scheduled to begin, then you are late. Tardiness is rude and disruptive, and it will result in the same loss of points as for the case of absence. If something about your schedule makes you unable to make it to class on time, then you have enrolled in the wrong section.

Electronic Devices

During the lecture portion of any class period (i.e., whenever I am talking), I will not tolerate any student using a cell phone, electronic tablet, or any other such device, except for purposes related to the course. If I see you doing so, you will lose all points for the day, which will be the same as not attending. Therefore, if you want to send messages to friends during class time, you might as well skip class and receive your zero from the comfort of home.

Grades:

The minimum final scores for the respective letter grades are given below.

97% A+	80% B-
93% A	77% C+
90% A-	70% C
87% B+	60% D
83% B	

My Absolutely Rigid Policy on Missing Lecture Examinations:

It's important for everyone to be aware of the policy regarding make-up lecture examinations. If you fail to complete a scheduled lecture examination by the deadline for that examination, there will be no official penalty for missing the examination. However, it is my strict policy that multiple-choice lecture examinations may be taken only when they are scheduled to be taken (i.e., per the most recently updated syllabus). This means that all make-up lecture examinations will consist of short-answer or essay type questions. **NO MAKE-UP LECTURE EXAMINATION WILL EVER BE A MULTIPLE- CHOICE TEST.** To ensure that you fully understand my policy, please re-read the previous sentence. The material treated on a make-up examination will be the same material treated on the corresponding multiple-choice version. In that sense, one can say that the make-up examinations are therefore no more difficult. But for many students in my experience, scores on short-answer tests are significantly lower than those on multiple-choice tests. This is because doing well on a short-answer test requires that you truly know what you're talking about. Guessing is much less likely to net you a correct answer. I'm telling you this, on the one hand, to make the official policy known. But even more importantly, I'm telling you this to strenuously dissuade you from missing a lecture examination for any but the most unavoidable of reasons. Doing well in this class **REQUIRES** that you make the class a priority. Therefore, if you'd like to receive a good grade, you would do well to save excuses for the other things that might coincide with the test dates, not vice-versa.

Schedule of Topics to be Treated: (This could change before or after the semester starts.)

Date	Chapter and Topic	Notes
R 20 Aug.	Ch. 01: Biochemistry and the Unity of Life	
T 25 Aug.	Ch. 02: Water, Weak Bonds and Order Out of Chaos	
R 27 Aug.	Ch. 03: Amino Acids	
T 01 Sep.	Ch. 04: Protein Three-Dimensional Structure	
R 03 Sep.	Examination 1	
T 08 Sep.	Ch. 06: Basic Concepts of Enzyme Action	Quizzes due at 09:00 (Chs. 01-04)
R 10 Sep.	Ch. 07: Kinetics and Regulation	
T 15 Sep.	Ch. 08: Mechanisms and Inhibitors	
R 17 Sep.	Ch. 10: Carbohydrates	
T 22 Sep.	Ch. 11: Lipids	
R 24 Sep.	Examination 2	
T 29 Sep.	Ch. 15: Metabolism: Basic Concepts and Design	Quizzes due at 09:00 (Chs. 06-08, 10, 11)
R 01 Oct.	Ch. 16: Glycolysis I	
T 06 Oct.	Ch. 16: Glycolysis II / Ch. 17: Gluconeogenesis I	
R 08 Oct.	Ch. 17: Gluconeogenesis II	
T 13 Oct.	Autumnal Hiatus (no meeting)	
R 15 Oct.	Ch. 18: Preparation for the cycle	
T 20 Oct.	Ch. 19: Harvesting electrons from the cycle	
R 22 Oct.	Examination 3	
T 27 Oct.	Ch. 20: The Electron Transport Chain	Quizzes due at 09:00 (Chs. 15-19)
R 29 Oct.	Ch. 21: The Proton-motive Force	
T 03 Nov.	Ch. 24: Glycogen Degradation	
R 05 Nov.	Ch. 25: Glycogen Synthesis	
T 10 Nov.	Ch. 26: The Pentose Pathway	
R 12 Nov.	Examination 4	
T 17 Nov.	Ch. 27: Fatty Acid Degradation	Quizzes due at 09:00 (Chs. 20, 21, 24-26)
R 19 Nov.	Ch. 28: Fatty Acid Synthesis	
T 24 Nov.	Ch. 29: Lipid Synthesis	
R 26 Nov.	Observance of Thanksgiving (no meeting)	
T 01 Dec.	Ch. 30: Amino Acid Degradation and the Urea Cycle	
R 03 Dec.	Ch. 31: Amino Acid Synthesis	
R 10 Dec.	Examination 5	Begins at 07:30, NOT 09:00!
S 12 Dec.	No meeting	Quizzes due at 09:00 (Chs. 27-31)

Disclaimer:

Course content and point allocation may vary from this outline to meet the needs of this particular group.

Point Distribution:

Lecture examinations - 5 at 12% each; 60% total
 Assignments - 24 at ca. 1.04% each; 25% total
 Attendance - 24 at ca. 0.42% each; 10% total
 Participation - indeterminate; 5% total



Course/Instructor Evaluation

The course/instructor evaluation for this course will be conducted online 7-10 days before the last official day of classes of each semester or summer session. Your response(s) to the course/instructor are anonymous and will not be returned to your instructor until after grades have been submitted. The use of a course/instructor evaluation is an important process that allows our college to (1) help faculty improve their instruction, (2) help administrators evaluate instructional quality, (3) ensure high standards of teaching, and (4) ultimately improve instruction and student learning over time. Completion of the evaluation is not required for you to pass this class and will not affect your grade, but your cooperation and participation in this process is critical. About two weeks before the class finishes, watch for an e-mail with "NCIAS Course/Instructor Evaluation" in the subject heading. The email will be sent to your official ASU e-mail address.

Withdrawals: The instructor will NOT withdraw students for any reason. Specifically, students should be aware that non-attendance will NOT automatically result in their being dropped from the course. Therefore, if a student does not attend class during the first week or for any extended period of time during the semester, they should not presume that they are no longer registered. **It is the student's responsibility to be aware of their registration status.**

Please note the following dates:

Session Date & Deadlines	Session A (7.5 Week Session) Aug 21 - Oct 10 2015	Session B (7.5 Week Session) Oct 15 - Dec 5 2015	Session C (15 Week Session) Aug 21 - Dec 5 2015
Classes Begin	August 20, 2015	October 14, 2015	August 20, 2015
Drop/Add Deadline (w/out College approval)	August 21, 2015	October 15, 2015	August 26, 2015
Tuition & Fees 100% Refund Deadline	August 26, 2015	October 20, 2015	September 2, 2015
Labor Day Observed - University Closed	September 1, 2015		
Course Withdrawal Deadline	September 09, 2015	November 3, 2015	November 4, 2015
Complete Session Withdrawal Deadline *	October 09, 2015	December 4, 2015	December 4, 2015
Deadline to Apply for Graduation	October 1, 2015		
Fall Break - Classes Excused	October 10-13, 2015		
Veteran's Day Observed - University Closed	November 10, 2015		
Thanksgiving Observed - University Closed	November 26 - 27 - 2015		
Classes End/Last Day to Process transactions	October 09, 2015	December 4, 2015	December 4, 2015
Final Exams	Last day of classes	Last day of classes	Dec 7 - 12, 2015
Final Grades Due	October 12, 2015	Dec 7 - 14, 2015	Dec 7 - 14, 2015
Commencement Ceremony (Graduate & Undergraduate)	December 14, 2015		

Any withdrawal transaction must be completed by the deadline date in accordance to the appropriate session at the registrar's office. If not, you will still be officially enrolled and you will receive a grade based on your work completed.

*As part of a complete session withdrawal a student must withdraw from all classes in a session. Beginning the first day of classes, undergraduate students are required to work with a Student Retention Coordinator to facilitate the withdrawal process. Please refer to <http://students.asu.edu/StudentRetention>



For additional information about ASU's withdrawal policy and the possible consequences of withdrawing from a class, contact Registration Services or your academic counselor.

Students are responsible for their registration status!

The Grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents a student who is doing acceptable work from completing a small percentage of the course requirements at the end of the semester. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. **A grade of incomplete will NOT be awarded unless there is documented evidence of extreme personal or immediate family hardship.** Changes in work hours, child-care emergencies, or other similar personal problems will not be approved as reasons for awarding incompletes. The Director of the School of Mathematical and Natural Sciences must approve all incomplete grade requests.

Reasonable Accommodations for Students with Disabilities: The Disability Resource Center (DRC) provides information and services to students with any documented disability who are attending ASU West. Individualized program strategies and recommendations are available for each student as well as current information regarding community resources. Students also may have access to specialized equipment and supportive services and should contact the instructor for accommodations that are necessary for course completion.

Academic Integrity and Code of Conduct:

As defined in the *ASU Student Academic Integrity Policy*: <http://provost.asu.edu/academicintegrity>.

Each student has an obligation to act with honesty and integrity, and to respect the rights of others in carrying out all academic assignments. A student may be found to have violated this obligation and to have engaged in academic dishonesty if during or in connection with any academic evaluation, he or she:

- Engages in any form of academic deceit;
- Refers to materials or sources or employs devices (e.g., audio recorders, crib sheets, calculators, solution manuals, or commercial research services) not authorized by the instructor for use during the academic evaluation;
- Possesses, buys, sells, obtains, or uses, without appropriate authorization, a copy of any materials intended to be used for academic evaluation in advance of its administration;
- Acts as a substitute for another person in any academic evaluation;
- Uses a substitute in any academic evaluation;
- Depends on the aid of others to the extent that the work is not representative of the student's abilities, knowing or having good reason to believe that this aid is not authorized by the instructor;
- Provides inappropriate aid to another person, knowing or having good reason to believe the aid is not authorized by the instructor;
- Engages in plagiarism;
- Permits his or her work to be submitted by another person without the instructor's authorization; or
- Attempts to influence or change any academic evaluation or record for reasons having no relevance to class achievement.

BCH371 follows the ASU Academic Integrity Policy in the administration of all course examinations and assignments. Violations of the University Academic Integrity policy will not be ignored. Penalties include reduced or no credit for submitted work, a failing grade in the class, a note on your official transcript that shows you were

punished for cheating, suspension, expulsion and revocation of already awarded degrees. The university requires that the implementation of any of these penalties for violations of the academic integrity policy be reported to the Dean's office. The Integrity Policy defines the process to be used if the student wishes to appeal this action.

In BCH371 you are expected to follow the *ASU Student Code of Conduct* (<http://students.asu.edu/srr/code>) especially when communicating with your peers, instructors, and teaching assistants. Violations of the student code of conduct may result in withdrawal from the class.



Final Exam Make-up Policy: The final exam schedule listed in the Schedule of Classes will be strictly followed. Exceptions to the schedule and requests for make-up examinations can be granted only by the director of the School of Mathematical and Natural Sciences for one of the following reasons:

- 1) religious observances
- 2) the student has more than three exams scheduled on the same day
- 3) two finals are scheduled to occur at the same time

Make-up exams will **NOT** be given for reasons of non refundable airline tickets, vacation plans, work schedules, weddings, family reunions, or other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and makeup the final within one calendar month. The student must provide written documentation and be passing the class at the time to receive an Incomplete. A signed "Request for Grade of Incomplete" must be submitted by the student and approved by the student's instructor and the Director of the School of Mathematical and Natural Sciences.

The instructor reserves the right to make changes to this syllabus as needed.

If you find it necessary to leave a note for this instructor, please contact the administrative reception desk of the School of Mathematical and Natural Sciences located at FAB North Level 1 room N101-1.

Policy against Threatening Behavior:

In the classroom and out students are required to conduct themselves in a manner that promotes an environment that is safe and conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual (<http://www.asu.edu/aad/manuals/ssm/ssm104-02.html>).

Potentially Offensive Content:

A notification such as the following should be included in the syllabus if appropriate for the class in question.

If you find any of the content of his class offensive, please bring your concerns to the instructor immediately.

Power Outage:

In the event of a campus power outage or other event affecting the ability of the University to deliver classes, any decision to cancel classes will be announced using the ASU emergency notification system. For this reason, it is imperative that students register with the ASU emergency notification system at: <https://cfo.asu.edu/emergency-alert>. In cases in which a limited number of buildings are affected, students should check the university website and/or call the School office at (602) 543-6050.

Emergency Evacuation Plan:

Students should be aware of the evacuation route posted on the exit door of each classroom. Students who cannot walk down stairs should notify the instructor as early in the course as possible so the instructor can provide information regarding the location of the designated meeting area on each upper floor of the building (marked with a blue sign that states Emergency Evacuation Response Area).