

BIOLOGY 104 INTRODUCTORY BIOLOGY II
COURSE SYLLABUS – SPRING 2015
PLEASE READ THIS SYLLABUS CAREFULLY!!

COURSE COORDINATOR

Dr. D. Luther
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Office hours: Thursday 10:00 – 12:00 and Friday 10:30-12:30

LECTURE INSTRUCTOR

Section 001: Dr. D. Luther dluther@gmu.edu	MWF 9:30-10:20am	ENT 178
Section 002 Dr. E. Blum eblum@gmu.edu	MW 3:00-4:15pm	IN 103
Section 003 Dr. A Laemmerzahl alaemmer@gmu.edu	R 4:30-7:10pm	IN 103

REQUIRED TEXTS

Lecture Text: Campbell, Reece, Taylor, Simon and Dickey. 2014. *Biology: Concepts and Connections*, 8th ed., Pearson Benjamin Cummings, San Francisco.

Lab Manual: Luther. 2015. *Introductory Biology for Non-majors Laboratory Manual BIO 104, Third Edition*. Hayden-McNeil Publishing, Inc., Plymouth MI.

COMPUTER SOFTWARE USED IN THIS COURSE

We will be using Pearson's MASTERINGBIOLOGY website for this course. You will be using this site to access learning activities, do homework assignments, and take online quizzes. If you purchased your books from the GMU bookstore, it comes packaged with an access code for the Masteringbiology.com website. If you purchased a used text or purchased your text from another source, you may need to purchase access to the masteringbiology.com site separately. It is possible to purchase a subscription to the masteringbiology.com website separately, but you will need it for graded assignments.

Basic requirements for Mastering

Windows XP, Vista, Windows 7 Supported browsers: * [Firefox](#) 13.0 (Windows XP, Windows 7) [Google Chrome](#) 19.0 [Internet Explorer](#) 8.0, 9.0 (Windows 7) [Safari](#) 5.0

Mac OS 10.6, 10.7 Supported browsers: * [Firefox](#) 13.0 [Safari](#) 5.0 [Google Chrome](#) 19.0 * Additional browser versions may also be supported. As newer versions become available, these are also tested as part of Pearson's commitment to quality. If any recent browser version is not supported, it will be noted in these system requirements. **What about tablets?** An app is available for the [Pearson eText on tablets](#). The Apple iPad is not currently supported by Mastering. Mastering assignments require Adobe Flash technology. (More about [Flash Player requirement](#)). Further information can be found at the following website: <http://www.masteringbiology.com/site/support/system-requirements.html>

BIO 104 - DESCRIPTION AND OBJECTIVES:

Biology 104 is part of the University General Education program and, as such, fulfills, in part, the Natural Science requirement for a 2-semester laboratory science. The General Education program has four goals: 1) to ensure that all undergraduates develop skills in information gathering, written and oral communication, and analytical and quantitative reasoning; 2) to expose students to the development of knowledge by emphasizing major domains of thought and methods of inquiry; 3) to enable students to attain a breadth of knowledge that supports their specializations and contributes to their education in both personal and professional ways; and 4) to encourage students to make important connections across boundaries (for example: among disciplines; between the university and the external world; between the United States and other countries). It is the instructors' aim that we enable our students to achieve these goals!

Biology 104 is the second of a 2-semester sequence in Introductory Biology designed primarily for non-majors. It begins with an exploration of the concept of animal homeostasis, then expands on this by looking into the structure and function of the major animal organ systems, with emphasis on mammalian systems. The second part of the semester includes an examination of the structure and function of higher plants, as well as some major concepts in ecology. Laboratory exercises, including a dissection of a fetal pig, are designed to augment and illustrate principles discussed in lecture. Biology 104 is a 4-credit course; therefore students must be enrolled in both a laboratory and lecture section. No credit will be awarded to students who are not appropriately enrolled by the official deadlines.

The general education natural sciences courses engage students in scientific exploration; foster their curiosity; enhance their enthusiasm for science; and enable them to apply scientific knowledge and reasoning to personal, professional and public decision-making. To achieve these goals, students are challenged to 1) Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding, 2) Recognize the scope and limits of science, 3) Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.) 4)

Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information) 5) Participate in scientific inquiry and communicate the elements of the process.

It is strongly recommended that students successfully complete BIOL 103 before taking this course.

GMU e-mail: All George Mason students are issued an e-mail account. Instructors often find it convenient or necessary to e-mail individual students, or the class as a whole. The George Mason in-house policy is to use only the GMU e-mail accounts. Therefore, it is necessary for the students to activate and frequently check their GMU e-mail account to insure receiving messages in a timely fashion.

GMU ID's: All students are issued a GMU photo ID card. Please carry this with you, especially during exams, as it will be necessary for instructors to verify each student's identification. Instructors are not required to honor identification cards other than those issued by the University.

ATTENDANCE AND CLASSROOM BEHAVIOR: Regular attendance in both laboratory and lecture is crucial to successful completion of this course. Studies have shown that students who attend each class perform far better than those whose attendance is irregular. Many important, interesting and subtle points can be made by instructors, which may not be presented in the textbook. Instructors may also make announcements regarding changes in scheduling or material to be covered. Therefore, students are expected to attend every lab and every lecture, to arrive on time, and to remain until class is dismissed. **Students are responsible for being aware of all information and announcements presented in class, whether or not they are present.**

Students are also responsible for being sure they are properly enrolled in the course. If a student drops the course, he or she must see to the paperwork him or herself. Instructors will not "automatically" drop a student who merely stops coming to class.

Attendance in laboratory is mandatory. Laboratory absences will result in a grade of zero for that lab. **Three or more unexcused absences in lab will result in a grade of zero for the entire laboratory portion of the course.** For an explanation of the laboratory make-up policy, please see the heading on Laboratory Policies. Students must heed all warnings and safety precautions issued by their lab instructors.

If something is not clear to you, by all means ask questions! A well-timed question can help everyone in class, even the instructor. Students are also expected to be respectful and considerate of one another as well as their instructors. To that end, please listen when someone else is talking, and turn off all cell phones or other noise-makers while in class or lab. If it is necessary to carry on activities that are not directly related to the material being presented in class, please conduct these activities elsewhere. In order to make the most effective use of both students' and instructor's time and energy, disruptive students may be required to leave the classroom.

STUDENTS WITH DISABILITIES: We are happy to accommodate students with disabilities. If you feel this would be helpful to you, you must contact the instructor as well as the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the DRC.

HONOR CODE: The Biology Department strongly enforces the GMU Honor Code. Students are expected to read and adhere to the George Mason University Honor Code. **Ignorance of the Honor Code is no excuse for infractions thereof.** All work done in lecture and lab (exams, data sheets, quizzes, etc.) must be the sole work of the student. Copying data, falsifying data, cheating on exams and quizzes, failing to credit the work of others are all violations of the Honor Code and will be dealt with most seriously.

CANCELED CLASSES: If an examination is scheduled for a day on which classes are canceled due to weather or any other reason, the examination will be given during the next scheduled class. Call (703) 993-1000 for official notification of canceled classes.

GRADING: Two hourly lecture exams will be given, each worth 130 points. The final exam will be cumulative and worth 250 points. Hourly exams for classes meeting multiple times per week will be given on the last meeting of the week. In those lecture sections, which meet only once a week for 2.67 hr., the hourly exams will be given during the first portion of the class period; after a short break, the lecture will resume. For the hourly and final exams, students will be required to bring with them one or two sharpened pencils, a good eraser, a Scantron form No. SC882-E, and a valid GMU ID card. The use by students of electronic devices of any type is prohibited during exams. The hourly and final exams will start promptly at the scheduled time. Students are expected to arrive on time to all exams! Students arriving late to an exam will be seated only at the discretion of the instructor, and will be given no extra time to take the exam. Once one student has finished and handed in an exam, no other, late arriving students will be allowed to take the exam - No Exceptions! **Due to the large size of the lecture classes absolutely no make-up exams, including the final exam, will be given to any student under any circumstances.**

Final course grades are usually available via Patriot Web within 48 hours of the final exam. If you wish to have additional information regarding your grade, please provide the instructor with a stamped, self-addressed envelope prior to the final exam, or see the instructor in person after the grading period. **I will not e-mail exam or final course grades!!** In addition to lecture exams, there will be 10 online homework assignments worth 20 points each. The laboratory is worth a total of 290 points, bringing the course total to 1000 points. The total point breakdown is as follows:

Graded Material	Total Points	Grade
Midterm Exams (2)	260	980 - 1000 = A+ 920 - 979 = A
Online Homework (mastering biology)	200	900 - 919 = A-
Laboratory	290	870 - 899 = B+ 820 - 869 = B
Final Exam	250	800 - 819 = B- 770 - 799 = C+
	1000	700 - 769 = C 600 - 699 = D

LABORATORY POLICIES

Attendance: Punctual attendance is required in every lab, and is essential for proper understanding of the material. **Three unexcused absences from lab will result in a total grade of zero (0) for the entire lab portion of the course grade (a loss of 290/1000 points).**

Because there can be hazards associated with some laboratory procedures, equipment, and chemicals, all students must follow standard safe laboratory practices, as well as any particular precautions and instructions issued by the lab instructor. All students are expected to participate in routine clean-up of their lab space, and to be cooperative and considerate of their fellow students who will be using such space after them.

Lab Make-Ups: If a student unavoidably misses a lab, it **may** (or it may not!) be possible to make up the missed lab in another section during the same week. A make-up must be approved by both instructors. Any instructor may refuse to allow a student to make-up in his or her lab if the lab is already at capacity. If a make-up is allowed, the student must take the quiz and follow all rules and instructions of the "host" instructor. It is the student's responsibility to see that all graded material is transmitted to the instructor of record. A student will be permitted only 2 make-ups per semester.

Lab Pre-Reading Assignments: A 5-point assignment should be completed before arriving at the laboratory and should be handed to the instructor at the beginning of the laboratory. Late assignments will not be accepted. Pre-reading assignments will not be accepted if the student doesn't also participate in the laboratory exercise.

Lab Data Sheets: A Data Sheet, located at the end of each Lab Manual exercise, will be collected by the lab instructor at the beginning of the next laboratory exercise. Each assignment will be worth 20 points.

Other Laboratory Assignments: Based on the data that you collect during the second laboratory exercise you, along with your laboratory partners will research, organize, and give an oral presentation to the rest of the students in your laboratory section. You will be provided with a grading rubric, which the instructor will use to grade your oral presentation. The oral presentation is worth 15 points. At the end of laboratory 9 you are asked to work with your laboratory group to choose a case study, discuss it, research it, and present a short oral presentation the next week in lab based on your results. The case study oral presentation is worth an additional 5 points beyond the normal amount of points given for the data sheets and questions.

Lab Safety Reminders!!

No food or drink may be brought into the lab, or consumed there, unless part of the laboratory exercise.

High heels, bare feet, sandals, open-toed shoes, bare midriffs, shorts, sleeveless shirts or excessive bare skin are **not allowed** in the lab.

Report to your instructor any unsafe conditions you notice.

Follow all safety precautions given by your instructor.

Attendance Reminders!!

Be on time and prepared! Quizzes are given at the beginning of lab!

Ask questions to clarify any procedure or principle you are uncertain of.

Permission to make up a lab must be obtained by both instructors. Only 2 make-up's allowed per semester.
Unexcused absences in 3 or more labs cause the loss of all lab points (**eek!**).

WHERE TO GET HELP

If you encounter any difficulties in this course, first see either your lecture or laboratory instructor, **immediately!** Do not wait until the end of the semester to ask for help in understanding the material in order to improve your grade - by then, it may be too late! Know your instructors' names, office hours, e-mail addresses and phone numbers; then use them! Do not "be afraid" to ask your instructors for help - that is our job!

The Counseling Center is committed to improving academic and personal skills, and offers many workshops and counseling groups throughout the semester.

Make use of the many rich academic and personal opportunities available at Mason!

Biology 104 SPRING 2015
Lecture and Lab Schedule

Week of:	Lecture Topic	Chapters in Text	Lab Exercise
Jan 19	Tissues, Homeostasis	20	NO LABS
Jan 26	Digestive System	21	Introduction; Safety #1 Structural Support and Function
Feb 2	Respiratory System	22	#2 Respiration
Feb 9	Circulatory System	23	#3 Cardiovascular
Feb 16	Circulatory System LECTURE EXAM I	23	#4 The Senses
Feb 23	Immune System	24	#5 Digestive System Carb Cutter I
Mar 2	Endocrine System	26	#6 Digestive System Carb Cutter II
Mar 9	SPRING BREAK		NO LABS
Mar 16	Nervous System	28	#7 Plant Reproduction
Mar 23	Review LECTURE EXAM II		#8 Competition and Predation
Mar 30	The Biosphere, Communities and Ecosystems	34, 37	#9 Conservation Biology and the Tragedy of the Commons
Apr 6	Communities and Ecosystems,	37	#10 Ecosystems and Watersheds – Water Quality I
Apr 13	Animal Behavior	35	#11 Ecosystems and Watersheds – Water Quality II
Apr 20	Conservation Biology	38	NO LABS
Apr 27	Catch-up; Review		

Final Exams:

Section 001 May 11 7:30 - 10:15am
 Section 002 May 11 1:30 - 4:15pm
 Section 003 May 7 4:30-7:15pm

Lecture Instructor _____ Lecture Section _____

Office Hours _____ Contact _____

Lab Instructor _____ Lab Section _____

Office Hours _____ Contact _____