

# Chemistry 161

## General Biochemistry

### Fall 2022

**Instructor:** Dr. Katherine McReynolds  
**Office:** SQU 534  
**Office Hours:** M 10-10:30 AM  
W 12-12:30 PM

**Phone:** 278-6551  
**E-mail:** [kdmcr@csus.edu](mailto:kdmcr@csus.edu) (preferred contact)  
**Class Meets:** SQU 456 MWF 9-9:50 AM

**Required Textbook:** *Biochemistry The Molecular Basis of Life*, 7<sup>th</sup> Edition, by McKee and McKee, ISBN: 9780190847609

**Required Online Homework:** Achieve Essentials for Biochemistry-1 semester (See homework section for more information).

**Course Description:** Introduction to the structure and function of biological molecules (carbohydrates, lipids, proteins, nucleic acids, enzymes and hormones), enzyme kinetics, the structure and function of membranes, and the bioenergetics and regulation of major anaerobic and aerobic metabolic pathways.

**Course Prerequisite:** Successful completion (C- grade or better) of Chemistry 20 or 124. One year of biology (Bio 1 & 2) is highly recommended. **Note: The prerequisites for Chem 1A & B and Chem 124 (if 24 was taken) must also be complete to remain in this class. There will be no exceptions to this policy.**

#### Grading:

Three exams @ 100pts.	300
Final exam (Cumulative)	200
Best 4 of 5 quizzes (25 points each)	100
Achieve Homework	50
Metabolic Chart (Due 12/05/22)	<u>50</u>
	700 pts. total

Letter grades will be assigned based on a range of:

A:	90% and up
A-:	88-89.9%
B+:	86-87.9%
B:	80-85.9%
B-:	78-79.9%
C+:	76-77.9%
C:	68-75.9%
C-:	66-67.9%
D:	55-65.9%
F:	Below 55%

**Attendance:** Attendance of the lecture is not required, but is *highly* recommended.  
**Please see the current University catalog for the drop policy.**

**COVID-19 Information:** For the latest information regarding campus policies, please go to: <https://www.csus.edu/return-to-campus/vaccination-faq.html>. Vaccinations or current approved exemption from vaccination are still required for you to be on campus.

Here are some guidelines for class this semester:

- Indoor masking is optional but recommended.
- If you have symptoms or test positive for COVID-19, please **DO NOT** come to class. Please email me and let me know that you are ill and will be out (you do not have to tell me that you have COVID). At that time, I will provide information regarding how to make up any missed quizzes/exams.

**Cheating:** Cheating in any form will not be tolerated. Cheating involves having extraneous notes, in written form or stored in a programmable calculator, using a cell phone, looking at someone else's exam paper, or alteration of a graded question(s) with submittal for a re-grade. If a student is caught cheating, I will deal with them in the harshest manner possible, given the nature of the offense. At the bare minimum, the score for the assignment the student was caught cheating on will become a zero and will count towards their final grade. At the maximum, the student will be reported to the Office of Student Affairs, where they may face sanctions against them, such as probation, or expulsion from the University. It is up to my discretion as to which path I will take in dealing with an incidence of academic dishonesty.

**Course Etiquette:** Students are expected to be on time to class. It is very disruptive and disrespectful to both the instructor and the other students in the course to come in late. Cell phones must be turned **completely off** during class time. Failure to do so may result in confiscation of the cell phone until the end of class. Repeat offenders may be subject to dismissal from class/loss of points in the course, which may impact the student's final grade in the course.

**Exam Day Rules:** On exam days, please place your backpack, including cell phone (**turned off**), in the front of class by the instructor. No hats are to be worn on exam day. The only items allowed at your desk are: pencil/pen, eraser, Scantron form, basic calculator (no cell phones, no graphing calculators). You will not be permitted to leave the room during an exam for any reason, including needing to go to the restroom/get a drink of water. If you do leave the classroom during an exam, your exam is over and must be turned in.

**Quizzes:** Quizzes will be based on the lecture, assigned reading, handouts, and homework, covered on the material covered since the previous quiz. The format can be any combination of the following: short-answer, fill in the blank, or multiple-choice. It is possible that a take-home quiz, or an online quiz in Sapling will be given instead of an in-class quiz. Take home quizzes will be due in the following class period and online quizzes will be open for a 24 hour period (announced in class). **You are not to work with your classmates, or anyone else on take-home/online quizzes.** In class quizzes will occur at the beginning of class. There are no make-up quizzes/early quizzes given. Since one score is dropped, if you miss a quiz, it will be omitted from your grade. Subsequent missed quizzes will count as a zero.

**Exams:** Exams will be based on the lecture, assigned reading, handouts, and homework. The format will be multiple choice and short answer. **Attendance is required!!** If you must miss an exam for a good reason (ie. Illness) a doctor's note or other evidence of a valid excuse will be required. The documentation is required within one week of the missed exam, and the student must meet with the instructor in person to discuss the absence. No make up exams will be given, even with a valid excuse. Instead, the student will make up the missed section on the final exam.

**Quiz/Exam Grading Policy:** Extreme care will be taken with the grading of your quizzes and exam materials in this course. For exams, one page is graded at a time for all students, ensuring the utmost in consistency for partial credit assignment. If you detect a mistake in the grading, such as an addition error, please bring it to my attention immediately, and it will be resolved. If, however, you feel that you deserve a greater amount of partial credit than what you were given, I reserve the right to re-grade the entire quiz/exam, which may result in a lower overall score.

**Preparing for Quizzes/Exams: Don't memorize everything.** Memorization is **NOT** the key for **most** of the information you will learn in this course. Trying to actually **understand** the concepts is more important, and will help you to be able to think through quiz/exam questions, even if they differ from those in the homework. For other study hints, see the section below.

**How to Succeed in this Course (Expect to spend a minimum of 9 hours/week on this class):**

- Prepare for lecture. Read ahead of the lecture. Jot down questions/notes as you go. This way, you have been exposed to the material before you hear about it in lecture, and can then pay better attention to the lecture and even formulate in-class questions.
- **Always** attend class.
- After class, (within hours, not days) you should re-copy your in class notes, and add in additional information gleaned from your reading. This will make your notes more comprehensive, and have the added benefit in serving as a study tool to help you better understand the material.
- Attempt the assigned problems. Don't let the answers serve as a crutch. Remember, you won't have access to the answers on a quiz or exam. All you will have is your knowledge and problem-solving skills.
- Read the chapter summaries. Do you understand the concepts?
- Study both alone and in groups. You will get different benefits from both.
- **Get help as soon as you need it. Don't wait until it is too late! I have weekly office hours at different times to assist you.**

**Homework:** Homework will be assigned from each chapter through Achieve (Macmillan) and will be announced in class and posted on Canvas. It is **highly** recommended that the homework be completed for each chapter, as many of the quiz/exam questions will be based on skills learned by doing the assigned problems.

**Instructions for setting up Achieve Homework:** Please go to the following link: <https://achieve.macmillanlearning.com/courses/vf3rkj> Our course is listed as: CHEM 161: General Biochemistry, Fall22, McREYNOLDS. Achieve Learning offers a grace period on payment; for most courses, this is 4 weeks from the first day of the term. During sign up or throughout the term, if you have any technical problems or grading issues, please send an email to <https://macmillan.force.com/macmillanlearning/s/chat-with-us> explaining the issue. The Achieve support team is almost always more able (and faster) to resolve issues than your instructor.

### Tentative Lecture Schedule:

**NOTE: Chapters 1 & 2 are review. They will not be covered in class, but you are responsible for the material in those chapters.**

<b>Week of:</b>	<b>Monday</b>	<b>Wednesday</b>	<b>Friday</b>
8/29 (1)	Introduction and Diagnostic quiz	Chapter 3-Water	Chapter 3-Water
9/5 (2)	<b>Labor Day-No Class</b>	Chapter 3-Water	Chapter 5-Proteins
9/12 (3)	Chapter 5-Proteins	Chapter 5-Proteins	Chapter 5-Proteins
9/19 (4)	Chapter 5-Proteins	Chapter 6-Enzymes	Chapter 6-Enzymes
9/26 (5)	<b>Exam #1 (100 points) Chapters 1-3, 5</b>	Chapter 6-Enzymes	Chapter 6-Enzymes
10/3 (6)	Chapter 6-Enzymes	Chapter 7-Carbohydrates	Chapter 7-Carbohydrates
10/10 (7)	Chapter 7-Carbohydrates	Chapter 7-Carbohydrates	Chapter 7-Carbohydrates
10/17 (8)	Chapter 4-Energy	Chapter 4-Energy	Chapter 4-Energy
10/24 (9)	Catch up day	Group activity Chapter 8-Carb. Met.	<b>Exam #2 (100 points) Chapters 4, 6-7</b>
10/31 (10)	Chapter 8-Carb. Met	Chapter 8-Carb. Met.	Chapter 8-Carb. Met.
11/7 (11)	Chapter 8-Carb. Met.	Chapter 8-Carb. Met.	<b>Veteran's Day-No Class</b>
11/14 (12)	Chapter 9-CAC	Chapter 9-CAC Group activity	Chapter 9-CAC
11/21 (13)	Chapter 9-CAC Chapter 10-ETC/OP	Chapter 10-ETC/OP	<b>Thanksgiving Break No Class</b>
11/28 (14)	Chapter 11-Lipids	Chapter 11-Lipids	<b>Exam #3 (100 points) Chapters 8-10</b>
12/5 (15)	Chapter 11-Lipids	Chapter 11-Lipids Chapter 17-Nucleic Acids	Chapter 17-Nucleic Acids
12/12	<b>Final Exam Week</b>	<b>Cumulative Final Exam: Dec 14<sup>th</sup> 8-10AM</b>	<b>Final Exam Week</b>