

Chemistry 161

General Biochemistry

Fall 2020

Instructor: Dr. Katherine McReynolds
Office Hours: T: 12-12:30 PM, Th 9-10 AM
via Zoom

E-mail: kdmcr@csus.edu
Class Meets: Zoom, TTh, 7:30-8:45 AM

Class Meeting Zoom Information:

Registration Link:

<https://csus.zoom.us/join/99163907048>

Passcode: 161090120

Meeting ID: 968 5545 0405

Class meetings will be a mixture of synchronous and asynchronous. Tuesday's normal lecture will be pre-recorded and posted in Canvas on Sunday evenings (asynchronous). We will meet on Tuesdays to discuss COVID-19 and work in groups on problems (synchronous). On Thursdays we will have a normal synchronous lecture. All class meetings will be recorded and posted in Canvas.

Office Hours Zoom Information:

Tuesdays: <https://csus.zoom.us/j/99163907048>

Meeting ID: 991 6390 7048

One tap mobile:

+16699006833,,99163907048# US (San Jose)

Thursdays: <https://csus.zoom.us/j/94100565308>

Meeting ID: 941 0056 5308

One tap mobile:

+16699006833,,94100565308# US (San Jose)

Required Textbook: *Biochemistry The Molecular Basis of Life*, 7th Edition, by McKee and McKee, ISBN: 9780190209896 (You may also use the 5th or 6th editions)

Required Online Homework: Sapling Learning (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
Formal Quizzes (25pts. Each, best 4 of 5)	100

Informal Zoom Poll questions	40
Sapling Homework (based on % correct)	50
COVID-19 Project	<u>50</u>
	740 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.

Course Etiquette: Students are expected to be on time to class on Zoom. Please keep your camera on and your microphone off, unless you are called on to speak. Cell phones must be turned **completely off** during class time to avoid unnecessary distraction. Please respect everyone's right to learn without distraction in class, and be an active participant. If it is not possible for you to have your camera on, please send me an email to let me know.

Campus Support: If you need assistance with testing accommodations, or because of hardships as a result of COVID-19, the campus has services available to assist you through disability services, [Student Health and Counseling Services](#), and [CARES](#) resources for basic needs.

Formal Quiz/Exam Day Rules: On exam days, you will be required to be present in Zoom with your camera turned on for the duration. You are only permitted to utilize the allowed materials/resources as determined by the instructor. You may NOT use your cell phone as a calculator.

Academic Honesty: *Excerpt from the CSUS Academic Honesty Policy*
<https://www.csus.edu/umanual/student/stu-100.htm>):

Student Responsibilities:

1. Knowing what constitutes academic dishonesty and taking steps to avoid it, including:
 - a. Understanding what constitutes cheating and plagiarism and seeking clarification when they are uncertain;
 - b. Taking responsibility for making sure academic work complies with Sacramento State's academic honesty standards whether working individually or as part of a group.
2. Not taking credit for academic work that is not their own.
3. Not knowingly encouraging or making possible cheating by others.
4. Knowing the policies and procedures regarding academic honesty as specified in this document.
5. Exercising their option, if so inclined, to inform the instructor or the Student Conduct Officer of alleged cheating.

6. Knowing and following the rules instituted to preserve academic honesty. This includes learning and following the particular rules and expectations for specific classes, exams, and course assignments. Ignorance of these rules is not a defense to academic dishonesty.

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 some amount of quizzing will take place via Zoom polls during class (Each question worth 2 points). It is also 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 formal quiz score is dropped, if you miss a formal 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 on Zoom 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 on Zoom, and make sure to watch any pre-recorded lectures.
- 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 to assist you.**

Homework: Homework will be assigned from each chapter through Sapling Learning 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 Sapling Homework, Please go to the following link:

[https://store.macmillanlearning.com/us?_ga=2.81984214.1151112201.1597789021-](https://store.macmillanlearning.com/us?_ga=2.81984214.1151112201.1597789021-1007686931.1594686527)

[1007686931.1594686527](https://store.macmillanlearning.com/us?_ga=2.81984214.1151112201.1597789021-1007686931.1594686527). Our course is listed as: California State University, Sacramento - CHEM 161 – Fall2020 – McREYNOLDS. Sapling Learning offers a grace period on payment; for most courses, this is 14 days from the first day of the term. During sign up or throughout the term, if you have any technical problems or grading issues, please click the link within your account for technical assistance and provide as much information as possible. The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.

COVID-19 Project: I'm still figuring this out, so details will be released sometime in September.

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.

Week of:	Sundays: Pre-recorded lectures released	Tuesday	Thursday
8/31 (1)	None	Introduction and Diagnostic quiz	Chapter 3-Water
9/7 (2)	Chapter 3-Water	COVID-19 Background info	Chapter 5-Proteins
9/14 (3)	Chapter 5-Proteins	COVID-19 Viral composition	Chapter 5-Proteins
9/21 (4)	Chapter 6-Enzymes	COVID-19 Enzymes	Chapter 6-Enzymes
9/28 (5)	Chapter 6-Enzymes	Exam Review	Exam #1 (100 points)-Ch. 1-3, 5, COVID 1-3.
10/5 (6)	Chapter 7-Carbohydrates	COVID-19 Carbohydrates	Chapter 7-Carbohydrates
10/12 (7)	Chapter 7-Carbohydrates	COVID-19 Drug Treatments	Chapter 7-Carbohydrates
10/19 (8)	Chapter 4-Energy	COVID-19 Wrap Up	Chapter 4-Energy
10/26 (9)	Catch up day, Lecture TBA	Metabolism Introduction and Exam Review	Exam #2 (100 points) Chapters 4, 6-7, COVID 4-6.
11/2 (10)	Chapter 8-Carb. Met	COVID-19 Project Due Group Work: Glycolysis	Chapter 8-Carb. Met.
11/9 (11)	Chapter 8-Carb. Met.	Group Presentations: Glycolysis	Chapter 8-Carb. Met.
11/16 (12)	Chapter 9-CAC	Group Work: CAC	Chapter 9-CAC
11/23 (13)	Chapter 9-CAC Chapter 10-ETC/OP	Group Presentations: CAC	Thanksgiving Break No Class
11/30 (14)	Chapter 10-ETC/OP Chapter 11-Lipids	Exam Review	Exam #3 (100 points) Chapters 8-10
12/7 (15)	Chapter 11-Lipids	Chapter 11-Lipids Chapter 17-Nucleic Acids	Chapter 17-Nucleic Acids

12/14		Final Exam Week	Cumulative Final Exam: Dec 17th, 8-10 AM
-------	--	------------------------	--