I. Biology I, BIO 113

II. Dr. Steffani Driggins  
   Office Location: Gibbs Hall, Room 303  
   Office Hours: Mon. 2pm-4pm  
   Tues. 2:00pm-4:00pm  
   Wed. 2:00pm-4:00pm  
   Thurs. 2:30pm-4:30pm  
   Fri. None  
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III. Course Name and Description

BIO 113 BIOLOGY I Credit 4 hrs.
This is an introductory course for biology majors and consists of biological principles, with an emphasis on the scientific method, taxonomy, natural selection, macromolecules of life, basic principles of chemistry and biochemistry, prokaryotic cellular organelles, eukaryotic cellular organelles, photosynthesis, and cellular respiration. Laboratory exercises will complement the lecture topics. This course consists of three lectures and one laboratory session per week. THIS COURSE IS FOR BIOLOGY MAJORS ONLY.

IV. Course Objectives

The purpose of this course is to introduce biological concepts to biology majors that will create a foundation for the upper level biology courses. The topics that will be discussed in the course are the following: scientific method, classification of organisms, natural selection, populations, communities, ecosystems, biospheres, basic chemistry, basic organic chemistry, basic biochemistry, cell structure, cell function, cellular respiration, and photosynthesis.

V. Course Policies

Attendance and Participation

- The university expects class attendance.
- The specific number of absences for this class must not exceed ten percent (10%) of the total number of contact hours/meeting days established for the course, as established by the university and the South Carolina Department of Education.
- Attendance is the responsibility of the student. Absence from class for more than 10% (3-4 classes) of the scheduled class sessions, whether excused or unexcused, is considered excessive.
- For absences that are considered excessive, your instructor will contact the Vice President of Student Affairs, who will research the reasons for said absences and will move forward with scheduling a meeting with you and the appropriate unit head.
- In some instances, excessive absences will be addressed as combined effort between the Vice President of Student Affairs and the Vice President of Academic Affairs.
Please note that bodily presence in the classroom is not synonymous with attendance. If you are unprepared for class, disruptive, inattentive, or asleep, you may be counted absent and potentially asked to leave the classroom.

Students who leave class early, without an excused reason, will be marked absent.

Lateness: Three instances of being tardy are equivalent to one absence.

Class Participation: You are expected to attend each class session and actively participate in class assignments and activities. You are responsible for all class information whether you are in attendance or not. Disruptive behavior or disrespectful behavior is not permitted and will result in disciplinary action or dismissal from the course. Inappropriate behavior {fighting, threats, profanity, throwing/displacing objects, talking on cell phone/texting, other disrespectful behaviors} will not be tolerated and are in direct violation of the university’s Code of Conduct Rules (see 2017-2018 Student Handbook on the university’s website). Disrespect in any form will not be tolerated.

Learning Disability: If you suspect you have or have been diagnosed with any type of learning disability, please inform your instructor and submit the necessary paperwork to ensure that you academic needs are being met.

Academic Integrity: All members of the academic community recognize the necessity of being honest with themselves and with others. Cheating in class, plagiarizing, lying, and employing other methods of deceit diminish the integrity of the educational experience. Academic Policy states, “Use of cellular phones in class, the library and computer labs or university events is prohibited. Use of phone or other communication devices during tests or exams will be treated as academic dishonesty.” Faculty will hold students responsible for academic integrity and will demand academic honesty on all work for the course. The instructor retains the right to set the minimum "academic" penalty for academic dishonesty in a course which includes failure of the course. See Student Conduct Code for definitions of Academic Dishonesty, including cheating and plagiarizing. Plagiarism: “Plagiarism is the act of representing as one’s own the ideas or words of someone else and is the worst form of cheating. Allen University does not condone cheating in any form. Therefore, any student who borrows ideas, oral or written, from books or other sources, representing them in tests, term papers, themes, or other written assignments as his/her own, will be penalized. (Adapted from the Allen University Student Handbook.)

Appropriate Dress: Head coverings including hoods are prohibited for men in any building. Hair wraps and bandanas are prohibited for all students outside of the student’s living quarters. Shoulders and underwear should be covered. (Adapted from the Allen University Student Handbook)

Electronic Usage Policy: Laptops are not allowed to be used in class, except by instructor permission. Cell phones are not permitted to be used in class, except by instructor permission. Please place phones on vibrate or off, out of plain site either in a book bag, pocket or purse. You may be dismissed from class for noncompliance with this policy. Listening or Recording devices are not permitted to be used in this class without prior Accommodation Service Documentation/Verification and the Instructors permission.

Grading Policies and Procedures: Strive to complete each assignment to the best of your ability because there is no guarantee for extra credit. Your participation in this course is based entirely upon the goals and expectations you set for yourself. A copy of all your assignments should be kept for the duration of the semester and any concerns
about your grade should be addressed as they develop. Office hours are kept specifically for this purpose.

- All grade challenges (including quiz errors) should be submitted in writing within 48 hours of the assignment being returned. Students seeking to challenge the grade must clearly explain the issue in question and provide evidence (i.e. specific examples from the assignment in question and evidence) that warrants the change. The steps for this process appear below:

**Grade Challenges**

1. Read through the assignment and make note of any comments.
2. Next read the assignment directions and/or instructional sheet (if applicable) and compare your assignment against the criteria marks you received in the rubric.
3. If there are segments or aspects of a question where you think you deserve higher marks, then provide evidence that supports your assertion for the points in question---if from a course materials/text, provide page numbers.
4. Explain how and why this evidence warrants a change in the grade. Again, you must give specific examples that support your assertion before you explain why you feel you deserve a higher mark.
5. Type your concerns in a formal email and submit it to me within 48 hours of having the assignment in question returned. I will review what you have written and schedule a meeting to discuss my final decision or return my response via email.
6. Students must address any discrepancies in their grades (errors in grading, mistakes by the instructor, etc.) within a reasonable time. A reasonable time means any mistakes in assignments completed before the midterm should be addressed before the midterm exam is taken.

**Websites to help students avoid plagiarism:**

http://plagiarism.org/

http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml

http://www.library.arizona.edu/help/tutorials/plagiarism/index.html

- **Bonus Points**: From time to time bonus point opportunities may arise; however, there is never a guarantee for bonus points. The opportunities will be given in class. There are no make-up bonus opportunities. The cap for bonus points is 25 points per student. You may be able to improve a low grade through bonus point opportunities.

- **Exam Make up Policy** –Early Exams are only available to students who have prior University commitments required and arranged by the University. Students must notify the Professor of athletic and or academic commitments to make arrangements prior to the day of the exam. Documentation must be provided explaining the extenuating and unavoidable circumstances and/or commitments. The date and time of the early exam must be no more than a week before the exam is scheduled. Not showing up for the exam without notifying the professor prior to the day of the exam will result in a non-negotiable 50/F on the exam. The only other exceptions to the no makeup exam policy will only be granted for emergencies in which there is a medical note with a date and signature, police report with a date and signature, or other official document with a date and signature.
• **Exam Tardiness:** Students must be on time for their examination. Any student more than 10 minutes late for an exam will have 5 points deducted from their overall exam score. This policy is to eliminate cheating and provide an interruption free testing environment. **ALL CELL PHONES MUST BE TURNED OFF DURING EXAMINATIONS.** No iPods or other Electronic Listening Devices are ALLOWED during examinations.

**Social and Other Electronic Media (forthcoming as a separate document)**

**Collaborative Work**

All students will work in groups to complete each lab experiment. However, all students will submit their completed lab at the end of the lab time, separately and will be graded individually. Also, all students will work in groups to complete class activities that will occur throughout the semester.

**VI. Course Units**

**Outline of Content**

- Part 1: Scientific Method and Taxonomy
- Part 2: The Five Kingdoms
- Part 3: Chemistry
- Part 4: Organic Chemistry
- Part 5: Biochemistry, Energy and Enzymes
- Part 6: Cellular Organelles and the Plasma Membrane
- Part 7: Photosynthesis
- Part 8: Cellular Respiration

**Student Learning Outcomes**

- Know the steps of the scientific method and their application in science and research studies
- Be familiar with the five kingdoms (Monera, Protista, Fungi, Plantae, and Animalia)
- Be familiar with the concept of classifying organisms through taxonomy
- Be familiar with the concept of natural selection
- Be familiar with the concept of populations, communities, ecosystems and biospheres
- Be familiar with information regarding basic chemistry
- Be familiar with information regarding basic organic chemistry
- Be familiar with information regarding basic biochemistry
- Be familiar with information regarding potential energy, kinetic energy, 1st Law of Thermodynamics, and 2nd Law of Thermodynamics
- Be familiar with information regarding enzymes
- Identify and know the functions of cellular organelles in prokaryotic cells, plant cells, animal cells and the plasma membrane
- Know the process of photosynthesis
• Be familiar with the process of cellular respiration

**Assigned Reading from Textbook**
Please see the first table below.

**Assigned Web-based Material**
No web-based material is assigned for the course.

**Suggested Vocabulary, Formula, Video, etc. Before the Unit Begins**
There are no suggested formulas, videos, etc. before the unit begins.

Before each unit begins, a list of vocabulary/terminology for the assigned chapters will be submitted as an assignment on the BIO 113 course webpage. Students are to use the course textbook to define the assigned chapter terminology and submit the terms as a Word document, through the webpage for the course as an assignment, by the deadline. Please see the first table below for the week of each assigned chapter terminology.

**Dates or Weeks Graded Work Will Take Place**
Please see the first table below for the graded chapter exams, midterm exam and final exam.

**Quizzes:** Pop quizzes will be given beginning with week 2 and will be given throughout the course. The quizzes will be based on the topics discussed each week and will be used to prepare you for the lecture exams, midterm exam, and the final exam.

**Labs:** Please see the second table below for the graded labs.

<table>
<thead>
<tr>
<th><strong>BIO 113 Chapters and Class Discussion Topics</strong></th>
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<tbody>
<tr>
<td><strong>Week 1</strong></td>
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<td><strong>Week 2</strong></td>
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<td><strong>Week 3</strong></td>
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<td><strong>Week 4</strong></td>
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| Week 5 | Chapter 34 (sections 1-7): Vertebrates  
*Chapter 2 Terminology is assigned |
|--------|----------------------------------|
| Week 6 | Chapter 2 (sections 1-5): Chemistry – Part I  
*Chapter 3 Terminology is assigned |
| Week 7 | Chapter 3 (sections 1-2): Chemistry – Part II  
*Chapter 4 Terminology is assigned |
| **Week 8** | Chapter 4 (sections 1-4): Organic Chemistry  
*Midterm Exam/Exam #3  
*Chapter 8 Terminology is assigned |
| Week 9 | Chapter 8 (sections 1-5): Enzymes and Energy  
*Chapter 5 Terminology is assigned |
| **Week 10** | NO CLASS THIS WEEK – SPRING BREAK |
| Week 11 | Chapter 5 (sections 1-5): Biochemistry  
*Chapter 6 Terminology is assigned |
| Week 12 | **Exam #4**  
Chapter 6 (sections 1-4): Cells and Cellular Organelles |
| Week 13 | Chapter 6 (sections 5-6): Cells and Cellular Organelles  
*Chapter 7 Terminology is assigned |
| **Week 14** | Chapter 7 (sections 1-5): Cell Membrane Structure and Function  
*Exam #5  
*Chapter 10 Terminology is assigned |
| Week 15 | Chapter 10 (section1-4): Photosynthesis  
*Chapter 9 Terminology is assigned |
| Week 16 | Chapter 9 (sections 1-4): Cellular Respiration and Fermentation |
| **Week 17** | Final Exam/Exam #6 |

The labs that will be conducted each week are listed below. You will be required to complete each lab in a composition book that will be due each week at the end of the lab time. Any lab that is submitted on paper, spiral notebook, etc. instead of a composition book will not be accepted or graded. Any lab that is submitted late will not be accepted. Incomplete labs that are submitted before the deadline will be graded accordingly.
BIO 113 Weekly Lab Schedule

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Lab Safety, Lab Equipment and Lab Composition Book</th>
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<tbody>
<tr>
<td>Week 2</td>
<td>Microscopes, Letter E, Colored Thread, and Wet Mount Slides Lab</td>
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<tr>
<td>Week 3</td>
<td>Scientific Measurements and Metric Conversions Lab</td>
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<tr>
<td>Week 4</td>
<td>Zoology I Lab</td>
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<tr>
<td>Week 5</td>
<td>Zoology II Lab</td>
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<tr>
<td>Week 6</td>
<td>Acids and Bases Lab</td>
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<tr>
<td>Week 7</td>
<td>Basic Chemistry Lab</td>
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<tr>
<td>Week 8</td>
<td>Mini Race Cars, Potential Energy and Kinetic Energy Lab</td>
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<tr>
<td>Week 9</td>
<td>Enzymes, H₂O₂ and the Effect of Temperature Lab</td>
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<tr>
<td>Week 10</td>
<td>NO LAB THIS WEEK SPRING BREAK</td>
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<tr>
<td>Week 11</td>
<td>Lipids, Proteins, Carbohydrates and Nucleic Acids Lab</td>
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<tr>
<td>Week 12</td>
<td>Plant Cell Organelles Lab</td>
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<tr>
<td>Week 13</td>
<td>Animal Cell Organelles Lab</td>
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<tr>
<td>Week 14</td>
<td>Photosynthesis and the Absorption of Light Lab</td>
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<tr>
<td>Week 15</td>
<td>Cellular Respiration and Germinating Seeds Lab</td>
</tr>
<tr>
<td>Week 16</td>
<td>NO LAB, PRE-EXAMINATION WEEK</td>
</tr>
<tr>
<td>Week 17</td>
<td>NO LAB THIS WEEK, FINAL EXAM WEEK</td>
</tr>
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VII. Course Evaluation

Your grade for this course will be based on the assessments listed below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Lab Composition Book</td>
<td>25%</td>
</tr>
<tr>
<td>Lecture Exams (4)</td>
<td>40%</td>
</tr>
<tr>
<td>Midterm Exam (1)</td>
<td>10%</td>
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<tr>
<td>Final Exam (1)</td>
<td>10%</td>
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</tbody>
</table>
Midterm Exam: February 26 - March 2, 2018. Your midterm exam will be given on 3/02/2018 during regular class time. The midterm exam will be cumulative and will include the topics discussed up until midterm exam week.

Final Exam: Final exams will be given April 30 – May 5, 2018. Your final exam will be given on 05/02/2018 from 3:00pm to 5:00pm. The final exam will be cumulative and will include the topics discussed after the midterm exam up until the last week of classes.

VIII. Course Textbook

IX. Course Reading, Listening, and/or Viewing List
No specific course reading, listening and/or viewing list is required for the course.

Supplemental learning resources are available on the webpage for the course in the form of Powerpoint Slides, animations and youtube videos. They are uploaded onto the course webpage into a folder that is labeled accordingly (BIO 113 PowerPoint Slides, BIO 113 Animations, and BIO 113 Youtube Videos). The weblinks within each folder coincide with the chapters (PowerPoints), exams (animations) or topics (youtube videos) for the course.