

**Biochemistry II  
CHEM 4335  
Syllabus  
Spring 2019**

---

**Instructor**

Dr. Melissa Kelley  
201-A Laney  
Phone: 501-450-5960  
Email: [mkelley@uca.edu](mailto:mkelley@uca.edu)  
<http://faculty.uca.edu/mkelley/>

**Office Hours**

Monday: 1:00-2:00  
Wednesday: 8:15-9:15  
Monday: 8:15-9:15  
Appointments are also available

**Class Meeting Time**

MWF 11:00-11:50 Laney 105

**Course Description and Objectives**

Biochemistry II (CHEM 4335) is the second semester of the two-semester Biochemistry sequence. The objective of this course is for students to have an in-depth understanding of biochemical endocrinology. The course will focus on hormonal modes of action and their biochemical effects on physiology. An emphasis will be placed on general mechanisms of hormone actions followed by in-depth biochemical detail of how hormone secretion affects various endocrine glands such as the pituitary, thyroid, and adrenal.

**Course Prerequisites**

Prerequisite: successful completion of CHEM 4320. This course will require students to understand carbohydrate, lipid, and protein metabolism. These topics include but are not limited to glycolysis, gluconeogenesis, glycogen synthesis/degradation, energy production, lipid metabolism, and protein metabolism.

**Course Materials**

For a course of this level, students should not expect the course to center around or to be able to rely on a single textbook for instruction and/or assistance. Therefore, students should be aware that the instructors will primarily rely on a variety of resources including graduate-level texts and primary scientific journal articles for information.

### **Class Attendance and Make-up Policy**

Class attendance is strongly recommended. Those students who attend class regularly are the most likely to succeed in this course. As mentioned above, the vast majority of the material presented in this course will not be in a textbook. So attending class is necessary to obtain all the information that you will be held responsible for on quizzes and assignments. Whether a student is excused from an announced quiz or allowed to take it at a later date is solely at the discretion of the instructor. If you must miss a class during which assessments are given or due, substantial proof (what constitutes this is solely my discretion) of the reason for the absence will be required before any consideration for make up work is granted. Any student who is absent from class for 4 class meetings without contacting the instructor may be dropped from the course with an F, at discretion of the instructor.

### **Class Communications**

Students are required to obtain all information missed from class absences from their peers. It is a very good idea to have a classmate record a lecture that you know you will miss. Once notes and/or lecture recording(s) have been obtained and reviewed, students should come to faculty office hours to clarify any confusion about the missed material. If a texting app service is used for the class, class announcements may be sent out by email and/or text. Students should check their UCA email account regularly for class information/reminders. Announcements may also be made using Google Classroom.

### **How to be successful in this course**

1. **Attend lecture.** Students who do not attend lecture will not be successful in this course. Many of the topics I cover will not be presented in the book. You are responsible for the material covered in class and the reading assignments. Attending class is highly recommended.
2. **Biochemistry is a field that requires you to practice and think.** Biochemistry follows the same scientific laws that you have already learned and it is the application of these scientific laws to biological systems. Biochemistry is not a spectator sport and to be successful it requires hard work and lots of practice.
3. **Ask questions.** If you do not understand the concepts I have presented in lecture ask. Biochemistry is a science in which one concept is built on another. Please do not be embarrassed, there is no such thing as a stupid question. Stupidity lies in not asking. Please feel free to stop me in lecture with a question or if you would prefer stop by my office during office hours and ask.
4. **Be an interactive learner.** Ask questions and participate in class discussions. This is an excellent way to understand the material and hopefully you find many of the topics we cover are applicable to your life and your future career.

### **Important Notes:**

1. I cannot discuss grades by phone or email. I will not calculate your grade in the course for you.
2. I will not re-grade your assignments for additional partial credit. If I have made a mathematical calculation error, then the error can be discussed. You have one week

to contact me about a mathematical error on your assignments, after that time period the grade stands.

3. Late work is never accepted.
4. If you miss class, I will not provide a make-up lecture for you on the material. It is your responsibility to obtain the material. I would recommend that you try to have someone record the lecture for you, and get a least two people's notes over the material. After you have done these things, please come to me if you have specific questions about the material you missed.
5. I do not provide extra credit. There are plenty of opportunities for credit during the semester.
6. You must submit assignments in the manner requested and follow the directions concerning quizzes, exams, and assignments. Failure to follow the directions may result in a significant loss in points.
7. I will not answer questions regarding material on the exam or quiz prior to class starting. If you have specific questions about exam material, do not wait until the last minute or the day before to ask questions or email me. I will not answer exam related questions the day before an exam.

### **Grading**

Quizzes = 300 pts

Lecture = 150 pts

Show and Tell= 30 pts

Miscellaneous Assignments=0-150 pts

Total points= 480-630 points

### **Grading Scale**

A: 90%

B: 80%

C: 70%

D: 60%

F: 50%

### **Course Assignments**

#### **Quizzes (300 points)**

There will be three announced quizzes.

#### **Lecture Topic (150 points)**

Students will also be required will select a topic of hormonal regulation and prepare a lecture to instruct classmates on the hormonal basis of the topic. The presentation will include all introductory/background information and current primary literature results necessary for the class to obtain **an in-depth** understanding of the topic. Building on foundational lecture material, the lecture will consist of 25 minutes (20-minute lecture and 5 minutes for questions. Students will submit their lecture slides and references through Google Classroom. Students should submit their lecture materials 48 hours prior to their scheduled lecture time.

### **Show and Tell (30 points)**

Scheduled lecture days will be available for the students to present a show-and-tell over one of the topics covered in class. The student will be limited to two minutes with one minute allowed for questions.

### **Miscellaneous Assignments (0-150 pts)**

Additional assignments may be given throughout the semester. These may include homework or other assignments as the instructor deem appropriate. Class participation points may also be applied that reflect attendance, participation in discussions and lecture, and project involvement.

### **Lecture Schedule**

**\*This is a tentative schedule-all dates and contents are subject to change**

<b>Date</b>	<b>Topic</b>	<b>Assignments</b>
Jan 11	Introduction	
Jan 14	Pharmacology	
Jan 16	Pharmacology	
Jan 18	Pharmacology	
Jan 21	<b>MLK-no class</b>	
Jan 23	Pharmacology/Hormones	
Jan 25	Show and Tell #1	<b>Pharmacology Show and Tell</b>
Jan 28	Hormones	
Jan 30	Hormones	
Feb 1	Hormones	
Feb 4	Hormones	
Feb 6	Show and Tell #2	<b>Hormone Show and Tell</b>
Feb 8	<b>Quiz 1</b>	<b>Pharm. &amp; Hormones</b>
Feb 11	Pituitary Gland	
Feb 13	Pituitary Gland	
Feb 15	Pituitary Gland	
Feb 18	Pituitary Gland	
Feb 20	Pituitary Gland Thyroid	
Feb 22	Show and Tell #3	<b>Pit. Show and Tell</b>
Feb 25	Thyroid	
Feb 27	Thyroid	
Mar 1	Thyroid/Adrenal	

Mar 4	Show and Tell #4	<b>Thyroid Show and Tell</b>
Mar 6	<b>Quiz #2</b>	<b>Pit and Thyroid</b>
Mar 8	Adrenal	
Mar 11	Adrenal	
Mar 13	Adrenal	
Mar 15	Adrenal	
March 18-22	<b>Spring Break</b>	
Mar 25	Water/Salt Balance	
Mar 27	Water/Salt Balance	
Mar 29	Show an Tell #5	<b>Adrenal Show and Tell Last Day to Drop</b>
Apr 1	<b>Quiz 3</b>	<b>Adrenal &amp; Water/salt</b>
Apr 3	Show an Tell #6	<b>Water/Salt Show and Tell</b>
Apr 5	Student Lecture 1 & 2 Constriction and Dilation	
Apr 8	Student Lecture 3 & 4 Hormonal control of Calcium Balance	
Apr 10	Student Lecture 5 & 6 Hormonal control of Growth	
Apr 12	Student Lecture 7 & 8 Hormonal control of Male Reproduction	
Apr 15	Student Lecture 9 & 10 Hormonal control of Female Reproduction	
Apr 17	Student Lecture 11 & 12 Hormonal control of Pregnancy/Lactation	
Apr 19	Student Lecture 13 & 14 Hormonal control of G.I Tract	
Apr 22	Student Lecture 15 Pancreatic Islets	
Apr 24	Extra Lecture Day-If needed	
Apr 24	Reading Day-No Class	

## University Academic Policies

<b>Academic Integrity</b>	The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.
<b>Disabilities Statement</b>	The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Disability Resource Center, 450-3613.
<b>Building Emergency Plan</b>	An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at <a href="http://uca.edu/mysafety/bep/">http://uca.edu/mysafety/bep/</a> . Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.
<b>Title IX Disclosure</b>	If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to "student-on-student" or "employee-on-student"), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs, and the obligation to conduct an investigation will depend on the specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: <a href="https://uca.edu/titleix">https://uca.edu/titleix</a> . *Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.
<b>Course Evaluations</b>	<p>Evaluations are kept completely confidential. Your thoughtful feedback is highly valued and cannot negatively or positively affect your course grade. Over the years this information has changed and improved the instruction of this course.</p> <p>Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the thirteenth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button in the top right.</p>
<b>Student Handbook Policies</b>	You are encouraged to familiarize yourself with student policies described in the student handbook. In particular, carefully read and understand those policies pertaining to academic issues and sexual harassment.