BIOL220101
Boston College Summer Session 2016
Summer 2, June 27 to July 15
Monday, Tuesday, Wednesday, Thursday
8:15 to 11:30 AM

Instructor: Linda S. Tanini, M.Ed., Ph.D.
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Phone Number: (617) 784-8264
Office Hours: Before or after class or by appointment

Boston College Mission Statement
Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry.

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

Course Description
Foundational course required for Biology majors that introduces students to living systems at the molecular and cellular level of organization. Topics introduced in this course include basic cellular biochemistry, gene regulation, cellular organization and metabolism, and cell signaling and genetics.

Textbooks & Readings (Required)
Biology: How Life Works, Morris et al. 2nd Edition
A web based portable devise (ex iPhone, iPad, computer, tablet, etc)

Canvas
Canvas is the Learning Management System (LMS) at Boston College, designed to help faculty and students share ideas, collaborate on assignments, discuss course readings and materials, submit assignments, and much more - all online. As a Boston College student, you should familiarize yourself with this important tool. For more information and training resources for using Canvas, click here.
Course Objective:
1) Biologists ask questions, generate hypotheses, and designs experiments to test the predictions.
2) Students will understand the processes and patterns of biological evolution, and the role of evolution as the central unifying concept in biology.
3) Students will learn the scope of biological diversity and the genealogical relationships among major groups of organisms.
4) Students will understand the interactions between organisms and their environments, and the consequences of these interactions in natural populations, communities, and ecosystems.
5) The student will demonstrate knowledge across cultural settings and will learn the impact of culture, gender, and age in Biology as demonstrated in human impact on the ecosystem.
6) The student will demonstrate ethical knowledge pertaining to social issues as demonstrated by human impact on the ecosystem.

Grading
Grades will be based on 400 points:

Two Unit Exams  Unit exams will be administered on Thursday. It will be in the first half of the class with a lecture following the exam. The exam will consist of multiple choice questions and essays based on class presentations and media. You need to be present to complete the tests. If tests are requested late due to medical reasons, you need a physician's note. 100 pts each 200 pts

Final Exam  Final Exam will be approximately 50% cumulative. The final exam will be multiple choice questions based on class presentation and media. You need to be present to complete the tests. If tests are requested late due to medical reasons, you need a physician’s note. 100 pts 100 pts

Blackboard Quizzes  Online quizzes will be administered weekly through Agora as a formative assessment to help students and myself note any areas that require revisiting prior to the exams. 10 pts each 30 pts

Clicker Questions and Participation  Questions will be asked during the class to help check for understanding in the class. This is a great way for myself to assess how well the students understand the concepts. Two questions per day will RANDOMLY be chosen to be graded. You must be present in class to receive credit for these questions. Completing online assessment for another classmate will be considered a breach of the standards of academic integrity. 70 pts

The undergraduate grading system for Summer Session is as follows:
A (4.00), A- (3.67)
B+ (3.33), B (3.00), B- (2.67)
C+ (2.33), C (2.00), C- (1.67)
D+ (1.33), D (1.00), D- (.67)
F (.00)

The graduate grading system for Summer Session is as follows:
A (4.00), A- (3.67)
B+ (3.33), B (3.00)
B- (2.67), passing but does not count toward degree
C (2.00), passing but not for degree credit
F (.00)
All students can access final grades through Agora after the grading deadline each semester. Transcripts are available through the Office of Student Services.

**Deadlines and Late Work**
Assignments are due at the beginning of the class period on the specified dates unless otherwise noted on the syllabus. Late assignments will be graded accordingly or not accepted. Arrangements must be made with the instructor for submitting late assignments.

**Course Assignments**
This class contains a great deal of material to get through in a short period of time and we will move at a rapid rate, covering about two text chapters per day and a lab (for those taking the lab). Expect to spend approximately 8 hours per week on out-of-class assignments and exercises. Please note that some weeks will require more time and some weeks less time but the average is approximately 8 hours per week over the semester.

**How to succeed in this course:**
1) Read the material for the class lecture. While reading, form a “conversation with the text.” Periodically, stop to summarize the passage, ask questions, determine what the author wants you to learn, and explore the figures in relation to the text. After lecture, re-read the section to help organize your thoughts. Spending a great deal of time outside of class learning the material will be beneficial to your success.
2) Think and interact during class. Respond to in-class questions and be a full participant in class discussion.
3) Be engaged in class. Please mute or turn off electronic devices. You are welcomed to use your computer to take notes, but do not surf, check email, Facebook, eHarmony, Twitter or text during lecture. Doing so certainly prevents you from being present and fully participating during lecture. It is disrupted for surrounding students and is disrespectful.

**Course Schedule**

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<tr>
<th>Day</th>
<th>Date</th>
<th>Chapters to Read</th>
<th>Topic and In-Class Work</th>
<th>Due</th>
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| Monday    | June 27  | 2, 3             | • Molecules of Life  
  o Getting to know you wkst.  
  o Molecules Race  
  o Concept-Processing Pairs  
  • Nucleic Acids  
  o Francis and Crick paper  
  o My textbook page summarizer |                        |
| Tuesday   | June 28  | 4, 5             | • Translation and Protein Structure  
  o Making proteins  
  • Organizing Principals  
  o Inner Life of the Cell  
  o Case Study Sickle Cell Anemia  
  o Clothes pin | Canvas Quiz at 11 pm |
| Wednesday | June 29  | 6, 7             | • Making Life Work  
  o Graphic organizer |                        |
<table>
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<tr>
<th>Day</th>
<th>Date</th>
<th>Event</th>
<th>Topics</th>
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| Thursday  | June 30    | Exam 1, Chapt 8                            | Cellular Respiration  
  - Case Study: The mystery of the seven deaths |
| Monday    | July 4     | Independence Day                           | Photosynthesis  
  - Big Picture                                                      |
| Tuesday   | July 5     | 9, 10                                      | Cell Communication  
  - Rachel Dutton  
  - Wondertwins  
  - Cell Form and Function                                          |
| Wednesday | July 6     | 11, 12                                     | Cell Division  
  - Law and Order-Immortal  
  - DNA Replication                                                    |
| Thursday  | July 7     | 13, 14                                     | Genomes  
  - Mutation and Repair                                               |
| Monday    | July 11    | Exam 2, Chapt 15                           | Genetic Variation                                                     |
| Tuesday   | July 12    | 16, 17                                     | Mendelian Inheritance  
  - Eye color case study  
  - Beyond Mendel                                                         |
| Wednesday | July 13    | 18, 19                                     | Genetic Basis of Complex Traits  
  - Genetic and Epigenetic Regulation  
  - Epigenetics of Twins                                                |
| Thursday  | July 14    | Final Exam                                 | Final Exam                                                            |

**Written Work**

Summer Session students are expected to prepare professional, polished written work. Written materials must be typed and submitted in the format required by your instructor. Strive for a thorough yet concise style. Cite literature appropriately, using APA, MLA or CLA style per your instructor’s requirements. Develop your thoughts fully, clearly, logically and specifically. Proofread all materials to ensure the use of proper grammar, punctuation and spelling. For writing support, please contact the [Connors Family Learning Center](#).

**Attendance**

Attending class is an important component of learning. Students are expected to attend all class sessions. When circumstances prevent a student from attending class, the student is responsible for contacting the instructor before the class meets. Students who miss class are still expected to complete all assignments and meet all deadlines. Many instructors grade for participation; if you miss class, you cannot make up participation points associated with that class. Makeup work may be assigned at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class.

Consistent with BC’s commitment to creating a learning environment that is respectful of persons of differing backgrounds, we believe that every reasonable effort should be made to allow members of the university community to observe their religious holidays without jeopardizing their academic status. Students are responsible for reviewing course syllabi as soon as possible, and for communicating with the instructor promptly regarding any possible conflicts with observed religious holidays. Students are responsible for completing all class requirements for days missed due to conflicts with religious holidays.
Accommodation and Accessibility
Boston College is committed to providing accommodations to students, faculty, staff and visitors with disabilities. Specific documentation from the appropriate office is required for students seeking accommodation in Summer Session courses. Advanced notice and formal registration with the appropriate office is required to facilitate this process. There are two separate offices at BC that coordinate services for students with disabilities:

- The Connors Family Learning Center (CFLC) coordinates services for students with LD and ADHD.
- The Disabilities Services Office (DSO) coordinates services for all other disabilities.

Find out more about BC’s commitment to accessibility at www.bc.edu/sites/accessibility.

Scholarship and Academic Integrity
Students in Summer Session courses must produce original work and cite references appropriately. Failure to cite references is plagiarism. Academic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on exams or assignments, or submitting the same material or substantially similar material to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student’s work. Please see the Boston College policy on academic integrity for more information.