With prior notice, I will meet students in my office (C245). I can be reached by e-mail, and I will answer within 24 hours to arrange an appointment and answer questions.


COURSE DESCRIPTION: A comprehensive introduction to living systems, including the scientific basis of biology, cell structure and function, genetic mechanisms, biotechnologies, and ecological and evolutionary processes.

Class meets: Tuesday and Thursday, 9:30 a.m.-10:45 a.m. in SMCB224

COURSE OBJECTIVES: Human existence is embedded in the natural world. Understanding what life is and how it sustains itself in the context of its natural environment - as well as understanding how humankind transforms nature to improve its living conditions - are key notions to investigate within the field of modern biology. This course teaches basic concepts necessary toward understanding the nature of science, the chemical basis of life, and how the different macromolecular components within an organism work together to sustain life (nutrition), perpetuate it (genetics) or destroy it (disease). A true grasp of these fundamental concepts will ultimately help students see how Evolution itself works, and how biotechnologies intervenes in the course of nature to modify organisms (GMO). This course will also address more global biological issues related to biodiversity, such as human diversity, population growth, and ecology.

After completion of this course, students should be able to:

- Be familiar with the basic concepts of the scientific process and the nature of Biology.
- Understand the chemistry of life including: the basic structure of atoms and molecules, the properties of water, and the major groups of organic compounds and their functions in living systems.
- Discuss the fundamental structure and function of cells including: the role of sub-cellular organelles, how animal & plant cells differ, and the methods of cellular transport.
- Describe the nature of metabolism, including photosynthesis and cellular respiration, and it’s importance to living organisms.
- Understand the process of cellular and organismal proliferation including: mitosis & meiosis, DNA structure and function, and the basic principles of genetics and Mendelian inheritance.
- Appreciate the nature of the evolutionary theory and explain the basic concepts of evolution and natural selection according to Darwin.
- Understand and discuss the relationships between organisms and their environment including ecosystems, biomes, and their sustainability.

Reading Assignments and Reading Guides. Readings provide an introduction to the subjects we cover in this course. I will provide you with reading guides in the form of PowerPoint presentations that highlight information you should know from each chapter and ask questions you can use to
evaluate your understanding of the topics covered. You do not need to submit your answers to questions in the reading guides, however answering these questions will likely improve your performance on the graded components of this course. The PowerPoint presentations may include videos and animation links that I expect you to watch online. You are expected to read all of the assigned readings for this course including the entire chapters of the textbook that correspond with topics we cover each week.

**CANVAS Use:** BSC1005 uses the CANVAS Course Management system, for course communications, to distribute course information, and for grading. To log in to CANVAS please use the following link along with your USF net ID and password: [https://usflearn.instructure.com](https://usflearn.instructure.com).

Grading Scale: 94-100% A ; 90-93% A- ; 87-89 B+ ; 84-86% B ; 80-83% B- ; 77-79% C+ ; 74-76% C ; 70-73 C- ; 67-69% D+ ; 64-66% D ; 60-63% D- ; 59% and below F, failing.

The grade is based on 3 exams (E1: 25%; E2: 20%; E3: 30%, and 5 quizzes: 25%) that will be given every two-week period at the beginning of the class.

<table>
<thead>
<tr>
<th>Week/session</th>
<th>Weekly Topics*</th>
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<tr>
<td>August 26-28</td>
<td>The scientific method and evaluation of scientific data</td>
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<tr>
<td>September 2-4</td>
<td>The structure and function of biological macromolecules / Cell</td>
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<td>September 9-11</td>
<td>Cellular metabolism / Nutrients and membrane transport</td>
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<tr>
<td>September 16-18</td>
<td>Cellular metabolism / Enzymology and respiration</td>
<td>4</td>
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<td>September 23-25</td>
<td>Global warming / Photosynthesis</td>
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<tr>
<td>Sep 30/Oct 2</td>
<td>EXAM 1 / DNA synthesis and cell division (cancer)</td>
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<tr>
<td>October 7-9</td>
<td>Cell division / Mendelian Genetics</td>
<td>6/7</td>
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<tr>
<td>October 14-16</td>
<td>Mendelian Genetics / Biotechnology</td>
<td>7/8</td>
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<td>October 21-23</td>
<td>Biotechnology</td>
<td>8/9</td>
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<tr>
<td>October 28-30</td>
<td>EXAM 2 / Evolution and Natural selection</td>
<td>10</td>
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<tr>
<td>November** 4-6</td>
<td>Evolution and Natural selection / Species and Races</td>
<td>10/11</td>
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<tr>
<td>November 13 (11 off)</td>
<td>Species and Races</td>
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<td>November 18-20</td>
<td>Biodiversity and Classification</td>
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<td>Nov 25 (27 off)</td>
<td>Population Ecology</td>
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<td>December 2-4</td>
<td>Conserving Biodiversity</td>
<td>15</td>
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<tr>
<td>December 9</td>
<td>EXAM 3</td>
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* Schedule is tentative and subject to change. However, the schedule for exams will not be modified.

** November 1: Last day to drop with a “W”; no refund & no academic penalty for Fall 2014.

**Computer and Technology use in class:** Computer use in class, especially off-task computer use, can be a distraction to other students. Technology may be utilized to support coursework activities. While in class, you will use technology only for purposes related to this course. You are expected to be considerate of the instructor and other students while using technology. It is easy for technology to become a distraction to you and to those around you. Inappropriate uses will be noted and may affect your final grade. Negative technology use in class will reduce your grade by at least 1/2 letter grade, and may cause you to be dismissed from the class as the professor sees fit.
Appropriate Uses

- Taking notes.
- Following along with presentations, demonstrations, and other whole class activities.
- Engaging in assigned classroom tasks.
- Delivering classroom presentations or other assigned tasks.
- Facilitating discussions that require laptop/technology use.

Inappropriate Uses

- Displaying materials on screen which may be distracting or offensive to others.
- Instant messaging, e-mailing, surfing the Internet, playing games, writing papers, doing homework, etc.
- Keyboarding
- Talking on cell phone, text messaging, using pagers, or using other similar devices.
- Allowing distracting audio from any device.

Audio and Video-Recordings

- Recording of class via tape recorder, cell phone, or other recording devices is strictly prohibited without the express written permission of the instructor.
- Non-permission to sell class notes, materials, recordings: Students are not permitted to sell notes, materials, tests, recordings, or any other items related to this course.

PREPARATION FOR EXAMS or ASSESSMENTS: All exams are to be completed at the scheduled time. No make-up periods are scheduled. The final session exam will only be given on the assigned day. Please contact me in advance if you will not be able to take an exam at the scheduled time. All exams will be based on material presented in class activities, lectures, discussion, and required readings. The exams may be comprised of multiple choice, short answer, extended response and/or essay questions.

Test Format – Any combination of Matching, Multiple Choice, Short Answer, Extended Response, and Essay.

Recommendation: READ ALL designated MATERIAL. Not all the information contained in the exams will be covered in class. You are expected to read the materials, as assigned, and understand the content. If you do not understand the content, it is your responsibility to ask questions.

Additional Policies and Procedures:

- ADA Statement: Students with disabilities are responsible for registering with the Office of Student Disabilities Services in order to receive special accommodations and services. Please notify the instructor during the first week of classes if a reasonable accommodation for a disability is needed for this course. A letter from the USF Disability Services Office must accompany this request.
• **USF Policy on Religious Observances:** All students have a right to expect that the University will reasonably accommodate their religious observances, practices and beliefs. Students are expected to notify the instructor in writing by the second class if they intend to be absent for a class or announced examination, in accordance with this policy.

• In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to Canvas and email messaging and/or alternate scheduling. It is the responsibility of the student to monitor the main USF website, and email messages for important information about the closure. For information about the continuation of instruction, students are directed to their individual Canvas course sites.

• Disclaimer: This syllabus is an agreement between the instructor and the students registered in the course. It should be noted, however, that if any questions or problems involving official college policy or procedure, information and explanations as stated in the college catalog are always considered to override the language of a course syllabus. From time to time, this syllabus may need to be amended. The instructor will notify students via the USF Course Shell and/or email of any changes, additions, and/or deletions to the syllabus.