

BIOLOGY 102: Introductory Biology I

Survey of Biodiversity and Ecology

Summer 2024 COURSE SYLLABUS

A Note of Caution for Summer Courses:

Summer courses are generally concentrated, intense, and fast-paced; this is especially true for a 4 credit lecture and laboratory course, with its extra time and study requirements. Although it is theoretically possible to complete the course successfully while taking other courses, working, or having significant family or other outside responsibilities, **it is not recommended.**

LECTURE INSTRUCTOR:

Section A01 MTWR 10:30am-12:35am (Innovation Hall 317) Dr. Laemmerzahl alaemmer@gmu.edu

LAB INSTRUCTOR:

Section 2A1 TWR 1:00pm-3:45pm (Exploratory Hall 1504) Mr. Pedada spedada@gmu.edu

Section 2A2 TWR 7:00pm-9:45pm (online, see blackboard for link) Mr. Delaney pdelane@gmu.edu

COURSE COORDINATOR:

Dr. Epstein eeepstei@gmu.edu

REQUIRED TEXTS AND HOMEWORK ACCESS:

Lecture Text or e-Text: Shuster, Vigna, and Tontonoz. 2018. *Scientific American Biology for a Changing World*. 4th edition. Macmillian Learning, New York.

Lab Manual: Epstein and Luther. 2021. *BIOL 102 Survey of Biodiversity and Ecology Lab*. **2nd Edition** Hayden-McNeil Publishing, Inc., Plymouth MI.

Lab Supplies for Home Activities. Online Lab sections only. See list and schedule from lab instructor.

Online Homework: Achieve from Macmillian. See note below and more information from your instructor.

Note regarding textbook and homework access: To enhance your learning experience and provide affordable access to the right course material, this course is part of an inclusive access model called **First Day**. You can easily access the required materials for this course at a **discounted price**, and benefit from single sign-on access with **no codes required** in Blackboard. Mason will bill you at the discounted price as a course charge for this course.

It is NOT recommended that you Opt-Out, as these materials are required to complete the course. You can choose to Opt-Out on the first day of class, but you will be responsible for purchasing your course materials at the full retail price and access to your materials may be suspended.

For more information and FAQs go to customercare.bncollege.com.

Lab manual must be purchased from the bookstore (search by your lab section number) before the first lab meeting. This is the same physical book for both in-person and online sections.

REQUIRED TECHNOLOGY FOR THIS COURSE:

Blackboard Access. You'll need your Mason username (NetID) and password to access Blackboard. Log in to mymason.gmu.edu and select the Courses tab to locate your course. Blackboard Mobile App can help you keep track of your online courses using your mobile device.

Check your Internet Connection. To complete and turn in your assignments and other online activities, you will need consistent basic wireless or cellular connection at your home or study site.

We use Achieve, an **online homework management system**, for graded assignments in this course. You will be using this tool to access learning activities, do homework assignments, and take online quizzes. **Information and instructions for accessing homework will be provided by your instructor.**

BIOL 102 – DESCRIPTION, GOALS, AND LEARNING OBJECTIVES:

Biology 102 is an approved Mason Core Natural Science course with a laboratory experience. **The Mason Core 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 fulfill the requirements of the Mason Core, students in BIOL 102 will

1. Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding: a) evolves based on new evidence, and b) differs from personal and cultural beliefs.
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, including: a) making careful and systematic observations, b) developing and testing a hypothesis, c) analyzing evidence, and d) Interpreting results.

It is the instructors' aim that we enable our students to achieve these goals!

The Introductory Biology courses provide students with an understanding of, and appreciation for, the many facets of the biological world. **Biology 102 begins with an introduction to the scientific method and the core concept of evolution. We then look at diversity of life on earth. After a brief look at how new species arise, we then go on to a study of evolution of populations; and finally, a deeper look at ecology and conservation.** The laboratory exercises are designed to illustrate and expand on lecture topics. Because this class fulfills (in part) the Mason Core Natural Science with Lab requirement, 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.

Course Policies:

Course Modalities: While all sections require that students monitor and use Blackboard and GMU email for communications and to turn in assignments (see below), faculty will deliver, and students attend, each section in the modality listed officially in Patriot Web. For instance, a face-to-face course should be taught as face-to-face for all students. Students who prefer or need to study using a different modality should see their advisor about enrolling in a different section or course.

Students are expected to attend live lecture and lab sessions at the time and location stated in the schedule, for both in person and online sections. Exams are available **only** during the official class time. Note that attendance in lab is required to earn credit for work conducted in lab sections (see "Laboratory Policies" below). There are no "concurrent" or hybrid sections, and the modality of the course will not be changed for individual students for any reason.

GMU e-mail: All George Mason students are issued an e-mail account. **Email communications with this class will be conducted through your GMU email account only.** Messages sent through the "Blackboard Messages" system are not monitored.

GMU ID cards: All students are issued a GMU photo ID card. Please have this ready and available during exams to verify your identity. Instructors are not required to honor identification cards other than those issued by the University.

ATTENDANCE: 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. Students are expected to attend all class sessions. Many interesting, subtle and valuable points can be presented in class, which may not be presented in the text. **Therefore, students are responsible for being aware of all information and announcements presented in person or in online, and all announcements, and instructor emails.**

Check your email and Blackboard Announcements regularly & often. Your instructor will be sending you updates, announcements, and reminders. Update notifications on Blackboard so you're always up to date.

The [Registrar's published Summer 2024 calendar](#) lists the deadlines to drop or withdrawal from this course. Students are responsible for being sure they are properly enrolled in the course and, if a student drops the course, the student is also responsible for dealing with all the associated paperwork, and in a timely fashion. Instructors will not "automatically" drop a student who merely stops coming to class.

Special note on Laboratory Attendance: Being on-time for biology labs is critical. Lab instruction and safety introduction is conducted at the beginning of the laboratory period. Late-arriving students who miss this introduction may pose a significant safety hazard both to themselves and their classmates. Therefore, late-arriving students may be prohibited from entering the lab or completing any assignments for that session. No make ups are possible for late-arriving students. Note that exercises in the laboratory build on each other over the course of the semester. Be aware that failure to complete one lab may negatively impact your ability to complete other, later assignments! Missed lab assignments will be given the grade of "0", and there are no make-up assignments. **Three or more unexcused absences in lab will result in a grade of zero for the entire laboratory portion of the course.** Typically, there are no due date extensions for any assignment in lab or lecture except in exceptional cases (such as documented evidence of a serious illness). See "Laboratory Policies" below for more details.

STUDENTS WITH DISABILITIES: Both lab and lecture instructors are happy to make arrangements with students with disabilities. These arrangements, however, **must** be made through the Office of Disability Services (ODS) at 993-2474. Please contact both the ODS **and** your instructors as soon as possible for any accommodations you might need.

CLASSROOM BEHAVIOR IN PERSON AND ONLINE: 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 asked to be respectful and considerate of one another. To make the most effective use of both students' and instructor's time and energy, disruptive students may be asked to leave an in-person class.

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

HONOR CODE: Students are required to read and adhere to the George Mason University Honor Code. Ignorance of the Honor Code is no excuse for infractions thereof. The GMU Honor Code is enforced in all Biology courses. All work done in lecture and lab (exams, data sheets, quizzes, etc.) must be the **sole** work of the individual student whose name appears on the assignment. Copying data, falsifying data, failing to give credit to referenced sources, cheating on exams and quizzes are among violations of the Honor Code, and will be dealt with most seriously.

Important warning regarding online study sites: Some kinds of participation in online study sites violate the Mason Honor code: these include accessing exam, lab, or homework questions for this class; accessing exam, lab, or homework assignment answers for this class; uploading of any of the instructor's materials or exams; and uploading any of your own answers or finished work. Always consult your syllabus and your professor before using these sites. **Violators will be reported to the Office of Academic Integrity.**

GRADING:

Two 55 minute lecture exams will be given, each worth 150 points. The final exam will be comprehensive and worth 250 points. **Absolutely no make-up exams, including the final exam, will be given to a no-show student under any circumstances.**

In case of a real emergency you must let your instructor know before the exam or no later than 12 hours after the exam. All make up exams take place the same day as the final and will be all essay questions.

In addition to lecture exams, there will be 10 online homework assignments worth 20 points each. The laboratory is worth 25% of the course total. The percentage score that you earn in lab will be used to calculate your weighted lab total out of 250 points, bringing the course total to 1000 points. The total point breakdown is as follows:

Graded Material	Points	Grade
Midterm Exams (2)	300	980 - 1000 = A+
Online Homework	200	900 - 979 = A
		870 - 899 = B+
Laboratory (weighted points)	250	800 - 869 = B
Final Exam	250	770 - 799 = C+
	1000 (course total)	700 - 769 = C
		600 - 699 = D

Biology 102 Final Exam Date: Thu. 6/20 10:30 am – 1:15 pm **

(We will probably get done early and will move the exam to Monday, 6/17)**

Instructors are not obligated, and indeed are discouraged from transmitting any type of grades to students via e-mail. Final course grades will be available to students via Patriot Web by the deadline for grade submission as set by George Mason University.

LABORATORY POLICIES

All lab sections are synchronous (both face-to-face and online sections). Attendance at the synchronous lab meetings is mandatory for this course. Participation is required in each of the 11 lab exercises and is essential for proper understanding of the material. Exercises in the laboratory build on each other over the course of this semester. Be aware that failure to complete one lab may negatively impact your ability to complete other, later assignments! Missed lab assignments will be given the grade of "0", and there are no make-up assignments. **Three absences from lab will result in a total grade of zero (0) for the entire lab portion of the course grade (a loss of 250/1000 points).**

Being on-time for biology lab is critical. Lab safety information and instruction is communicated to students at the beginning of the laboratory period. Late-arriving students who miss this introduction may pose a significant safety hazard both to themselves and their classmates. Therefore, late-arriving students may be prohibited from entering the lab or completing any assignments for that session. No make-up is possible for late-arriving students.

There are no make-up labs, and all deadlines are firm. Absolutely no make-up labs will be given to any no-show or late student under any circumstance. Due to staffing constraints and availability of lab materials, you are not permitted to attend any lab except the one for which you are officially registered.

Students may miss up to two labs for any reason, including illnesses or emergencies, but are not able to earn points on the missed labs. The lowest two datasheet and prelab assignments will be dropped from your total lab score. It is important to treat every lab as if it will count towards your grade just in case an emergency prevents you from attending or completing a lab in the future. You should contact the instructor immediately if you are having medical difficulties and will miss more than one lab for any reason.

Students in in-person labs are never allowed to do online labs (e-Lab) for credit in the in-person lab course. There are no exceptions.

Student Conduct in the Lab: Biology laboratory classes require students to adhere to specific safety procedures in order to participate in the course. The general safety rules and policies stated in the syllabus and in the lab manual will be discussed by the lab instructor in the first week of lab. All students must sign the safety and policy agreement sheet in the lab manual and return to their lab instructor in order to participate in lab. Please note that students are required to comply with the directions of University officials (including faculty and graduate teaching assistants) who are acting within their authority to uphold a University policy. Any behavior that interferes with the normal operation of the teaching/learning environment is a violation of the GMU [student code of conduct](#).

Most lab assignments are due at the end of the lab period in which they are conducted. There are no due date extensions for any assignment in lab or lecture. You should contact the instructor immediately if you are having medical difficulties and will miss a lab for any reason, but note that students who miss three labs will not earn any points for the lab portion of the course.

All Lab Assignments must be submitted as directed by your lab instructor. Your instructor will provide you with specific details on how to format assignments for submission. Improperly formatted assignments will not be accepted, and there are no deadline extensions for incorrectly formatted assignments. Students are advised to review their submission to ensure it has been correctly submitted before the due date. Most lab exercises consist of a **prelab assignment** (5 points) and a **datasheet** (usually 20-30 points).

Home Lab Activities and Modifications for Online Lab Sections: e-Lab sections that use laboratory activities that have been modified for the online environment. **Each lab exercise has required, hands-on home activities that are mandatory parts of the assignments for online sections of the lab part of the course.** The details for completing these assignments and activities will be posted regularly in your lab course Blackboard page. Students must use common sense as well as any follow carefully any precautions and instructions issued by the lab instructor and should reach out to instructor with concerns and guidance on any home activity. The home activities are typically worth 5 points each.

Independent Project and Poster Presentation: Using the skills developed over the semester, students will select one of the exercises to use as the basis of an experiment of their own design. The experiment and results will be presented to the class in a formal poster presentation. The poster presentation is the final project of the course and is worth 50 points. Attendance is required in order to be able to present your poster to the class.

The Honor Code applies to Lab Assignments: The lab manual and your instructor will indicate when students should conduct experiments or share data or materials as part of a pair or a group. We encourage outside study groups, but pre-lab assignments and lab data sheets must be written individually and not copied from anyone else. IF THIS IS NOT CLEAR, ASK THE INSTRUCTOR. IDENTICAL ASSIGNMENTS WILL EACH BE REPORTED TO THE OFFICE OF ACADEMIC INTEGRITY. Instructors will specifically discuss what constitutes plagiarism on written work assigned in this class. If students have any questions about what constitutes plagiarism on any written assignment, they should ask the instructor BEFORE turning in work. Plagiarized work, uncited images from the internet, and work done in a previous semester may not be turned in for credit. Such assignments will not be graded and the student will be reported to the Office of Academic Integrity.

Important warning regarding online study sites: See the warning above (bottom of page 3).

Lab is worth 25% of the BIOL102 course total. The percentage score that you earn in lab will be used to calculate your weighted lab total out of 250 points.

WHERE TO GET HELP!

Biology is a fascinating subject, but one which some students find daunting. If you find yourself having any difficulties in this course, see your instructor (lab, lecture, or both) at the outset. All instructors have posted office hours, during which appointments are not necessary. In addition, many instructors may be able to meet students outside of their posted hours in order to accommodate student schedules. It is the instructors' job to provide all the help they can to students; it is the students' job to ask for individual help when they need it.

Much of the material in Biology 102 builds on material covered previously in the semester, therefore it is necessary to have a good understanding of one concept before moving on to the next. If you feel your understanding is inadequate; if you feel you are getting "lost," **see your instructor immediately!!** We are here to help!

[Many tips for successful learning can be found here.](#) Be proactive and take responsibility for your learning. If you are in a fully online section, your professor may have fewer "clues" about whether or not you understand course content. Reach out to your instructor if there is something that is not clear to you, or if you are having difficulty keeping up with the course. If you are having issues with the technology, let your instructor know and then contact [Courses Support](#) for help.

Learning Services If you need assistance, please contact Learning Services at 703- 993-2380, or via email at lsstaff@gmu.edu. Learning Services offers online [academic coaching](#) and [academic workshops](#), as well as a list of Mason [tutoring](#) resources.

Counseling and Psychological Services Counseling and Psychological Services (CAPS) remains available to provide services to Mason students. Please see CAPS' website for a list of hours and resources. CAPS also offers [virtual workshops](#) focused on healthy coping skills. Contact CAPS at 703-993-2380.

[Office of Diversity, Inclusion, and Multicultural Education](#) ODIME offers support to our Mason’s diverse student populations, including Asian/Pacific American, Black/African American/African Heritage, Hispanic/Latino(a), Middle Eastern and North African (MENA), and Native American/Indigenous heritages.

[Disability Services](#) Disability Services is available to serve all students with disabilities, including those with cognitive, learning, psychological, sustained head injuries, sensory, mobility, and other physical impairments.

Many students find joining study groups with fellow classmates useful and enriching both academically and personally. Learning outside the classroom may be the most important learning of all! Make use of the many rich academic and personal resources that continue to be available at Mason!

Summer 2024 BIOL 102 Lecture Schedule (tentative, see course web page for updates).

Week of Semester	<p style="text-align: center;">Lecture Topic</p> <p style="text-align: center;">Assignments and Learning Objectives</p> <ul style="list-style-type: none"> • All homework assignments are due Friday afternoon at 5pm the week they are assigned. Students are encouraged to begin early! • Exams are held the last class meeting of the week or as announced by the instructor 	Text Chapters in <u>Biology for a Changing World</u>
Week 1 May 13-16	<p style="text-align: center;">Scientific Method and the Study of Life</p> <p style="text-align: center;">HW #1: Science is a Process</p> <p><i>This assignment fulfills the requirements for the Mason Core. Students will show their understanding of how the process of science is a method of seeking answers to questions based on observation and experiment. Students will also demonstrate their ability to distinguish between the kinds of evidence that are most useful for reducing personal bias and apply this knowledge to interpreting the validity of scientific reports in media.</i></p>	1, 15
	<p style="text-align: center;">Cells and the Domains of Life</p> <p style="text-align: center;">HW#2: The Three Domains of Cellular Life</p> <p><i>Students will identify the features shared by all living cells and contrast some of the major differences between cells of Bacteria, Archaea, and the eukaryotes. Students will interpret simple phylogenetic trees and show their understanding of the significance of common ancestry in constructing the tree of life. Students will also examine the interplay between mass extinction and radiations.</i></p>	16
	<p style="text-align: center;">Animal Diversity</p> <p style="text-align: center;">HW#3: Evidence for Evolution</p> <p><i>This assignment fulfills the requirements for the Mason Core. Through their answers on this assignment, students will show their understanding of how the fossils of related species can show descent with modification. Students will demonstrate their understanding of how features of key intermediate fossils (like Tiktaalik) influenced the consensus understanding of tetrapod limb evolution.</i></p>	18
Week 2 May 20-23	<p style="text-align: center;">Plant Diversity</p> <p style="text-align: center;">HW#4: Key Adaptations of Land Plants</p> <p><i>Students will describe some of the key features of the three largest groups of land plants and contrast their lifestyles and habitats. Students will explain how humans benefit from plants and explore the concept of ecosystem services. Students will contrast plant and animal reproduction cycles and be able to describe features that allow some plants thrive in dry terrestrial environments.</i></p>	18
	<p style="text-align: center;">Intro to Microbial Diversity</p> <p style="text-align: center;">HW#5: The Hidden World of the Microbiome</p> <p><i>This assignment fulfills the requirements of the Mason Core. Students will explore how our understanding of microbial diversity has greatly changed in recent years as researchers have developed new tools to better observe and describe these organisms and decrease observer bias. Students will apply this information to our understanding of the human microbiome and its applications, as well as to the profound differences between Bacteria and Archaea.</i></p>	17

	<p align="center">Exam 1 (Thursday, May 23rd)</p> <p><i>This test fulfills the requirements of the Mason Core. Through their responses on the questions on the exam, students will demonstrate their competence in understanding how scientific understanding evolves based on new evidence and can be applied to societal challenges. Students will also demonstrate their ability to assess the credibility and validity of scientific information. Students will show their understanding of microbial, animal, and plant biodiversity.</i></p>	<p>Exam may move forward or back a day or two</p>
<p>Week 3 May 28-30</p> <p>(No class Monday - Memorial Day)</p>	<p align="center">Natural Selection HW#6: Evolving Resistance</p> <p><i>This assignment fulfills the requirements for the Mason Core. Students will be able to define antibiotic resistance and explain how it evolves, as well as the impact of antibiotic resistance on human health. Students will explain the role of unequal reproductive success in evolution by natural selection. Students will show their understanding of how environmental challenges may favor an organism with a particular variation to survive and reproduce, but that no amount of need can cause any variation to be generated. Students will demonstrate their understanding of how evolution by natural selection leads to adaptation in other situations (for example, insecticide resistance).</i></p>	13
	<p align="center">Evolution of Populations HW#7: Sex in the Cities</p> <p><i>Students will describe how adaptive and nonadaptive mechanisms influence the composition of a gene pool, using examples from urban evolutionary studies to illustrate. Students will be able to compare, in general terms, the gene pools of an evolving population and a nonevolving population. Students will describe the concept of reproductive barriers and how they apply to the biological species concept.</i></p>	14
	<p align="center">Human Evolution HW#8: Skin Deep</p> <p><i>This assignment fulfills the requirements for the Mason Core. Students will show their understanding of factors influencing skin color evolution in humans, and how the trait is unusual for varying so widely between human populations. Students will also recognize that patterns of human genetic variation do not correlate with skin color or racial categories and apply this understanding to uncovering problematic features of commonly available DNA-based ancestry testing.</i></p>	19
<p>Week 4 Jun 3-6</p>	<p align="center">Population Ecology HW#9: Wolves, Moose and How Populations are Interconnected</p> <p><i>Students will define ecology and explore the interactions studied by ecologists. Students will compare different types of population growth and explore the relationship between population growth and carrying capacity, as well as factors influencing population growth and size.</i></p>	20
	<p align="center">Ecology: Communities and Ecosystems HW#10: The Importance of Honey Bees</p> <p><i>This assignment fulfills the requirements for the Mason Core. Students will demonstrate their understanding of the role pollinators play in communities and apply this understanding to the potential consequences of pollinator decline for ecosystems. Students will also explore examples of keystone species and how they affect ecosystems as well as the consequences for human society.</i></p>	21, 22
<p>Week 5 Jun 10-13</p>	<p align="center">Exam 2 (Monday, June 10th)</p> <p><i>This test fulfills the requirements for the Mason Core. Through their responses on exam questions, students will demonstrate their ability to recognize how evolutionary theory is applied to societal challenges such as the rise of antibiotic resistance. Students will also show their understanding of how the importance in ecosystems of concepts such as of population growth has changed with new evidence.</i></p>	<p>Exam may move forward or back a day or two</p>

	Conservation Biology <i>Students will describe the three components of biodiversity and explain how human activities threaten biodiversity. Students will also describe the process of biological magnification. Students will demonstrate their understanding of the causes and consequences of global warming. Students will describe, in general terms, the process of rewilding as a conservation technique.</i>	23
	Wrap Up and Review for Comprehensive Final	
Week 6 June 17	Final exam	

Summer 2024 BIOL 102 Lab Schedule (tentative, see blackboard for updates).

Week of Semester	Lab Exercise See Lab Blackboard for details
Week 1 May 13-17	Lab Introduction (required) Check-In and Safety Orientation; lecture section reporting. Note that students who do not attend the lab introduction in week 1 may be dropped from the lab. Due: Lab Safety Agreement Form Due: Lecture Section Number report form
	Lab # 2 Cell Diversity Bring: laptop to lab Due: Lab2 prelab Due: Lab2 datasheet
	Lab # 1 Hypothesis Testing Due: Lab1 Datasheet
Week 2 May 20-24	Lab # 3 Tree Diversity and Phylogeny Due: Lab3 prelab Due: Lab3 datasheet
	Lab # 4 Animal Diversity Due: Lab4 prelab Due: Lab4 datasheet
	<i>Make up Lab #2 for late-adding students only</i>

Week 3 May 27-31	<p align="center">Lab #7A Antibiotic Resistance I And Lab 7 Part 3 (yogurt; see lab manual page 115)</p> <p>Due: Lab7A prelab Get 7A worksheet checked off (do not hand in)</p>
	<p align="center">Lab #7B Antibiotic Resistance II</p> <p>Due: Lab7B prelab (including article reading, see manual and blackboard) Due: Lab7C questions (lab manual page 117) Get 7B worksheet checked off (do not hand in)</p>
	<p align="center">Lab # 8 Competition and Predation</p> <p>Due: Lab7 Antibiotic Resistance Report Due: Lab8 prelab & article reading assignment Due: Lab8 datasheet 1 and discussion questions</p>
Week 4 Jun 3-7	<p align="center">Lab #9 Ecosystems & Watersheds I</p> <p>Due: Lab8 part 2 datasheet (pred-prey documentaries) Due: Lab9 prelab</p>
	<p align="center">Lab #10 Ecosystems and Watersheds – Water Quality II</p> <p>Due: Water Quality Infographic Due: water quality letter to public official Due: independent research proposal</p>
	<p align="center">Lab #11 Ecosystem Services and Conservation Biology</p> <p>Due: Lab11 prelab Due: Lab11 datasheet Due: Lab11 article discussion question responses</p>
Week 5 Jun 10-14	<p align="center">Lab #5 Reading and Assessing Data And Independent Research Work Session</p> <p>Due: Lab5 prelab, including screenshots (see p 81) Due: Lab5 datasheets <i>Note students who miss the work session will not have data for their poster presentations (and will lose points!)</i></p>
	<p align="center">Independent Research Work Session</p> <p><i>Note students who miss the work session will not have data for their poster presentations (and will lose points!)</i></p>
	<p align="center">Monday, June 17: Poster Presentations (Lab #6)</p> <p><i>Student must be present to present poster and earn any points for assignment</i></p>
Week 6 June 17	<p>No labs</p>