

This is a sample syllabus for BSC2010. Students should reference the section syllabus provided at the beginning of the semester for specifics regarding assignments and grade assignments.

**Biological Science I – BSC2010 – Section #**  
**SEMESTER**  
**Lecture Times & Location**  
**Optional Help/Discussion Time & Location**

**Instructor:**

Name & contact information

**Office Hours:**

Times & Location

**Teaching Assistants:** Teaching Assistants are available for office in the Biology Study Center (KING 1054). (TA Names & e-mail addresses & office hours)

**BSC 2010 COURSE DESCRIPTION:**

This is the first part of a two-semester introductory biology course designed for those interested in pursuing a career in life sciences. The intention of this course is to provide the building blocks necessary for a student to gain a strong foundation in general biology. Topics covered will provide an overview of biological processes and function at the molecular, cellular and organismal level: 1) Atoms and Biological Molecules, 2) Cellular Biology, 3) Biochemistry and Energy Transformation 4) Molecular Genetics and 5) Physiology. The diversity of knowledge gained in BSC 2010 will aid understanding in more advanced biology classes.

**BSC2010 COURSE OBJECTIVES:**

At the end of the semester, students will be able to:

- describe the basic structure of atoms and important biological molecules
- identify parts of the eukaryotic cell and describe fundamental cell functions
- explain basic cellular biochemistry and energy-transformation processes in plant and animal cells
- identify and explain the components of the Central Dogma of molecular genetics; describe the mechanisms and significance of gene regulation
- explain the physiological processes underlying human functional systems (e.g., nervous, digestive, respiratory, circulatory).

**The Liberal Studies for the 21st Century Program at Florida State University builds an educational foundation that will enable FSU graduates to thrive both intellectually and materially and to support themselves, their families, and their communities through a broad and critical engagement with the world in which they live and work. Liberal Studies thus offers a transformative experience.**

**This course has been approved for the Liberal Studies disciplinary requirement of Natural Science and thus is designed to help students become an effective interpreter of scientific results and a critical analyst of claims about the natural world. Therefore, at the end of the semester, students will also be able to:**

- 1. Pose questions or hypotheses based on scientific principles.*
- 2. Use appropriate scientific methods and evidence to evaluate claims or theoretical arguments about the natural world.*
- 3. Analyze and interpret research results using appropriate methods.*

**COURSE WEB SITE:** Canvas (<https://canvas.fsu.edu/>). Students will find grades, lecture slide sets, handouts, “written” homework assignments & problem sets, study guides, practice exams & quizzes, answer keys, discussion articles, video/internet links, group-report info, & announcements posted in various folders on the course website. *Please refer to the course website and check your FSU e-mail frequently to receive updated information*

**COURSE MATERIALS:**

**Biology, 11<sup>th</sup> Edition**, by Campbell and Reece (with Mastering Biology). This text is also used for Biological Science • II (BSC 2011) and Eukaryotic Diversity (BSC3016).

**Required Online Content:**

[www.masteringbiology.com](http://www.masteringbiology.com) Course ID: **XXXXXXXX**

This is an on-line learning software package developed by the publisher of your textbook with a vast array of useful resources tailored specifically to the material covered in the text. Among these resources are; videos, mp3 tutor sessions, study tools, self-quizzes, practice tests and an optional online version of the textbook itself (i.e., an “e-book”). You will be assigned ten Mastering Biology assignments throughout the semester. Directions for registering with Mastering Biology for this course are provided on Blackboard under “Course Info.

**i>Clickers:**

Students are required to purchase an i>Clicker polling device for this course. Please have your i>Clicker device purchased and registered (instructions on Blackboard) by the second week of class. Several i>Clicker questions will be used during every class meeting to assess your understanding and to monitor attendance for up to 2% extra-credit. I am sorry, but I cannot give you attendance credit if you have forgotten your device. **PLEASE BE AWARE:** Students caught operating more than his/her own “clicker” will forfeit their opportunity to earn any extra-credit for the entire semester. The same penalty will apply to the absent student(s) who permitted another student to operate their “clicker.” *Each offense will also be considered a violation of FSU’s Academic Honor Policy.*

**COURSE ASSIGNMENTS AND EVALUATION: (to be decided by each instructor)**

Grades will come from four sources, and exams will account for 90% of the final grade:

- Mastering Biology reading assignments. Mastering Biology Homework will be due before each class (submitted online through the Mastering Biology website). **(100 points)**
- Four unit exams will be given with a point total of 175 points each. **(700 points)**
- One cumulative final will be given with a point total of 200. **(200 points)**

Errors or discrepancies in a grade that you have received must be brought to the attention of the instructor within one week of your receiving the graded document.

The instructor reserves the right to curve exam grades in a fair and impartial manner when the exams are initially graded under the following conditions:

1. The average exam grade is low enough that the instructor feels the exam warrants a curve.
2. The curve will only serve to improve exam grades and not reduce them.

**UNEXCUSED ABSENCE POLICY: (to be decided by each instructor)**

Students who miss a scheduled quiz, examination or in-class assignment, or fail to hand in an assignment on time without prior approval or verifiable emergency or suitable documentation (e.g., doctor’s note) will be assigned a grade of zero.

**PARTICIPATION POINTS: (to be decided by each instructor)**

We will use several clicker questions during every class meeting to assess your understanding and to monitor attendance for up to 2% extra-credit. I am sorry, but I cannot give you participation credit if you have forgotten your device.

**FINAL COURSE LETTER GRADES** (a sample is shown below; final letter-grade designations will be left up to the individual instructor):

Exams and quizzes will account for ~##% of your final grade. (INSTRUCTOR ENTERS PERCENTAGE HERE)

<b>A</b>	<b>= 920 – 1000 points</b>	<b>C+</b>	<b>= 780 – 799 points</b>
<b>A-</b>	<b>= 900 – 919 points</b>	<b>C</b>	<b>= 720 – 779 points</b>
<b>B+</b>	<b>= 880 – 899 points</b>	<b>C-</b>	<b>= 700 – 719 points</b>
<b>B</b>	<b>= 820 – 879 points</b>	<b>D</b>	<b>= 600 – 699 points</b>
<b>B-</b>	<b>= 800 – 819 points</b>	<b>F</b>	<b>= &lt; 599 points</b>

**COURSE SCHEDULE: (instructor inserts their own schedule here)**

Lecture	Date	Topic	Text
1		Introduction; Process of Science	Chpt 1: pp 1 - 27
2		Atoms	2: 30 -37
3		Chemical Bonds I	2: 38 - 45
<b>No Class</b>			
4		Chemical Bonds II, water	2: 38 – 45; 3: 46 - 52
5		Acids and Bases, Organic Molecules	3: 52 – 57; 4: 58 - 67
6		Macromolecules – Carbohydrates	5: 68 - 74
7		Macromolecules – Amino Acids, Proteins	5: 77 - 91
8		Nucleic Acids	5: 86 - 89
9		Macromolecules continued - Lipids	5: 74 - 77
10		<b>EXAM 1</b>	
11		The Cell	6: 94 - 124
12		Cell Structure and Organization	6: 94 - 124
13		Membrane Structure and Function	7: 125 - 131
14		Transport	7: 132 - 141
15		Transport; Laws of Thermodynamics	8: 142- 148
16		ATP, Enzymes	8: 149 - 153
17		Enzyme- Substrate specificity, feedback	8: 153 - 160
18		Oxidation-reduction reactions	9: 162 - 166
19		<b>EXAM 2</b>	
20		Cellular Respiration I Glycolysis, Krebs Cycle	9: 166 - 172
21		Cellular Respiration II Electron Transport Chain	9: 172 - 182
22		Photosynthesis and Light	10: 185 - 191
23		Photosynthesis I	10: 191- 198
24		Photosynthesis II	10: 198 - 205
25		Cell communication	11: 206-213
26		Signal transduction; second messengers	11: 214- 227
27		<b>EXAM 3</b>	
28		DNA/RNA, chromatin	16: 305 – 310, 320 - 322
29		DNA replication and repair	16: 310 - 319
30		Transcription	17: 325 - 336
31		Translation	17: 337 – 344, 348 - 350
32		Genetics of Bacteria	18: 351 - 356
33		Eukaryotic gene regulation	18: 356 - 366
34		Mutations; Genetic Engineering; Cancer	17: 344-346; 18:373 - 379
35		Genetics of viruses	19: 381 - 395
36		<b>EXAM 4</b>	
37		Guest Lecture – Biotechnology	reference Chpt 20
38		Circulatory System; Blood	42: 898 - 915
39		Respiration; Gas Exchange	42: 915 - 929
40		Immune System	43: 930 - 953
<b>No Class</b>			
41	Mon 12/1	Muscles	50: 1105 - 1119
42	Wed 12/3	Neurons, synapses	48: 1047 - 1063
43	Fri 12/5	Nervous Systems	49: 1064 - 1085
<b>Final Exam</b>			

**UNIVERSITY ATTENDANCE POLICY:**

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

**ACADEMIC HONOR POLICY:**

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

**AMERICANS WITH DISABILITIES ACT:**

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the: Student Disability Resource Center 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD) [sdrc@admin.fsu.edu](mailto:sdrc@admin.fsu.edu) <http://www.disabilitycenter.fsu.edu>

**FREE TUTORING FROM FSU (in addition to tutors located in the Biology Study Center in KING 1054):**

On-campus tutoring and writing assistance is available for many courses at FSU. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options at <http://ace.fsu.edu/tutoring> or contact [tutor@fsu.edu](mailto:tutor@fsu.edu). High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

**SEXUAL HARASSMENT POLICY:**

It is the policy of the University that its employees and students neither commit nor condone sexual harassment in any form. [http://registrar.fsu.edu/bulletin/grad/info/university\\_notices.htm](http://registrar.fsu.edu/bulletin/grad/info/university_notices.htm)

**STUDENT ELIGIBILITY FOR AN INCOMPLETE GRADE:**

Incomplete grades will not be assigned except in the case of exceptional unforeseen circumstances as determined by the instructor.

**SYLLABUS CHANGE POLICY:**

Except for changes that substantially affect implementation of the evaluation (grading) statement this syllabus is a guide for the course and is subject to change with advance notice.