Chemistry 352
Biochemistry II
Fall 2019
MWF 10:00, SSMB 327
Dr. Riggs-Gelasco
324B SSMB, 953-7455

gelascop@cofc.edu

Office Hours
Monday, 2:00
Thursday, 2:00
or by appointment


Topics:
- Intro to Metabolism, Chapter 10
- Glycolysis, Chapter 11
- Citric Acid Cycle, Chapter 13
- Oxidative Phosphorylation, Chapter 14
- Gluconeogenesis, Glycogen metabolism, Pentose Phosphate, Chapter 12
- Photosynthesis, Chapter 15
- Lipid Metabolism, Chapter 16
- Nitrogen/Amino Acid Metabolism/Urea Cycle, Chapter 17
- Nucleotide Biochemistry, Chapter 18

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

Student learning outcomes are assessed on in class exams, on homework assignments and on the final exam.

Pre-requisite: Chem 351

Grading:
- Four Exams worth 15% each
- Tentative Dates subject to change
  - Friday, September 13
  - Friday, October 11
  - Wednesday, November 6
  - Monday, December 2
- Three Quizzes each worth 2%
- Homework assignments are worth 14%; these are due the class prior to an exam
- Final Exam worth 20%, Wednesday December 11, 8:00-11:00am

Grades will be assigned according to the following MINIMUM scale

<table>
<thead>
<tr>
<th>Letter</th>
<th>%</th>
<th>GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
<td>3.0</td>
</tr>
<tr>
<td>Grade</td>
<td>Range</td>
<td>Score</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>F</td>
<td>Below 60</td>
<td>0.0</td>
</tr>
<tr>
<td>D-</td>
<td>60-62</td>
<td>0.7</td>
</tr>
<tr>
<td>D</td>
<td>63-66</td>
<td>1.0</td>
</tr>
<tr>
<td>D+</td>
<td>67-69</td>
<td>1.3</td>
</tr>
<tr>
<td>C</td>
<td>70-72</td>
<td>1.7</td>
</tr>
<tr>
<td>C-</td>
<td>73-76</td>
<td>2.0</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>2.3</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
<td>2.7</td>
</tr>
</tbody>
</table>

**Final Exam**  
Friday, December 11, 8:00-11:00am.

**Homework:**  
There will be several homework assignments. The assignments will include end-of-chapter questions, literature assignments, and computer assignments. A homework assignment will be due the lecture period prior to each test. Late homework is penalized. The maximum grade you can receive on homework that is handed in late is the lowest score of the assignments that were passed in on time. You are allowed to discuss the homework with one another, but you are to write out the answers/calculations in your own words. Identically worded homework assignments are an indication of cheating (see below). Answers to the homework will be available for viewing in the main office.

Homework is to be typed, with the exception of mechanisms or calculations, which can be neatly printed. Homework answers are to be presented in numerical order. Homework pages should be stapled together. At this point in your chemistry careers, I expect you to be familiar with the superscript and subscript commands in your word processing program (for example, type H$_2$O, not H2O).

**Attendance:**  
Attendance at lectures is usually proportional to your grade. Some of the material covered in this course cannot be found in your book. We will not necessarily be following the order of the book. You will probably be confused as to what to focus on if you miss class. If you have to miss lecture, find another student in the class who will share their notes with you. You are responsible for obtaining the material and assignments you missed. Attendance at exams is mandatory. There are NO makeup exams. Exam dates are announced in advance. If you have an excused absence from the Dean of Undergraduate Studies for missing an exam for health reasons or for a family emergency, then you will be graded on your remaining scores. Missing more than one exam will be interpreted as excessive absence and you will be given a WA for the course.

**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. Homework assignments that appear to be prepared as a joint effort will receive a joint grade (i.e. the points earned will be divided by two). The physical act of preparing your homework for submission should be done on your own.

Disabilities:
The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services at the Center for Disability Services/SNAP located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying me as soon as possible and for contacting me one week before the accommodation is needed.

Weather Events:
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 in order 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.