Chem 352 Biochemistry II Fall 2021

**This syllabus is subject to change by the instructor.**

**Day/Time:** MWF 11:00 – 11:50 am  
**Location:** SSMB 138  
**CRN:** 10162

**Instructor:** Dr. Amy L. Rogers  
Office: SSMB 308 (School of Sci & Math Bldg)  
Phone: (843) 953-7292  
Email: rogersaL@cofc.edu  
Office Hours: MWF 10:00 – 11:00 am; and by appointment

**Student Learning Outcomes:**
- Illustrate the chemical logic inherent in metabolism
- Compare and contrast the types of organic reactions that facilitate the breakdown and building of biological molecules
- Evaluate how errors in metabolism lead to human disease
- Recognize how metabolic pathways are regulated

**Required Materials:** Principles of Biochemistry, 5th Edition Moran, Horton, Scrimgeour, and Perry

**Prerequisite:** Chemistry 351

**Electronic Requirements**
- Access to consistent, reliable high-speed internet connection
- Computer with microphone and external speakers or a headset with a microphone. A laptop is required by CofC. More information about the laptop requirement and other technologies to support your learning can be found at https://go.cofc.edu/laptop.
- Web camera
- Calculator - A calculator that performs exponential and logarithmic functions is required
- Printer or access to one
- **Adobe Scan App or CamScanner:** A way to take a photo of your work and quickly upload it as a PDF file to an OAKS Dropbox. Use an app to compile of all your written work (in order) into a single PDF document and submit it to the appropriate location in OAKS. Before submitting, you should review the file to make sure all the pages are present in the right order and legible; re-take scans in different lighting if necessary. See the tutorial below or Tutorials/Resource page in OAKS for more information.

It is important to maintain your computer so that it is functional throughout the term. In addition, if you encounter a computer problem or have any technical problems, please contact the Student Computing Support Desk at (843)953-5457 or studentcomputingsupport@cofc.edu. Additional support and computing downloads and tutorials can be located at blogs.cofc.edu. Please be sure to promptly resolve problems. **Computer failure/unavailability does not constitute an excuse for not completing or submitting work by the due date.**

**Attendance:** It is difficult to be successful in this course without attending class. However, please do not attend in-person class if you are sick or under quarantine/isolation. Students will be responsible for reporting directly to the instructor the reasons for all absences including but not limited to personal illness, COVID-related illness, a requirement that they isolate or quarantine, or the need to care for a family member who is ill due to COVID. If a student is being dishonest about an illness or a COVID-associated absence, the Honor Code is in force and the student will be reported as a suspected Honor Code violation to the Dean of Students.
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**Classes:** All classes will be held in person unless the College moves to fully online. Zoom will be utilized every lecture and available to students that are impacted by COVID or some other approved absence. Zoom lectures will not be recorded and will not be available after each lecture. The expectation is for students to attend class in person unless they have been approved to attend via Zoom. Access to the Zoom link can be found on OAKS or directly sent via email.

**Class Materials and Participation:** All class materials will be provided on OAKS. PowerPoint presentations of all lectures will be posted on OAKS to download prior to class. OneNote will be used during lectures to annotate the PowerPoints. Access to OneNote is found in OAKS in the OneNote module under the Table of Contents. Access to these materials and annotations are not an excuse to not attend class. I expect everyone to participate in class whether we are in person or virtual. If possible, please turn on your video during our virtual time together.

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

- Wednesday, September 29
- Friday, October 22
- Friday, November 12
- Monday, December 6

**Final Exam:** The Final Exam will be comprehensive given on Wednesday, December 8, 1:00 pm.

**Out of Class Bioinformatics Assignment:** There will be an out of class assignment that will be calculated within Mystery Credit portion of the course. This assignment will familiarize you with useful biochemical tools. Specific details will be given later in the semester.

**Makeups:** There are NO makeup tests and a grade of zero will be assigned regardless of the reason. The lowest test grade will be dropped in the calculation of the test average.

**Grading:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Exams</td>
<td>65%</td>
</tr>
<tr>
<td>Mystery Credit/Bioinformatics Assignment</td>
<td>10%</td>
</tr>
<tr>
<td>Final exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>D+</td>
<td>68-69</td>
</tr>
<tr>
<td>D</td>
<td>65-67</td>
</tr>
<tr>
<td>D-</td>
<td>63-64</td>
</tr>
<tr>
<td>F</td>
<td>below 63</td>
</tr>
</tbody>
</table>
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### Important Dates to Remember:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>8/24</td>
<td>First day of classes</td>
</tr>
<tr>
<td>9/25-26</td>
<td>Storm makeup days – Zoom only</td>
</tr>
<tr>
<td>10/29</td>
<td>Last day to withdraw from classes with grade of “W”</td>
</tr>
<tr>
<td>11/24-30</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>12/6</td>
<td>Last day of class</td>
</tr>
<tr>
<td>12/8</td>
<td>Final Exam, 1:00 pm</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 who has a documented disability and has been approved to receive accommodations through SNAP Services, please communicate this with the instructor early in the semester.

### Electronics Device Policy:

Devices whose usage is prohibited in class at any time are: pagers, cell phones, 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 laptops, handheld computers, iPads, 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.

### 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.

### Inclement Weather:

If the College of Charleston closes and members of the community are evacuated due to inclement weather, students are responsible for taking course materials with them to continue with course assignments consistent with instructions provided by faculty. In cases of extended periods of institution-wide
closure where students have relocated, instructors may articulate a plan that allows for supplemental academic engagement despite these circumstances.

COVID guidelines: For the health and safety of yourself and those around you, you are required to wear a face-covering over both your nose and mouth while inside all campus buildings. This mask should fit well; there should not be gaps anywhere between your face and the mask. Also remember that students, faculty, and staff should not come to campus when they feel unwell. Anyone with known contact with someone who is infected with COVID is required to follow CDC and CofC guidance, which states that unvaccinated people quarantine themselves away from others for 10-14 days after the last known contact and additionally get tested (negative test results do not eliminate the need to quarantine), while vaccinated people monitor themselves for symptoms and, if they become symptomatic, begin quarantine and testing. Additionally, per the CDC, fully vaccinated people should get tested 3-5 days after their exposure, even if they don’t have symptoms, and wear a mask indoors in public for 14 days following exposure or until receiving a negative test result.

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

Chapters and Topics:
• 11 Glycolysis
• 13 Citric Acid Cycle
• 14 Electron Transport and ATP Synthesis
• 15 Photosynthesis
• 12 Gluconeogenesis, Pentose Phosphate Pathway, and Glycogen Metabolism
• 16 Lipid Metabolism
• 17 Amino Acid Metabolism
• 18 Nucleotide Metabolism