

COURSE SYLLABUS OUTLINE

Course Title and Number: Principles of Biology BSC 121

Semester and Year: Fall 2015

Days/Time: Lecture: Tuesday and Thursday 3:30-4:45, room S-376

Lab sections: 103 (T 10-1150, RM S-203), 104 (W 10-1150, RM S-203)

Instructor:

Name: Dr. Jayme L. Waldron

Office: S-378

Office Hours: Monday 9:30-11:00, or by appointment.

Office Phone: 696-3361

Email: waldron3@marshall.edu

Use email to contact me (do not send messages via blackboard). If you send email from accounts other than your Marshall email, there is a very good chance I will not see them. Use your Marshall accounts for email communications.

Office hours: I make every effort to keep scheduled office hours. Please be aware that sometimes there are conflicts with required meetings, and I cannot be present. When possible, I will make announcements on muOnline if I am unable to make scheduled office hours. I strongly encourage you to make an appointment if you need to meet with me.

Course Description: A continuation of the study of basic biological principles common to all organisms. Evolution, diversity of life, structure, function, and ecology. Intended for science majors and pre-professional students.

Credit: 4 credit hours in biological sciences

Prerequisites: BSC 120 with a grade of C or better.

University Policies: By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802

Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment

Text Information:

Required Text: Brooker, R.J., Widmaier, E.P., Graham, L.E., and Stiling, P.D. 2008. **Biology, 3rd Edition.**

Other required Materials:

1. Connect Plus Account Access
2. Weinstein, S. 2010. BSC 121 Laboratory Manual, Principles of Biology, Majors, 14th ed.
3. Safety goggles
4. Pechenik, J.A. Short Guide to Writing about Biology. Longman.

COURSE OBJECTIVES: The purpose of this course is to familiarize students with the study of living organisms. Students will be exposed to various aspects of the body of biological knowledge through an overview of all major taxonomic groups, from bacteria to mammals, including the relationships between organism form and function. At the conclusion of this course you should have concrete knowledge of the biological sciences; understand the process of science through experimentation and hypothesis testing; and hopefully gain an appreciation and a sense of wonder inspired by the complexity of living organisms.

Desired Learner Outcomes:

- Students will synthesize information, think critically, and solve critical thinking problems.
- Students will be able to distinguish between the terms adaptation, fitness, natural selection and evolution.
- Students will identify the relationships between form and function at the levels of biological organization.
- Students will demonstrate an understanding of the methods of science used in scientific investigation by conducting scientific investigation, analyzing and interpreting data, and preparing a scientific paper.
- Students will apply principles of scientific inquiry, differentiate a theory from a hypothesis, and differentiate fact from opinion in regard to biological sciences.
- Students will practice working collaboratively through laboratory studies and experiments.

Grading Policy: Grading scale will be as follows:

90-100% = A 80-89% = B 70-79% = C 60-69% = D ≤ 59% = F

Grades will be based on lecture and lab assignments as follows:

Exams (3)	48%
Final Exam	17%
Online quizzes	10%
Lab grade	25%

Lecture exams: There will be three lecture exams, plus a final. Material on examinations can include information from lectures and assigned readings/videos. Please notify me in advance if you know you will miss an exam (see Attendance Policy below). In case of university closure on an exam day, the exam will be rescheduled for the next lecture session.

Online Quizzes: Weekly quizzes will be posted on Connect Plus and will cover textbook reading material scheduled for the week (see Table below). Quizzes will be open for one week. You will have the opportunity to take each quiz 3 times and you may use your text and your notes. On submission you will be told which answers were incorrect. The quiz grade recorded will be the highest of the 3 attempts. After the submission time, the answers and explanations of the questions will become available for your review.

Labs: Your laboratory performance will account for 25% of your total course grade. This will be determined from laboratory data analyses, lab hand-ins, written lab reports and pre-lab quizzes. All lab reports, unless otherwise noted, must be handed to your TA and be on time. Neither Dr. Waldron nor other TA's will accept the sheets or deliver them to your TA. Lab reports will only be accepted at the start of labs and late reports will not be accepted. You must be present in lab in order to hand in any

type of lab report for credit. Lab quizzes may or may not be announced and cannot be made up.

Final Exam

The final exam will include 25% content from previous exams. The final exam is scheduled for Tuesday (December 8), 3:30-5:30.

ATTENDANCE POLICY: Students are expected to be on time for lectures, labs, and exams. Attendance in lectures is **mandatory**. You will need to sign-in to each class period. At the end of the semester, I may use attendance data to make decisions about borderline grades.

Attendance in laboratory is **mandatory**. You are expected to arrive on time for lab and stay until all assigned work is completed.

You are responsible for any material missed by being absent. Students are responsible for all activities and announcements that occur during class and are responsible for any material missed. Missed information should be obtained from classmates NOT from your instructor.

Missed exams due to illness, death in the family, or institutional activities will be excused **only with an official university excuse**. Make-up exams will be administered for excused absences only (see University Policies section below). ANY UNEXCUSED ABSENCE FROM AN EXAM WILL RESULT IN A GRADE OF ZERO FOR THAT EXAM. If you arrive for an exam after the first person has handed in their exam, you will not be allowed to take the exam.

Electronic devices: Mobile phones are not permitted in class. You will be dismissed from class if you are caught texting or if your phone rings. You will be given an absence for the day. Please inform me should there be a need to have a cell phone on.

Audio or video recording of lectures is not permitted without prior consent of Dr. Waldron. Computers cannot be used during class. Notes must be taken using paper and writing utensils.

Computer Literacy: I use MUOnline (<http://www.marshall.edu/muonline>) to distribute course announcements, supplementary material, and study aids. Course materials are also located on the Connect Plus website.

Records: Students are encouraged to mark both the exam and answer sheet and return both at the end of the exam period. Should a question arise concerning grading, the answer sheet will be the official response. Exams and answer sheets will be kept for one semester or summer term following completion of the course.

Grades will not be given or discussed over the phone or email. You must be present during lecture or lab to collect graded exams, quizzes, and lab reports. Students should keep all returned exams score sheets, quizzes, and lab reports so that their relative standing in the course can be known at any time. All grades appeals must be done formally in writing and within 10 days of the student's receipt of the graded item. Until final grades have been submitted you are expected to keep copies of all submitted and graded work (quizzes, papers, etc.).

COURSE OUTLINE/DAILY/WEEKLY SCHEDULE:

Week (Dates)	Topic	Reading
Week 1 (Aug 25-27)	Course Introduction Evolution Natural Selection and Speciation	Ch. 23-24
Week 2 (Sep 1 - 3)	Species and taxonomy Bacteria and Archaea Note: "W" withdrawal period begins	Ch. 25-26 Ch. 27
Week 3 (Sep 8-10)	Bacteria and Archaea Protists	Ch. 27 Ch. 28
Week 4 (Sep 15-17)	Plants and the Conquest of Land Exam 1 (Thurs Sep 17)	Ch. 29
Week 5 (Sep 22-24)	Evolution of Modern Plants Fungi	Ch. 30 Ch. 31
Week 6 (Sep 29- Oct 1)	Animal Diversity Invertebrates	Ch. 32 Ch. 33
Week 7 (Oct 6-8)	Invertebrates Vertebrates	Ch. 33 Ch. 34
Week 8 (Oct 13-18)	Vertebrates Exam 2 (Thursday Oct 15)	Ch. 34
Week 9 (Oct 20-22)	Animal Bodies & Homeostasis Nervous System	Ch. 40 Ch. 41
Week 10 (Oct 27-29)	Muscular Skeletal Systems & Locomotion Nutrition & Digestion	Ch. 44 Ch. 45
Week 11 (Nov 3-5)	Energy Balance, metabolic rate, & body temperature Circulation & Respiration	Ch. 46 Ch. 47-48
Week 12 (Nov 10-12)	Excretion Exam (Thurs Nov 12)	Ch. 49
Week 13 (Nov 17-19)	Ecology & Biomes Behavioral Ecology	Ch. 54 Ch. 55
Week 14 (Nov 24-26)	NO CLASS! Thanksgiving Break	
Week 15 (Dec 1 - 3)	Population Ecology Biodiversity & Conservation Biology	Ch. 56 Ch. 60
FINAL EXAM	(Tuesday Dec 8): Time: 3:30-5:30	