Course syllabus

Biology/Botany/Zoology 151 – Introductory Biology

GENERAL COURSE INFORMATION

Course Subject, Number, and Title
Biology/Botany/Zoology 151 – Introductory Biology

Credits *5*

Canvas Course URL
https://canvas.wisc.edu/courses/371785

Course Designations and Attributes
General education; Honors available.

Course Description
This course is the first semester of a two-semester sequence designed for majors in biological sciences. Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics and selected topics in animal physiology. High School chemistry or concurrent registration in college chemistry is strongly advised.

Requisites
Not recommended for students with credit already in Zoo/Bio 101, 102, or Botany/Bio 130.

Meeting Time and Location
Lecture 1: 11:00-11:50 a.m., MWF – B10 Ingraham Hall
Lecture 2: 12:05-12:55 p.m., MWF – B10 Ingraham Hall
Discussion and Lab meeting times and locations depend on section enrollment and are posted on My UW as well as on the course Canvas site.

Instructional Mode
In-person

Credit Hours are met by the Course

This 5-credit class meets three times weekly for 50 minutes for lecture, once weekly for three hours for lab, and once weekly for 75 minutes for discussion. Over the course of the semester, students are expected to do a total of about 250 hours of learning activities, which include class attendance (lecture, lab, and discussion), reading, studying, preparation, problem sets, writing, and other learning activities.

Regular and Substantive Student-Instructor Interaction

This course meets the regular and substantive student-instructor interaction requirement through feedback on student work, providing information about course content, facilitating discussion of course content, and through predictable and scheduled interactions with the student.

Course Website, Learning Management system, and Instructional Tools

Course materials will be available on the course Canvas site, which is organized into weekly modules. Each weekly module is divided into different pages: one for lecture, lab, and discussion. A weekly announcement will be posted to the "Announcements" tab. Each weekly module contains all the information needed for that week.

Masking policy

This course follows the guidance and safety requirements of the University as a whole.

INSTRUCTORS, COURSE COORDINATORS, AND TEACHING ASSISTANTS

Instructors - Titles and Names

Dr. Simon Gilroy	**Dr. Seth Blair**	**Dr. Farrah Madison**
sgilroy@wisc.edu	ssblair@wisc.edu	fnmadison@wisc.edu

Instructor Availability

Office hours will be announced in lecture and posted on the course Canvas site (click here for instructor's office hours).

Course Coordinators

Dr. Jeremiah Yahn	**Dr. Brendan Scherer**
229 Noland Hall	233 Noland Hall
(608) 265-5336 (office)	(608) 265-4331 (office)
151lec1@zoology.wisc.edu	151lec1@zoology.wisc.edu

Teaching Assistants

A list of all TA names, office hours, and contact information will be provided on the course Canvas site.

LEARNING OUTCOMES

Course Learning Outcomes

Introductory Biology 151/152 is a two-semester introductory sequence for majors in the biological sciences. Emphasis will be placed on learning, understanding, and being able to use key biological concepts and the scientific method.

The study of modern biology is not only a matter of assimilating information. Learning how to use that information for problem-solving, posing hypotheses, and interpreting experimental results is also critical to understanding biology as a science. The lectures examine key concepts. Discussions allow you to investigate these more fully. In the laboratory, you will need to use the scientific method and apply concepts from lecture to carry out the various activities. In addition, labs stress teamwork and the development of written and oral presentation skills. These are required to investigate scientific concepts successfully and communicate research findings to others.

General Learning Goals and Objectives

- Develop a broad knowledge base sufficient to understand, connect, and synthesize the Vision & Change core concepts: Evolution; Structure and Function; Information Flow, Exchange, and Storage; Pathways and Transformations of Energy and Matter; Systems.
    - Students will be exposed to topics that cover the breadth of the field of biology, the scope of biology (atoms to ecosystems), and about the many ways to be a biologist.
    - Introductory Biology 151 will concentrate on cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow through DNA, RNA, and proteins, principles of genetics, and principles of animal physiology, with emphasis on structure-function relationships in the digestive, circulatory, respiratory, immune, excretory, muscular, and nervous systems.
- Make connections to other scientific disciplines. Students will:
    - use other scientific disciplines (e.g., chemistry, physics, and math) to understand biology, and make conceptual and content linkages with those disciplines.
    - understand the importance of collaboration between biology and other scientific disciplines.
- Make connections to society at large. Students will understand:
    - the scientific underpinnings of current issues.
    - why biological knowledge is essential to global citizenship.
- Develop practical skills necessary for a professional biologist. Students will advance their:
    - teamwork skills.
    - laboratory skills.
    - quantitative analysis skills.
- Develop communication proficiency. Students will be able to:
    - write logically and with clarity and style about important questions in biology.
    - articulate persuasively, both orally and in writing, focused, sophisticated, and credible arguments.

    - understand and explain results effectively.
    - approach evidence with probity and intellectual independence.
    - find and use source material appropriately with proper citation.
    - read and understand primary scientific literature.
    - understand the difference between primary and secondary scientific literature.
- Become proficient in problem-solving through engaging in the process of science. Students will become proficient in:
    - developing testable hypotheses and aligning methods with a hypothesis.
    - using biological knowledge/concepts to solve novel problems.
    - identifying/asking questions and determining how to answer them.
    - integrating disparate information.
- Gain interest in the field of biology. Students will gain an appreciation for all topics in biology, not just their own intended major or career path.

GRADING

Grade Distribution

This is a 5-credit course. Attendance in lecture, lab, and discussion is mandatory.

- The lecture portion of the course will comprise 50% of the final grade. The majority of which will come from three equally weighted exams (16%/exam). There is no cumulative final exam for the course. Lecture participation through Top Hat is 2% of the final course grade. Full credit is earned by participating in >75% of lecture activities, and half credit (0.75%) is earned by participating in 50-75% of lecture activities. No credit is earned if participation is less than 50% of lecture activities.
- The lab will comprise 40% of the final grade. The specific breakdown of points for the lab portion of the course is detailed on Canvas.
- The discussion will comprise 10% of the final grade, broken down as follows:
    - Discussion quizzes are 6% of the final course grade. Each lecturer will write 3 quizzes for their lecture third and your lowest quiz score will be dropped for each third.
    - Weekly discussion homework is 2% of the final course grade. Discussion attendance is required to receive credit on submitted homework assignments.
    - Two lecture-based essays are each 1% of the final course grade, for a total of 2%.

Grading Scale

The course is graded on a standard scale as noted below.

90-100% = A
88-89.99% = AB
80-87.99% = B
78-79.99% = BC
70-77.99% = C
60-69.99% = D

Canvas calculates your grade in the course using ONLY assignments that you have completed. This means that as more assignments are completed, the numerator and denominator for your grade continue to grow and become more reflective of your final score. Please take into consideration that assignment groups in this course are weighted differently and that there can be large fluctuations in your ongoing calculated final score as new scores are entered into the respective groups. This course is **not** graded on a curve.

Questions Regarding Graded Work

Any questions regarding grading of any exams, quizzes, or assignments must be addressed within **one week** following the return of the graded work. The grader reserves the right to address only the graded item in question or the entire exam, quiz, or assignment. Absolutely **no** reconsideration of graded work will be permitted following the submission of final letter grades in this course unless it concerns a technical issue regarding grade recording. Expect all assignments to be graded within two weeks of submission.

REQUIRED TEXTBOOK, SOFTWARE, and OTHER COURSE MATERIALS

Textbooks & Other Required Materials

Biology – How Life Works 4th edition, by Morris, Hartl, Knoll, Lue, & Michael.

The textbook is available through the University Book Store (https://text.uwbookstore.com/), and you can select to purchase a digital version only, or a hardcover version which comes with digital access. For more information on these options, please visit the intro bio course Canvas site.

COURSE COMMUNICATION

Canvas & Emails - Friday Announcement Each Week

An announcement is posted by 5pm on Friday each week to Canvas. **These announcements will include essential information regarding homework, course policies, exam scheduling, and other matters.** Other notifications about the course will be via email. All students are responsible for the information contained in these communications and are to check them regularly.

EXAMS

Exam schedule

Exam 1: Wednesday, October 11th, 8:15 - 9:45 pm; location to be determined (TBD)
Exam 2: Wednesday, November 15th, 8:15 - 9:45 pm; location TBD
Exam 3: Monday, December 18th, 5 - 6:30 pm; location TBD (note this is the time given to us by the registrar)

Exam Review Schedule

Exam 1: Sunday, October 8th, 6-8 pm; location TBD
Exam 2: Sunday, November 12th, 6-8 pm; location TBD
Exam 3: Thursday, December 14th, 6-8pm; location TBD

Locations for the exams and exam reviews will be provided on the intro bio course Canvas site.

Exam Policies

- **Conflicts between our course and other courses' exams:** University policy specifies that exams cannot disrupt classes held during regularly scheduled times (https://registrar.wisc.edu/exampolicy/). If you have an exam for another course that conflicts with your lab or discussion in Intro Bio 151, you must request an alternate exam time from your professor. Likewise, we will provide alternate exam times for students with legitimate course conflicts of this nature.
- **Alternate exam times** will be offered prior to each exam for students with documented conflicts.
- **No Electronic Devices** (including phones or calculators) will be permitted in the exam rooms. Any math required will involve simple calculation performed by hand.
- **Note Cards** will be permitted in the last half of exam sessions. Blank cards will be provided approximately one week prior to the exam. All information on the card MUST be handwritten.
- There will be no **late make-up exams** except for extreme cases, such as a death in the family, serious illness, legal, or University-related conflicts. The format of the make-up exam will be at the professor's discretion. Contact the teaching faculty for scheduling at 151lec1@zoology.wisc.edu. This policy also applies to any other graded instrument of the course.

HONORS

Intro bio is an "honors optional" course that may meet students honors degree track requirements. For more information about letters and science honors requirements, click here for CALS honors program information, click here. The honors option in intro bio is a science communication project. You will be participating in an adapted version of the Flame Challenge – an international contest that challenges scientists at every level to communicate familiar yet complex concepts in ways that are understandable to a child.

Through this project you will increase your mastery of complex biological information and improve your communication skills by translating a topic from this course for a younger audience. You will choose a challenge question, drawn from the course lecture content, and then you'll create a graphic or video submission. The goal is to create something informative, creative, and engaging. To support you along the way, we'll check in and get feedback on your project. You can find schedule & submission date details on Canvas.

If you are interested in the Honors option, please fill out the google form linked on the "Honors Option" intro bio course Canvas page. You'll also find information there on how to add the honors credit through L&S.

PRIVACY OF STUDENT RECORDS & THE USE OF AUDIO RECORDED LECTURES STATEMENT

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record the lectures without the instructor's permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

COURSE EVALUATIONS
Students will be provided with an opportunity to evaluate this course and their learning experience. Student participation is an integral component of this course, and your confidential feedback is important. You are strongly encouraged to participate in the course evaluation.

STUDENTS' RULES, RIGHTS & RESPONSIBILITIES
See the Guide's to Rules, Rights, and Responsibilities

DIVERSITY & INCLUSION
Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinions enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

ACADEMIC INTEGRITY
By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct that may result in disciplinary action. Examples of disciplinary action include, but are not limited to, failure on the assignment/course, written reprimand, academic probation, suspension, or expulsion.

ARTIFICIAL INTELLIGENCE SOFTWARE
Submission of any papers, paper drafts, or any other course assignments that were wholly or partially written by AI tools (including, but not limited to, ChatGPT, DALL-E, and others) does not support the learning objectives of this course and is prohibited, and will be addressed through UW–Madison's academic misconduct policy, specifically UWS 14.03(1)b (b) Uses unauthorized materials or fabricated data in any academic exercise.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES STATEMENT

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (UW-855) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform faculty [me] of their need for instructional accommodations during the beginning of the semester, or as soon as possible after being approved for accommodations. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: McBurney Disability Resource Center)

ACADEMIC CALENDAR & RELIGIOUS OBSERVANCES

Please visit the University website for further information regarding the Academic Calendar & Religious Observances.

ABOUT THE INSTRUCTORS

Dr. Simon Gilroy, Professor, Botany Department

Research areas: Cell Biology, Plant Biology, Bioinformatics, Space Biology

I grew up in the UK, doing my undergraduate degree at Cambridge University and then moving to Edinburgh, Scotland to do my Ph.D. I then did postdoctoral work in Berkeley, got a faculty position at Penn State and in 2007, moved behind the cheddar curtain to Madison. I'm a plant biologist and the kinds of questions that I like to think about are at the cellular level – how do the genes and proteins in a cell make the amazing biology that we see around us happen? In my lab, we work on how stresses like being eaten or subjected to a Wisconsin winter are sensed by plants. We also do research outside the lab. Our "field site" for this work is 250 miles straight up on the International Space Station where we are working with NASA on engineering plants to grow in space. I teach the cell and molecular biology section of Bio 151/153. Cells are the fundamental unit of life and so through their study we can answer one of the most basic questions in biology: what does it really mean to be alive?

Dr. Farrah Madison, Assistant Professor, Integrative Biology Department

Prepare yourself for quite the journey! I was born and raised in Omaha, Nebraska and attended the University of Nebraska-Lincoln for both my bachelor's and master's degrees. My undergraduate major was Physiology in the Animal Science Department where I learned about domestic livestock such as cow, sheep, chicken. However, I was really interested in zoo animals, so I specialized in exotics. I worked at the Omaha Henry Doorly Zoo at that time and thought that was what I wanted to do with my life until I realized I would need two jobs to move out of my parent's home, so I went on to graduate school! I went back to the Animal Science

Department and used the layer hen model to investigate the effects of additional dietary vitamin D on bone density, eggshell quality, and physiology. It was at this time I realized how much I LOVED research, so I went on to pursue my doctorate in Neurobiology at the University of Arkansas-Fayetteville with Dr. Wayne Kuenzel. My doctoral research explored sex differences in cellular and physiological mechanisms that modulate stress responses in broiler breeder hens (the chicken you eat if you eat meat, the campus is across the street from Tyson Foods). After graduation, I moved to Hope College in Holland, Michigan for a HHMI Postdoctoral Fellowship where I investigated the role of hormones on reproductive function in RATS (((GASP))). I quickly returned to birds during my second postdoc at Johns Hopkins University where I investigated sex differences in how a hormone, namely testosterone, influences changes in brain morphology and behavior in songbirds (mainly canaries). While at Johns Hopkins I taught several courses such as Behavioral Endocrinology, Stress and the Brain, and Animal Behavior. I continued working with songbirds when our lab moved to the University of Maryland at College Park. We are almost done here *wipes brow*. In 2019 I decided it was time to start my own lab, so I interviewed for an Assistant Professor position at Hope College, received an offer and get this…DEFERRED MY START UNTIL FALL 2020!! I mean, who could have predicted a global health pandemic #amiright?? So, I moved back to Hope College to start my lab in Fall 2020, however, in 2021, I visited UW-Madison to give a talk to the Integrative Biology Department and INSTANTLY fell in love. Things worked out and I started as Assistant Professor Fall 2022 and I am never ever, ever, ever, leaving! In my lab I continue to use the songbird model to investigate phenotypic (sex, strain, and morph) differences in brain, hormones, and behavior. We use both basic and molecular techniques to get at these questions.

Dr. Seth Blair, Professor, Integrative Biology Department
Research areas: Cell Biology, Developmental Biology, Genetics/Genomics, Neuroscience

I grew up in Seattle, but my dad was from Madison and his folks lived over on Sheldon Street near Michael's Frozen Custard, so I've been in and out of town for years now. I was an undergrad at Yale and got my PhD at the University of California in Berkeley in 1982. My grad school mentor was Gunther Stent, who had been an important figure in the early days of molecular genetics but had since gotten interested in the developmental biology of nervous systems. At the time, we were figuring out how cells make the nervous system of the leech (simple nervous systems, lovely embryos, slightly obnoxious feeding habits). After that I did a postdoc at the University of Washington in Seattle working on the nervous system of the fruit-fly Drosophila, I did a brief postdoc at Harvard Med School working on leeches again, and then I came here in 1989. These days I pretty much stick with Drosophila (wonderful genetics, easier to feed), looking at the development of neuronal and non-neuronal tissues and how signaling between cells is used to determine the developmental fate of cells. I used to keep a tank of leeches around, but they died of sucker rot a few years back.

Dr. Jeremiah Yahn, Teaching Faculty, Integrative Biology Department

I am a WI native from the driftless area in general, but mostly I grew up in Viroqua. I have always had an affinity for animals and nature; spending most of my childhood outdoors fishing, hunting, foraging, hiking, and whatever else I could get myself outdoors to do. I went to Viterbo University in La Crosse WI for my undergraduate and tried to take every class that I could, but quickly realized that I should narrow my focus. I settled on a degree in biology (with several minors and emphases) and it has served me well ever since. After a short stint in the AmeriCorps as a lumberjack in the greater southwest (shout out to Flagstaff), I returned to WI and started graduate school. I worked with Dr. Steven Ventura on my Masters' degree, focusing on spatial sciences and environmental monitoring. Subsequently, I got my PhD from the University of Wisconsin, Madison, in 2016, working in the Karasov lab group. The focus of my PhD involved animal energetics (how animals pay the bills so to speak) and how one can model energy budgets to understand questions of ecotoxicology. Mostly, I worked with amphibians and more specifically frogs, but used several vertebrates to answer these questions.

I do not lecture straight from the text but urge you to do the readings before each lecture. Please do not read the text exhaustively but rather to familiarize yourself with the content before you come to lecture. If you do this, I think that you will find it MUCH easier to pay attention and will retain more of the lecture as a result. Then, if after a lecture you still do not understand something, research it more exhaustively at that point. Take good notes (by hand-yes it helps) during lecture and revisit these notes at the end of the day and once again at the end of each week. By continually interacting with the material and your notes I think you will find it easier to be successful in the course (and probably other courses as well). I hope you enjoy learning about animal physiology - I think it is neat!

I wish that I were metal enough to say that I used to have a tank of leeches that later succumbed to sucker rot, but alas, I am not that metal…

Dr. Brendan Scherer, Teaching Faculty, Integrative Biology Department

I grew up in Kaukauna, Wisconsin before coming to UW-Madison for my undergraduate studies. I began as a mechanical engineering major, but switched to botany after a couple semesters. I fell in love with learning about plants, the natural world, and all the ways that life is interconnected. After graduating with my B.S. in 2013 I worked on a hops farm and as a tutor until moving to Tallahassee, Florida to get my Ph.D. in Biological Sciences from Florida State University. My dissertation research focused on the bacterial microbiome of mangrove trees, and took me all across the swamps and coastal wetlands of Florida, where I was fortunate enough to avoid any leeches (though I saw my share of wild pigs and alligators). After graduate school, I was ecstatic to move back to Madison, where I briefly lectured in the botany department before joining the USDA as a postdoctoral researcher. I have always loved teaching, and was thrilled to join the iBio department in August of 2023. Aside from work, I love gardening, cooking, reading, biking, hiking, camping, and playing and listening to music.

Introductory Biology 151 - Fall 2023

Lecture Schedule

The course schedule is subject to change, if it does students will be notified via the weekly lecture page on Canvas

Date	Day	Topic	Reading (REVIEW)	Lecturer
Sep 6	W	Introduction: Cells & Life	No reading assignment	Gilroy
Sep 8	F	Structure & function of molecules #1: Water & Carbohydrates	3rd and 4th edition: Ch 2	Gilroy
Sep 11	M	Structure & function of molecules #2: Lipids & Proteins	Ch 2	Gilroy
Sep 13	W	Structure & function of molecules #3: Proteins & Nucleic acids	3rd edition: Ch 3: 3.1-3.2, Ch 4: 4.1 4th edition: Ch 4.1-4.2, Ch 5: 5.1	Gilroy
Sep 15	F	Cell Structure, membranes and water	3rd edition: Ch 5 4th edition: Ch 3	Gilroy
Sep 18	M	Organelles and endomembranes	No new reading assignment	Gilroy
Sep 20	W	Enzymes and biochemistry	3rd and 4th edition: Ch 6	Gilroy
Sep 22	F	Energy and glycolysis	3rd and 4th edition: Ch 7	Gilroy
Sep 25	M	Energy and respiration	No new reading assignment	Gilroy
Sep 27	W	Fermentation/Photosynthesis	No new reading assignment	Gilroy
Sep 29	F	Photosynthesis I: light and biochemistry	3rd and 4th edition: Ch 8	Gilroy
Lecture Essay #1 Due September 29th @ 11:59 pm				
Oct 2	M	Photosynthesis II: biochemistry	No new reading assignment	Gilroy
Oct 4	W	Cell division/mitosis I	3rd edition: Ch 11: preface-11.2 4th edition: Ch 11: preface-11.1, 11.4	Gilroy
Oct 6	F	Cell division/mitosis II	3rd edition: Ch 11: 11.5-11.6 4th edition: Ch 11: 11.5	Gilroy
Review Session - Exam 1 - Sunday, October 8th, 6-8 pm; room 145, Birge Hall				
Oct 9	M	Heredity, Genes, and DNA	3rd edition: Ch 3: Preface-3.2 4th edition: Ch 4: Preface-4.2	Blair
Oct 11	W	DNA and replication	3rd edition: Ch 12: preface-12.2 4th edition: Ch 11: 11.2-11.3	Blair
Exam #1 - Oct 11, 8:15 - 9:45 pm; see weekly announcement for room assignments				
Oct 13	F	More DNA replication, transcription	3rd edition: Ch 3: 3.3-3.4 4th edition: Ch 4: 4.3-4.4	Blair
Oct 16	M	Transcription and translation	3rd edition: Ch 4: 4.2 4th edition: Ch 5: 5.2	Blair
Oct 18	W	Translation and mutations	3rd edition: Ch 14: 14.2-14.5 4th edition: Ch 13: 13.2-13.5	Blair
Oct 20	F	Gene expression	3rd edition: Ch 18 4th edition: Ch 17	Blair
Oct 23	M	Meiosis and sexual reproduction	3rd edition: Ch 11: pp. 228, 11.3 4th edition: Ch 11: pp. 226-227; Ch 14: preface-14.1	Blair

Oct 25	W	Mendelian genetics I	3rd edition: Ch 15 4th edition: Ch 14: 14.3-14.5	Blair
Oct 27	F	Mendelian genetics II	No new reading assignment	Blair
Oct 30	M	Sex chromosomes	3rd edition: Ch 16: preface-16.2, 16.4 plus pp. 380-381 "...entire chromosome" 4th edition: Ch 15: preface-15.2, 15.4 plus pp. 363-365 "...entire chromosome"	Blair
Nov 1	W	Gene linkage and recombination	3rd edition: Ch 16: 16.4 4th edition: Ch 15: 15.3	Blair
Nov 3	F	Dominance, multiple alleles, polygenic traits	3rd edition: Ch 17 4th edition: Ch 16	Blair
Lecture Essay #2 Due November 6th @ 11:59 pm				
Nov 6	M	Non-Mendelian Inheritance	3rd edition: Ch 11: 11.4; Ch 16: 16.5 4th edition: Ch 14: 14.2; Ch 15: 15.5	Blair
Nov 8	W	Junctions and signaling between cells	3rd edition: Ch 10: 10.3-10.4; Ch 9 4th edition: Ch 10: 10.3-10.4; Ch 9	Blair
Nov 10	F	Structure & Function: Homeostasis	3rd edition: Ch 33.2 & 33.3 4th edition: Ch 33.1-33.3	Madison
		Review Session - Exam 2 - Sunday, November 12th, 6-8 pm; room 132, Noland Hall		
Nov 13	M	Nervous System I	3rd edition: Ch 34.4, 34.5, 34.6 4th edition: Ch 35	Madison
Nov 15	W	Nervous System II	3rd edition: Ch 35 4th edition: Ch 35	Madison
Exam #2 - Nov 15, 8:15 - 9:45 pm; see weekly announcement for room assignments				
Nov 17	F	Sensory Systems I	3rd edition: Ch 34.5 4th edition: Ch 35	Madison
Nov 20	M	Sensory Systems II	No new reading	Madison
Nov 22	W	Sensory Systems III	3rd edition: Ch 34.6 4th edition: Ch 35	Madison
Nov 24	F	Thanksgiving (no lecture)		
Nov 27	M	Muscles	3rd edition: Ch 35.1 & 35.2 4th edition: Ch 36	Madison
Nov 29	W	Endocrine Systems	3rd edition: Ch 36 4th edition: Ch 37	Madison
Dec 1	F	Respiration	3rd edition: Ch 37.1 & 37.2 4th edition: Ch 38	Madison
Dec 4	M	Circulation & the Heart	3rd edition: Ch 37.3-37.5 4th edition: Ch 38	Madison
Dec 6	W	Ingestion, Digestion, & Absorption	3rd edition: Ch 38.2-38.4 4th edition: Ch 39.4	Madison
Dec 8	F	Digestion II	3rd edition: Ch 29 4th edition: no new readings	Madison

Dec 11	M	Osmoregulation	3rd edition: Ch 29 4th edition: Ch 40	Madison
Dec 13	W	TBD		Madison
Dec 14		Review Session - Exam 3 - December 14th, 6-8 pm; room 145, Birge Hall		
Exam #3 - Monday, Dec 18, 5:00 - 6:30 pm; see weekly announcement for room assignments				

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Discussion Schedule

Week	Activity	Assignment Due
Sep 6-8	**Discussions begin Monday, September 11**	
Sep 11-15	What is discussion? Introductions & policies	Homework 1*
		No quiz, this week.
Sep 18-22	Macromolecules	Homework 2
		Quiz 1 due 9/20 at 11:59 pm**
Sep 25-29	Cell structure & enzyme kinetics	Homework 3
		Quiz 2 due 9/27 at 11:59 pm
Oct 2-6	Respiration & Fermentation	Homework 4
		Quiz 3 due 10/4 at 11:59 pm
Oct 9-13	Photosynthesis & Mitosis	Homework 5
		No quiz, this week.
Oct 16-20	Replication & transcription	Homework 6
		Quiz 4 due 10/18 at 11:59 pm
Oct 23-27	Translation & gene expression	Homework 7
		Quiz 5 due 10/25 at 11:59 pm
Oct 30-Nov 3	Meiosis & Mendelian genetics	Homework 8
		Quiz 6 due 11/1 at 11:59 pm
Nov 6-10	More genetics & pedigrees	Homework 9
		No Quiz
Nov 13-17	Exam Review	Homework 10
		No Quiz
Nov 20-24	Nervous systems & neuron structure	Homework 11
		Quiz 7 due 11/22 at 11:59 pm
Nov 27-Dec 1	Sensory Systems	Homework 12
		Quiz 8 due 11/29 at 11:59 pm

Dec 4-8	Respiration & Endocrine	Homework 13
		Quiz 9 due 12/6 at 11:59 pm
Dec 11-13	Circulation & Digestion	Homework 14
*Homework is due prior to the start of discussion		
**Quizzes are to be completed after you complete discussion for the week		

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Lab Schedule

Check Canvas for all assignment details Prior notice will be given for any course schedule changes.

Week	Lab Module	Assignment	Points (400)
Sept 6-8	**Labs begin Monday, September 11**		
Sept 11-15	Foundations	Before: Pre-lab	5
		End of lab: Submit worksheet	20
Sept 18-22	Microorganism Behavior (1 of 3)	Before: Pre-lab	5
		End of lab: Submit worksheet	5
Sept 25-29	Microorganism Behavior (2 of 3)	Before: Pre-lab	5
		End of lab: Submit worksheet	5
Oct 2-6	Microorganism Behavior (3 of 3)	Before: Pre-lab	5
		During: MB Quiz	25
Oct 9-13	Forensic Analysis with PCR (1 of 3)	Submit Microorganism paper	55
		Before: Pre-lab	5
Oct 16-20	Forensic Analysis with PCR (2 of 3)	Before: Pre-lab	5
		End of lab: Submit in-class activity	20
Oct 23-27	Forensic Analysis with PCR (3 of 3)	Before: Pre-lab	5
		During: FA quiz	25
Oct 30 - Nov 3	Sleep and Cognitive Function (1 of 3)	Before: Submit Forensic Analysis paper	55
Nov 6-10	Genetics	Before: Sleep Log	
Nov 13-17	Sleep and Cognitive Function (2 of 3)	Before: Pre-lab	5
		Before: Sleep Log	
		Before: Submit Genetics paper	30
		End of lab: Submit worksheet	10
Nov 20-24	**Thanksgiving recess - No Labs**		
Nov 27 - Dec 1	Sleep and Cognitive Function (3 of 3)	Before: Pre-lab	5
Dec 4-8	Mammalian Anatomy and Physiology	Before: Submit Sleep paper	85
		Before: Pre-lab	5
		End of lab: Submit worksheet	10
Dec 11-15	**No Labs**		
		Total lab points:	400