Chemistry 351 Biochemistry  
Fall 2017

Day/Time: MWF 11:00 am – 11:50 am  Place: MYBK 322  CRN: 10252  or  MWF 12:00 pm – 12:50 pm  Place: MYBK 322  CRN: 10253

Instructor Information: 
Dr. Amy L. Rogers  
E-mail: rogersaL@cofc.edu  Phone: 843-953-7292  Office: Rm 308 SSMB  
Office Hours: Monday 3:00 – 4:00, Tuesday 10:00 – 11:30 am or 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: Course material, study tools, and additional information will be provided for students on OAKS. You can access OAKS through the College of Charleston MyCharleston website. Go to https://my.cofc.edu/cp/home/displaylogin, login into MyCharleston using your system login ID and password. Once you are in the MyCharleston system, click on OAKS icon at the top of the page, and you will be taken to the OAKS site.

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. If you arrive late for a quiz, test, or the final exam, instructions will not be repeated nor will you receive additional time to complete the assignment. 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: I expect everyone to have already printed notes prior to class in order to participate in class. This is the only way that I can evaluate the general understanding of the class. Participation will be included in the Mystery Credit (more on that later).

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 College of Charleston official email on a frequent and consistent basis.

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

- **Exam I:** Friday, September 15
- **Exam II:** Friday, October 13
- **Exam III:** Friday, November 10
- **Exam IV:** Monday, December 4

**Final Exam:** The Final Exam will be comprehensive given on either Monday, Dec 11 (11:00 class) or Wednesday, Dec. 13 (12:00 class). Both exam times will be held at 12:00 pm. 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.

**Mystery Credit:** During the semester, I will be selecting different opportunities to count towards Mystery Credit. These opportunities may include certain questions on exams, attendance, participation, extra assignments, general effort, punctuality, etc.

**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>Percentage</th>
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<tbody>
<tr>
<td>Four Exams</td>
<td>65%</td>
</tr>
<tr>
<td>Final exam</td>
<td>25%</td>
</tr>
<tr>
<td>Mystery credit</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
<td>C</td>
<td>73-75</td>
</tr>
<tr>
<td>A-</td>
<td>89-92</td>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>B+</td>
<td>85-88</td>
<td>D+</td>
<td>67-69</td>
</tr>
<tr>
<td>B</td>
<td>82-84</td>
<td>D</td>
<td>64-66</td>
</tr>
<tr>
<td>B-</td>
<td>79-81</td>
<td>D-</td>
<td>60-63</td>
</tr>
<tr>
<td>C+</td>
<td>76-78</td>
<td>F</td>
<td>below 60</td>
</tr>
</tbody>
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**Important Dates to Remember:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 21</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Oct. 26</td>
<td>Last day to withdraw from classes with grade of “W”</td>
</tr>
<tr>
<td>Dec. 4</td>
<td>Last day of class</td>
</tr>
<tr>
<td>Dec. 11</td>
<td>Final Exam (11:00 class)</td>
</tr>
<tr>
<td>Dec. 13</td>
<td>Final Exam (12:00 class)</td>
</tr>
</tbody>
</table>

**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.

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 feel free to come and discuss this with me.

Electronics Device Policy: Devices whose usage is prohibited in class at any time are: pagers, radios, TV, CD, DVD, and MP3 players and similar devices. Devices that are allowed to be used at certain times during class, except during tests, exams and quizzes are cell phones, laptops, handheld computers, PDAs, electronic pens, calculators, and similar devices. The sound must be off unless otherwise specified by the instructor. During tests, exams, and quizzes no electronic devices (except approved calculators) are allowed to be on or in sight, unless otherwise specified by the instructor.

Tips for Success:

- Attend all classes
- 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 for Each Test and Corresponding Book Chapter Sections
Chemistry 351 Biochemistry
Fall 2017

**Test 1**

- **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

**Test 2**

- **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

**Test 3**

- **Enzyme Kinetics**
  - Chapter 5

**Test 4**

- **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