Chemistry 351 Biochemistry
Summer 2021

Day/Time: MTWRF 12:00 – 1:45 pm  Place: SSMB 127  CRN: 30355

Instructor Information:
Dr. Amy L. Rogers
E-mail: rogersaL@cofc.edu  Phone: 843-953-7292  Office: Rm 308 SSMB
Office Hours: By appointment

Student Learning Outcomes
• Discuss how the structure of biological molecules determines their function
• Understand and apply principles of biological catalysis
• Appraise kinetic and thermodynamic data
• Employ chemical and thermodynamic principles to explain biological interactions

Prerequisite: Chemistry 232 and Chemistry 232L.


OAKS/OneNote: Course material, study tools, and additional information will be provided for students on OAKS and OneNote. You can access OAKS through the College of Charleston MyCharleston website. Once in the MyCharleston system, click on OAKS icon at the top of the page, and you will be taken to the OAKS site. The OneNote link is found on the OAKS course homepage.

Class Meetings: Lectures will be held M-F at 12:00-1:45 pm in SSMB 127.

Attendance Policy: Attendance is expected at all classes. Students are responsible for all information presented in class. It is imperative that you attend class and arrive promptly. Please note that an Absence Memorandum from the Office of Undergraduate Studies only verifies your documentation for missing a class. It does not entitle you to make up or be excused from any work, assignment, quiz, or test. Any work missed due to an absence will be given a zero unless the absence is specifically excused by the instructor.

Participation: Learning requires investment. I expect students to be prepared for class to allow full participation during class. Because notes are provided in advance, our class time will be used to explain and discuss concepts and work problems when applicable.

Tests: There will be four online exams throughout the semester and one cumulative final exam. The tentative dates set for the exams are:

Exam I: Monday, July 19
Exam II: Monday, July 26
Exam III: Monday, August 2
Exam IV: Monday, August 9
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Final Exam: The Final Exam will be comprehensive given on Tuesday, August 10. Absence from the Final Exam will result in the grade of "X" being assigned which converts to an "F" within 48 hours unless an excused absence has been granted by the dean in the Office of Undergraduate Studies. Requests for an alternate final exam time must be processed through the Office of Undergraduate Studies no later than 5 p.m. on the last day of class.

Make-ups: Test may only be made up if appropriate documentation is presented and approved by the instructor.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Four Exams</td>
<td>75%</td>
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<tr>
<td>Final exam</td>
<td>25%</td>
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Grading Scale:

<table>
<thead>
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<th>Grade</th>
<th>Interval</th>
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<tr>
<td>A</td>
<td>93-100</td>
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<tr>
<td>A-</td>
<td>89-92</td>
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<tr>
<td>B+</td>
<td>85-88</td>
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<td>B</td>
<td>82-84</td>
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<td>D</td>
<td>64-66</td>
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<tr>
<td>D-</td>
<td>60-63</td>
</tr>
<tr>
<td>F</td>
<td>below 60</td>
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Important Dates to Remember:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>July 13</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Last day to withdraw from classes with grade of “W”</td>
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<tr>
<td>Aug. 9</td>
<td>Last day of class</td>
</tr>
<tr>
<td>Aug. 10</td>
<td>Final Exam</td>
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Academic Dishonesty:

Cheating will not be tolerated in this course. The following description of cheating is from the student handbook:

“the actual giving or receiving of unauthorized, dishonest assistance that might give one student an unfair advantage over another in the performance of any assigned, graded academic work, inside or outside of the classroom, and by any means whatsoever, including but not limited to fraud, duress, deception, theft, talking, making signs, gestures, copying, electronic messaging, photography, unauthorized reuse of previously graded work, and unauthorized use or possession of study aids, memoranda, books, data, or other information. The term cheating includes engaging in any behavior specifically prohibited by a faculty member in the course syllabus or class discussion.” For this course, entering formulas into a calculator to be used during an exam will be considered as an act of premeditated cheating.

Students that cheat and are then prosecuted through the Honor Board receive a grade of XF. This does not look good to all future employers and graduate programs. It is infinitely better to get an F than an XF.
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Disabilities: If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please send me the appropriate documentation.

Email: Email is considered an official method for communication at the College of Charleston. If a student wishes to have email redirected from their official college issued account to another email address, they may do so, but at their own risk. Having email redirected does not absolve the student from the responsibilities associated with official communication sent to his or her College account. Students are expected to check their CofC official email often.

Tips for Success:
• Attend all Zoom lectures
• Be an active learner
• Put in 2-3 hrs/day for each lecture class period.
• Read textbook & do homework problems after each lecture
• Use resources to study – chapter study goals, class notes, sample problems, homework, end-of-chapter reviews, and key terms in textbook
• When confused, ask for help – from instructor, friends, tutors
• Stay Healthy
• DO NOT FALL BEHIND

Topics Covered and Corresponding Book Chapter Sections
Water Chapter 2
Acids and Bases Chapter 2
Amino Acid Structure Chapter 3.1 - 3.5
Fatty Acid/Triacylglycerol Structure Chapter 9.1 - 9.3
Monosaccharides Chapter 8.1 - 8.4
Purines and Pyrimidines Chapter 19.1
High Energy Molecules and Delta G Chapter 1.4; Chapter 10.5 - 10.6
Polymers Chapter 1.3
Polymers of Amino Acids Chapter 4.1
Polymers of Sugars Chapter 8.5 - 8.6
Polymers of Bases Chapter 19.1 - 19.2
Protein Preparation Chapter 3.6
Protein Folding Chapter 4
Enzyme Kinetics Chapter 5
Enzymes and Mechanisms Chapter 6
Lipid Structure/Function Chapter 9.4 - 9.10
Glycoconjugates Chapter 8.7
Coenzymes and Vitamins Chapter 7
DNA/RNA Chapter 19.3 - 19.7