PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

GENERAL BIOLOGY II
BIOL 1120

Class Hours: 3 **Credit Hours:** 4
Laboratory Hours: 2 **Revised:** Fall 2016

Catalog Course Description:

Plant and animal anatomy (tissues, organs, and organ systems), physiology, reproduction, and growth; microorganisms; fungi; ecology. Course includes three hours of lecture and two hours of laboratory applications each week.

Prerequisites:

None

Corequisites:

Students enrolled in lecture must be registered for the corequisite laboratory during the same semester.

Textbook(s) and Other Course Materials:

Biology. 10th edition. Johnson, Mason, Losos, Singer. McGraw Hill. 2014. The text is required. Volume II of this textbook will be used for Biology 1120. The custom volume at the Pellissippi State Bookstore includes a 6 month access code to *Connect* (some faculty may require *Connect* assignments) or students may purchase directly from their instructor's e-learn site

Customized Biology Laboratory Manual, 12th edition. Mader. McGraw Hill. 2016. The lab manual is required and will be used for each exercise.

Week/Unit/Topic Basis:

Week Topic

1. Lecture: Seedless & Seed Plants 30, 31
   Lab: Nonvascular & Seedless Vascular Plants, Seed Plants #17, 18 (moss, ferns, & pines)

2. Lecture: Plant Form, Function & Nutrition 36-38

3. Lecture: Plant Hormones & Reproduction 40, 41
   Lab: Organization of Flowering Plants #19; Flowers & Seeds #22
   Unit 1 Assessment 100 pts. – Ch. 30, 31, 36-38, 40, 41

4. Lecture: Prokaryotes; Protists 28, 29
   Lab: Bacteria & Protists #15

5. Lecture: Fungi; Animals 32-34

Lab: Fungi #16

6. Lecture: Animals; Nervous System 35, 43
   Lab: Intro to Invertebrates #23
   Unit 2 assessment 100 pts. – Ch. 28, 29, 32-35

7. Lecture: Nervous System; Endocrine System 43, 45
   Lab: Lab Practical 1

8. Lecture: Endocrine System; Musculoskeletal System 45, 46

9. Lecture: Reproductive System; Circulatory System 52, 49 Lab: Invertebrate Coelomates #24
   Unit 3 assessment 100 pts. – Ch. 43, 45, 46, 52

10. Lecture: Circulatory System; Respiratory System 49, 48
    Lab: Mammalian Anatomy I, II #27, 29

11. Lecture: Digestive System; Urinary System 47, 50
    Lab: Nervous System & Senses 31; Heart Anatomy #29

12. Lecture: Urinary System; Immune System 50, 51
    Lab: Homeostasis #30; Blood Typing (handout)
    Unit 4 assessment 100 pts. – Ch. 47-51

13. Lecture: Population Ecology; Community Ecology 55, 56
    Lab: Effects of Pollution #35; Food Webs (handout)

14. Lecture: Ecosystems, Temperate Deciduous Forests; Conservation Biology 57, 59
    Lab: Lab Practical 2 Unit 5 assessment 100 pts. – Ch. 55-57, 59

15. Finals Week - Mandatory Comprehensive Final 100 pts.

    Note – The order of plants varies in spring and fall semesters. Fall semester begins with plants; Plants are the unit 4 topic in the spring. The weeks without labs vary depending on the specific dates of semester breaks.

Course Goals*:

The course will:

A. Expand student understanding about the diversity and complexity of life so they may become better stewards of our biosphere. V.4
B. Expand student understanding of the relationship between the structure of something (a tissue, organ, or organism) and its function. V.4
C. Enhance student understanding of health related problems giving students an ability to communicate more effectively with health care providers. V.3
D. Guide students to an understanding and appreciation of environmental concerns such as

recycling and waste disposal, acid rain, population growth, the introduction of non-native species, the greenhouse effect and global warming. V.3-4

E. Enhance student ability to interpret related biological information and determine its validity. V.2-3
F. Enhance student ability to reason and think more critically. V.1-5

*Roman numerals after course objectives reference goals of the Biology program.

Expected Student Learning Outcomes*:

Students will be able to:

1. Describe basic anatomy (tissues, organs, and organ systems), physiology, reproduction, and development of plants and animals. B, C, F
2. Identify causes and treatments of various basic medical concerns such as ulcers, diabetes, depression, osteoporosis and infertility. B, C, F
3. Compare and contrast organisms representing the five kingdoms of living things. A, B, D, F
4. Identify the importance of organism from the five kingdoms of living things to the health of the biosphere. A, D, F
5. Explain basic concepts of population growth and community interactions. D, E, F
6. Describe the major concepts of ecology and environmental concerns. A, D, F
7. Use dichotomous keys to identify unknown organisms and report data using graphs and tables. E, F
8. Locate biology related material in the library and online. Evaluate biological information they read about online or see on TV. E, F
9. Interpret and draw conclusions from data presented in graphic form. E, F

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

Evaluation:

A. Testing Procedures: 75% of grade

Each lecture unit will be evaluated using one or more tests (a mix of discussion and objective questions) and assignments totaling 100 points. There are no makeup lecture tests. There will be a mandatory comprehensive final for the course worth 100 points. The comprehensive final may be used to take the place of one missed exam (worth 100 pts.) or may be used to replace the lowest unit (100 pts.) score if all exams and unit points were attempted. Any earned extra credit points will be forfeited by failure to take the comprehensive final.

The additional 75 points associated with lecture will be earned by doing a variety of activities to be determined by your instructor. You will receive directions from your lecture instructor about the assignment(s).

B. Laboratory Expectations: 25% of grade

Students are expected to attend the lab section for which they are enrolled; lab attendance is required for completion of the course. Students MAY be able to attend an alternate lab section to make up a missed lab if an acceptable excuse is presented and the request is approved by an instructor. Lab review questions must be signed by the make-up lab instructor in order to receive credit. Students must have attended a lab section in order to submit the corresponding lab questions. Laboratory work will not be accepted late.

Students should read the scheduled lab exercise before attending lab. A quiz covering that day's material or material from a previous lab may be given at the start of lab. There are NO make-up quizzes. After each exercise, students are required to complete the assigned lab review questions. Students are encouraged to work together to complete the questions, but not to plagiarize answers. These lab review questions will be collected and graded on four or more randomly selected dates. It is the student's responsibility to submit their work, if collected, to their lab instructor in a timely fashion.

Missing more than three labs (25%) in a semester will result in failure of the entire course.

Closed toe/heeled shoes are mandatory and garments that cover the legs are recommended.
Students are expected to dress appropriately for the laboratory to minimize the possibility of the spread of contamination and risk to personal safety. Students are required to report to their laboratory instructor any concern for personal safety or injury sustained during various exercises.

Drink, food, and any form of tobacco are not allowed in the classroom or laboratory.

Visitors are not allowed in the laboratory.

Student Participation in Dissections: During Biology 1120, students will study the anatomy and physiology of vertebrates and invertebrates. As are ALL laboratory exercises in Biology 1110 and 1120, the laboratory investigations involving dissections are mandatory. All students enrolled in the course are expected to participate. However in consideration of religious and/or moral objections of isolated individuals, students wishing to be excused from the actual physical dissection may petition for a waiver by submitting a written request (supported by pertinent evidence or documentation) to the Biology 1120 lead instructor two weeks prior to the first dissection lab. Biology faculty members reserve the right to grant or deny waivers. Appeals may be made to the Office of the Vice President for Academic Affairs. Students granted a waiver for the vertebrate and invertebrate exercises will be excused only from the actual physical dissection and will be expected to attend lab, master all materials presented in laboratory, and be responsible for all assignments and quizzes. All students are required to take the laboratory exams which include

material from the animal dissection exercises. Pregnant students are advised to consult their physician about their attendance of the dissection labs. With proper documentation, alternate activities will be assigned to pregnant students.

C. Field Work:
Students may be required to read supplemental articles or papers on reserve in the library, participate in biology related community service activities or complete questions at local biology related venues.

D. Other Evaluation Methods:
Other evaluation methods may be arranged at the discretion of the lead instructor and lecture instructor.

E. Grading Scale:

Lecture tests & assignments	Points
Unit 1	100
Unit 2	100
Unit 3	100
Unit 4	100
Unit 5	100
Comprehensive final	100
Assignment(s)	75
Total lecture points	675

Laboratory Points	Points
Lab review questions	48 (4 at 12pts. each)
Pre-lab quizzes	20 (4 at 5pts. each)
Leaf collection	45
Assignment(s)	17
Lab Practical 1	50
Lab Practical 2	45
Total lab points	225

Letter Grade	Percentage	Points
A	90-100%	810-900 points
B+	87-89%	783-809 points
B	80-86%	720-782 points
C+	77-79%	693-719 points
C	70-76%	630-692 points
D	60-69%	540-629 points
F	0-59%	0-539 points

Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for disabilities:

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. Disability Services (http://www.pstcc.edu/sswd/) may be contacted via email or by visiting Alexander 130.

D. Other Policies:

Classroom disruptions: Behavior that occurs during lecture or laboratory that is distracting to others will not be tolerated and may lower the final grade. Cell phones should be in the off or vibrate mode and should not be visible during class time. Students should refrain from sending or replying to text messages while in class. Arriving late and/or exiting the room prior to the end of class is disruptive and should not occur; students should discuss a need to leave early with the instructor in advance of the event.

Laboratory Substitution Policy: There may be a time during the semester that you will not be able to attend your regularly scheduled laboratory section. Since attendance is so critical to your laboratory grade, we do have a policy that will allow you to attend an alternate lab section ONE time during the semester. Lab substitution is only allowed in the case of an emergency and with adequate approval.