

Biology 210: Principles of Genetics

Fall 2022 Course Syllabus

Course and Instructor Information

Meeting times: Lecture: T, Th 9:30-10:45 CBB 101
 Final Exam: Wednesday, Dec. 21, 10:15am-12:15

Professor: Dr. Matt Rogge
Office: CBB 345
Email: mrogge@uwsp.edu

Office hours: W 1:00 pm-1:50 pm, F 9:00 am-9:50 am
 Other times by appointment

Course Description Genetics is the study of how traits are inherited and the chemical structures that influence those traits. Genetics is increasingly important in all biological fields. It is important that students in any biologically-related field have a fundamental understanding of how physical and physiological traits are determined and passed to the next generation, as it is likely that they will encounter this at some point in their career. In this class, you will study DNA as the genetic material of all organisms, how it is replicated and transferred, how it controls phenotypic traits of organisms, and how changes in the DNA sequence result in variation within populations of species, ultimately leading to evolutionary change.

Course Objective Describe the basic principles of inheritance at the molecular, cellular, organismal, and population levels.

Course learning outcomes

1. Describe the basic biochemical properties of DNA and explain how those characteristics are important to its role as the hereditary material.
2. Describe how DNA is packaged within a cell and how chromosomes are replicated and transferred during cell division.
3. Explain how genetic information is interpreted into proteins that determine the physical and physiological traits of cells and organisms.
4. Apply genetics to the study of populations and identification of phenomena that lead to species evolution.
5. Apply quantitative analyses to evaluation of genetic crosses, genetic mapping, and population genetics.

What you should acquire from this class

Students will understand that...

- The physical and physiological traits exhibited by an organism are a product of the genetic information found within the organism
- Genetic information is passed from parent to offspring, and the inherited traits can be predicted
- The genetic information can change, leading to modified physical or physiological traits, which is the basis for variation, adaptation, and evolution

Course Learning outcomes

Knowledge:

Students will...

- Describe the central dogma of molecular biology
- Describe the chemical and structural characteristics of DNA, RNA, proteins, and chromosomes
- Explain how genetic information changes, leading to variation within a population and adaptation and evolution of a species
- Explain similarities and differences in mitosis and meiosis
- Describe how traits are passed from parents to offspring

Skills:

Students will...

- Identify important sequences related to gene expression
- Determine the amino acid sequence of a protein from its DNA sequence
- Demonstrate the ability to predict the outcomes of genetic crosses
- Use chi-square to determine if expected outcomes match predicted outcomes
- Use the Hardy-Weinberg equation to determine genotype frequencies in a population

Dispositions:

Students will...

- Recognize the relatively simple nature of the genetic code, and how changes over time can lead to complex organisms
- Critically analyze the advantages and disadvantages of genetic manipulation
- Appreciate that physical variation observed in the members of a population is attributed to subtle differences in the individuals' genetic makeup

Required Texts

Brooker, Concepts of Genetics, 4th Edition, McGraw Hill. Available from text rental.

Grading and Assignments – Minimum Total Points: 290; Maximum Total Points 370

IT IS EXPECTED THAT EVERY STUDENT PERFORMS EACH GRADED ACTIVITY **INDEPENDENTLY**. NONE OF THE ACTIVITIES ARE TO BE COMPLETED IN GROUPS OF ANY SIZE. CHEATING, COPYING, AND OTHER FORMS OF PLAGIARISM WILL NOT BE TOLERATED.

Required Assignments (290 points)

Homework problem sets: 40 points

Some genetic topics rely on performing various types of calculations. Students are expected to know how to perform these analyses on quizzes and exams. These homework assignments are assigned so that students can check their understanding of these types of problems prior to taking exams. There will be four homework problem sets assigned over the course of the semester, with each being worth 10 points. The problem sets will be available in Canvas and submitted to Canvas. Once student submissions are graded, an answer/explanation sheet will be provided in the feedback for the assignments found in Canvas. If you do not complete the assignment, you will not receive the answer/explanation sheet.

Exams: 250 pts

There will be three exams during the semester (50 points each) and one during finals week (100 points). The material throughout the semester builds upon itself, so each exam will have **cumulative** ideas related to material covered on previous exams. In other words, view the semester continuously, not as units broken up by exams. The **Final Exam** will be worth 100 points, with 30 points coming from the last material covered and 70 points of cumulative semester material. **Prepare accordingly** through the semester. The exams will be any combination of short answer, diagramming, multiple choice, fill in the blank, quantitative reasoning (math), and matching. The material covered on each exam will be determined by where we are in the lecture schedule when the quiz occurs. No lecture exams are dropped, but the **score of the final exam can replace your lowest midterm exam** (assuming the final exam grade is higher than a midterm exam grade). An equivalent percentage of points will be used as the replacement. For example, if get a 90% on the final and 40/50 (80%) on a midterm, the midterm grade will be changed to 45/50 (a 90%).

The only acceptable excuses for missing an exam are a death in the family, violent illness, or accident, and written evidence of some kind will be required to make up a missed exam. **NO EXCEPTIONS.** If a makeup

exam is allowed, the makeup exam format may differ from the original exam. If you have a conflict with the exam, see the instructor **at least a week before** the scheduled exam to schedule an alternate time. If you do not inform the instructor at least a week in advance, you risk not being able to schedule an alternate exam time.

Optional Assignments (up to 80 points)

Online quizzes: 80 pts

Between exams, there will be online quizzes through Canvas. There will be four quizzes, each worth 20 points. The quizzes will occur 1-2 weeks before each exam (see semester schedule below), and you will have **two days** to complete the quiz once the quiz becomes available. You can take the quiz up to **five** times during those two days, but the grade you receive will be the **average score** of all your attempts. Each time you start the quiz, you will have 30 minutes to complete it. Consider the quizzes to be open book/notes. The format of the quizzes will be any combination of multiple choice, true/false, matching, quantitative reasoning (math), and ordering. No makeups are allowed if you fail to take the quiz within the 2-day window. These lecture quizzes are **optional**. If you do not take the quiz, you will not receive a grade, and the points for the quiz will not contribute to calculation of your final grade. **Once you begin the quiz, the grade will count even if you do not answer any questions. Do not start a quiz unless you intend on completing it.** You do not have to complete all four quizzes (you can choose to do none, one, two, three, or all four).

Total Class Points: 290-370 points (depending on how many optional assignments are completed)

Final grades will be calculated by dividing the total points received by the total points possible and multiplied by 100. The following scale will be used to assign a final grade.

<u>Percentage</u>	<u>Letter</u>	<u>Percentage</u>	<u>Letter</u>
92.50 to 100%	A	72.50 to 76.49%	C
89.50 to 92.49%	A-	69.50 to 72.49%	C-
86.50 to 89.49%	B+	66.50 to 69.49%	D+
82.50 to 86.49%	B	60.0 to 66.49%	D
79.50 to 82.49%	B-	≤ 59.99%	F
76.50 to 79.49%	C+		

ROUNDING: Percentages with a decimal value of xx.50 or higher will be rounded **up** to the next whole percentage (e.g., 89.500% → 90%). Percentages with a decimal value less than xx.50 will be rounded **down** to the next whole percentage (e.g., 89.49999999% → 89%). **NO EXCEPTIONS.**

Future Letters of Recommendation and References

In the future, you may need a former professor to write a letter of recommendation or be a reference for your employment application, application for graduate school, awards and scholarships, or other future endeavors. If you decide that you want to ask me to be a reference for you, you need to consider what you have provided for me to write or talk about. Were you an average, above average, or excellent student? Were you engaged in class and excited about the material? Am I familiar with you outside of class and your goals for your life and career? Have you separated yourself from other students I have had in terms of interest, motivation, or academic success? What am I going to be able to say about you to convince someone else that you are better than other applicants? Furthermore, have you exhibited any negative characteristics that I might mention in my letter? The information I give reflects my honesty, and I will not give false or misleading information because that may affect my ability to vouch for future students. Serving as a reference in no way guarantees that the reference will be a *positive* one. You need to consider these things for *any* person you hope to be a reference, not just me.

If you do ask me to be a reference or write a letter, I require the request to be in writing and an in-person meeting scheduled to discuss the position(s) for which you are applying. Before I give a recommendation, I require a current CV and/or transcript, copies of or links to forms I need to fill out, and all necessary contact

information (names, addresses, phone numbers) required for me to submit the recommendation. Finally, I require these materials be delivered a minimum of **two weeks** before a recommendation is due. If any of these criteria are not met, I will not have time, nor will I be well enough informed to write a letter.

Use of electronics during class

Please turn off/mute/set to vibrate any electronic devices that could interrupt class (lab or lecture) before class begins. If it is a personal emergency, feel free to excuse yourself from the class and communicate outside of the classroom.

How to be successful in this class

- Show up for all scheduled lectures.
- Look at the material you anticipate will be covered in class *before* you arrive to class.
- Develop good note-taking skills. Do not try to write down everything that is said. Sort through the information and make note of the important ideas and concepts being discussed.
- Reading and processing the information is the first step in learning the information. Learn to take notes with abbreviations so that you can spend enough time listening in addition to writing. Leave space in your notes so that you can go back and fill in more details later on.
- Be engaged in class. Process the information and put it in your own words. Answer questions when asked, even if you answer it in your head. If your answer is incorrect or lacking, make notes as to why.
- Do not study *for exams*. Studying that way promotes memorization, not understanding. Instead, study for learning and understanding, and success on the exams will follow.
- Do not try to memorize definitions. I will never ask you to define something. You should know the meaning of words so that you understand the questions I am asking on exams.
- Study frequently. Repetition is the key to learning *any* topic. Studying for 40 hours over the span of four weeks will be much more beneficial than studying for 40 hours the weekend before the exam.
- After you have studied and know some or most of the material, meet with other students in the class and actively *discuss* the information. Explain mechanisms, theories, concepts, etc. to other students. The other students can help you fill in areas where you are deficient. You will find that explaining these things to someone else is one of the best ways to ensure you know and understand the information. Then have another student explain a different idea or concept and help them identify areas in which they are deficient.
- Begin studying your notes beginning with “big picture” ideas. Find the bigger concepts and make sure you have a basic understanding of those ideas. Once those bigger concepts are understood, add additional details relating to those ideas. By doing this, you construct “compartments” in your mind to store the details rather than simply trying to absorb all the details and hoping that they arrange themselves into a coherent idea. Ultimately, the difference between an A, a B, and a C is the level of detail that you know, but you should ***begin*** by focusing on the bigger picture.
- The level of detail that you will be required to know is the level of detail that I cover in lectures. The book has much more detailed information, which may help you better understand the material I cover, but I will not ask about the details I do not cover.
- When you do not understand something, **LOOK IN THE TEXTBOOK!** The book can give more detailed explanations and images that may help you better understand the material. Alternatively, use the internet. You have a wealth of information at your fingertips, use it!
- When your notes do not make sense and the book does not help, schedule an appointment with me. I am here to help you learn. I do not expect you to be a geneticist *before* taking the class. I understand that much of this material is new to you, and one or two lectures may not be enough for you to fully grasp the concepts. Do not be too stubborn to ask for help or you will risk falling behind.
- When answering questions on exams, be sure you answer them ***clearly***. You should not expect me to interpret vague answers in your favor. Your ability to explain something clearly is related to your knowledge of the subject. If answers are not clear or direct, my interpretation is that you do not understand that topic very well.

- When I ask you to ***explain*** something, the answer should not be a one or two-word answer. A good explanation will incorporate answers to the following questions:
 - “**What** is happening?”
 - “**Why** is it happening?”
 - “**How** it is happening?”
 - Remember ***WHAT, WHY, and HOW.***
- Watch the following YouTube videos. The first is an hour-long lecture from psychology professor discussing how to study. The second is a 6 minute summary of the longer video.
 - <https://www.youtube.com/watch?v=IIU-zDU6aQ0>
 - <https://www.youtube.com/watch?v=23Xqu0jXlfs>

GENERAL COURSE POLICIES

Attendance

I expect students to attend all lectures. Attendance will be taken in lecture for Covid contract-tracing reasons, but attendance in lecture is not graded. Makeup exams or other makeup assignments will only be administered in the event of illness, emergency, university-sponsored event, etc., which will require documentation (an **excused** absence) before a makeup date is agreed upon. If you are aware ahead of time of a conflict with an exam period or other assignment, a meeting with the instructor is required to discuss the situation **at least 1 week before the absence**, and rescheduling may occur at the instructor’s discretion.

It is the student’s responsibility to get any missed lecture material from another classmate. I am not able to re-teach the material to individual students, and full PowerPoint slides will not be given to students that miss lecture or lab material for any reason. To be exposed to all content provided in each session, each student must be present during the scheduled lecture and lab periods.

Attending class will likely be the single most important factor in determining your performance and grade in the course, so plan to attend every class. The relationship between attendance and achievement in education has been extensively documented in peer-reviewed research.

Please refer to the “Absences due to Military Service” and “Religious Beliefs Accommodation” below. Additionally, below are attendance guidelines as outlined by the [UWSP registrar](#):

Attend all your classes regularly. We do not have a system of permitted "cuts." If you decide to drop a class, please do so using accesSPoint or visit the Enrollment Services Center. Changes in class enrollment will impact your tuition and fee balance, financial aid award and veterans educational benefit.

During the first eight days of the regular 16-week term, your instructor will take attendance. If you are not in attendance, you may be dropped from the class. You are responsible for dropping any of your enrolled classes.

- If you must be absent during the term, tell your instructor prior to the class you will miss. If you cannot reach your instructor(s) in an emergency, contact the Dean of Students Office at 715-346-2611 or DOS@uwsp.edu .
- If you are dropped from a class due to non-attendance, you may only be reinstated to the class section using the class add process. Reinstatement to the same section or course is not guaranteed. Your instructors will explain their specific attendance policies to be followed at the beginning of each course.
- If you take part in an off-campus trip by an authorized university group such as an athletic team, musical or dramatic organization, or a class, make appropriate arrangements in advance with the instructor of each class you will miss. If you are absent from classes because of emergencies, off-campus trips,

illness, or the like, your instructors will give you a reasonable amount of help in making up the work you have missed.

- If you enroll in a course and cannot begin attending until after classes have already started, you must first get permission from the department offering the course. Otherwise, you may be required to drop the course.
- If you do not make satisfactory arrangements with your instructors regarding excessive absences, you may be dismissed. If you are dismissed from a class, you will receive an F in that course. If you are dismissed from the University, you will receive an F in all enrolled courses.

Late Work

All late assignments will be assessed a **10% penalty per day** that the assignment is late (weekends included) unless otherwise stated. This penalty will be assessed based on the number of points you earned. For example, if you turned in an assignment two days late and received a score of 8/10, the 40% deduction will be applied to the 8 points you earned (40% of 8 is 3.2 points, so the grade will be 4.8/10, rounded up to 5).

Emergency Procedures

- In the event of a medical emergency call 9-1-1 or use campus phone found between CBB 101 and 105. Offer assistance if trained and willing to do so. Guide emergency responders to victim.
- In the event of a tornado warning, proceed to the lowest level interior room without window exposure, such as the restrooms near CBB 101. See **Error! Hyperlink reference not valid.** for floor plans showing severe weather shelters on campus. Avoid wide-span structures (gyms, pools or large classrooms).
- In the event of a fire alarm, evacuate the building in a calm manner. Exit CBB 101 to the hallway and out the main doors to the right or out the exit door at the front of the room. Gather with classmates at least 200 yards from the building. Notify instructor or emergency response personnel of any missing individuals.
- Active Shooter – RUN. HIDE. FIGHT. If trapped, hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders. See UW-Stevens Point Emergency Procedures at **Error! Hyperlink reference not valid.** for details on all emergency response at UW-Stevens Point.

Absences due to Military Service

As stated in the UWSP Catalog, you will not be penalized for class absence due to unavoidable or legitimate required military obligations, or medical appointments at a VA facility, **not to exceed two (2) weeks** unless special permission is granted by the instructor. You are responsible for notifying faculty members of such circumstances as far in advance as possible and for providing documentation to the Office of the Dean of Students to verify the reason for the absence. The faculty member is responsible to provide reasonable accommodations or opportunities to make up exams or other course assignments that have an impact on the course grade. For absences due to being deployed for active duty, please refer to the [Military Call-Up Instructions for Students](#).

Inclusivity Statement

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups.

If you have experienced a bias incident (an act of conduct, speech, or expression to which a bias motive is evident as a contributing factor regardless of whether the act is criminal) at UWSP, you have the right to report it using this [link](#). You may also contact the Dean of Students office directly at dos@uwsp.edu.

Religious Beliefs Accommodation

It is UW System policy ([UWS 22](#)) to reasonably accommodate your sincerely held religious beliefs with respect to all examinations and other academic requirements.

You will be permitted to make up an exam or other academic requirement at another time or by an alternative method, without any prejudicial effect, if:

- There is a scheduling conflict between your sincerely held religious beliefs and taking the exam or meeting the academic requirements; and
- You have notified your instructor within the first three weeks of the beginning of classes (first week of summer or interim courses) of the specific days or dates that you will request relief from an examination or academic requirement.
- Your instructor will accept the sincerity of your religious beliefs at face value and keep your request confidential.
- Your instructor will schedule a make-up exam or requirement before or after the regularly scheduled exam or requirement.
- You may file any complaints regarding compliance with this policy in the Equity and Affirmative Action Office.

Equal Access for Students with Disabilities

UW-Stevens Point will modify academic program requirements as necessary to ensure that they do not discriminate against qualified applicants or students with disabilities. The modifications should not affect the substance of educational programs or compromise academic standards; nor should they intrude upon academic freedom. Examinations or other procedures used for evaluating students' academic achievements may be adapted. The results of such evaluation must demonstrate the student's achievement in the academic activity, rather than describe his/her disability.

If modifications are required due to a disability, please inform the instructor and contact the [Disability and Assistive Technology Center](#) to complete an Accommodations Request form. Phone: 346-3365 or Room 609 Albertson Hall.

Help Resources

Tutoring	Advising	Safety and General Support	Health
Tutoring and Learning Center helps with Study Skills, Writing, Technology, Math, & Science. 018 Albertson Hall, ext 3568	Academic and Career Advising Center, 320 Albertson Hall Ext. 3226	Dean of Students Office, 212 Old Main, ext. 2611	Counseling Center, Delzell Hall, ext. 3553. Health Care, Delzell Hall, ext. 4646

[Click here](#) to flag a policy or practice that disproportionately affects marginalized students

UWSP Service Desk (1st Floor, Albertson Hall)

The Office of Information Technology (IT) provides a Service Desk to assist students with connecting to the Campus Network, virus and spyware removal, file recovery, equipment loan, and computer repair. You can contact the Service Desk via email at techhelp@uwsp.edu or at (715) 346-4357 (HELP) or visit this [link for more information](#).

Care Team

The University of Wisconsin-Stevens Point is committed to the safety and success of all students. The Office of the Dean of Students supports the campus community by reaching out and providing resources in areas where a student may be struggling or experiencing barriers to their success. Faculty and staff are asked to be proactive, supportive, and involved in facilitating the success of our students through early detection, reporting, and intervention. As your instructor, I may contact the Office of the Dean of Students if I sense you are in need of additional support which individually I may not be able to provide. You may also share a concern if you or another member of our campus community needs support, is distressed, or exhibits concerning behavior that is interfering with the academic or personal success or the safety of others, by reporting [here](#).

Academic Honesty

Academic Integrity is an expectation of each UW-Stevens Point student. Campus community members are responsible for fostering and upholding an environment in which student learning is fair, just, and honest. Through your studies as a student, **it is essential to exhibit the highest level of personal honesty and respect for the intellectual property of others. Academic misconduct is unacceptable.** It compromises and disrespects the integrity of our university and those who study here. To maintain academic integrity, a student must only claim work which is the authentic work solely of their own, providing correct citations and credit to others as needed. **Cheating, fabrication, plagiarism, unauthorized collaboration, and/or helping others commit these acts are examples of academic misconduct, which can result in disciplinary action.** Failure to understand what constitutes academic misconduct does not exempt responsibility from engaging in it.

UWSP 14.03 Academic misconduct subject to disciplinary action.

- (1) Academic misconduct is an act in which a student:
 - (a) Seeks to claim credit for the work or efforts of another without authorization or citation;
 - (b) Uses unauthorized materials or fabricated data in any academic exercise;
 - (c) Forges or falsifies academic documents or records;
 - (d) Intentionally impedes or damages the academic work of others;
 - (e) Engages in conduct aimed at making false representation of a student's academic performance; or
 - (f) Assists other students in any of these acts.

- (2) Examples of academic misconduct include, but are not limited to:
 - Cheating on an examination
 - Collaborating with others in work to be presented, contrary to the stated rules of the course
 - Submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another
 - Submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas
 - Stealing examinations or course materials
 - Submitting, if contrary to the rules of a course, work previously presented in another course
 - Tampering with the laboratory experiment or computer program of another student
 - Knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Students suspected of academic misconduct will be asked to meet with the instructor to discuss the concerns. If academic misconduct is evident, procedures for determining disciplinary sanctions will be followed as outlined in the [University System Administrative Code, Chapter 14](#).

Other Campus Policies

FERPA

The [Family Educational Rights and Privacy Act](#) (FERPA) provides students with a right to protect, review, and correct their student records. Staff of the university with a clear *educational need to know* may also have to access to certain student records. Exceptions to the law include parental notification in cases of alcohol or drug use, and in case of a health or safety concern. FERPA also permits a school to disclose personally identifiable information from a student's education records, without consent, to another school in which the student seeks or intends to enroll.

Title IX

UW-Stevens Point is committed to fostering a safe, productive learning environment. Title IX and institutional policy prohibit discrimination on the basis of sex, which includes harassment, domestic and dating violence, sexual assault, and stalking. In the event that you choose to disclose information about having survived sexual violence, including harassment, rape, sexual assault, dating violence, domestic violence, or stalking, and specify that this violence occurred while a student at UWSP, federal and state laws mandate that I, as your instructor, notify the Title IX Coordinator/Office of the Dean of Students.

Please see the [Title IX page](#) for more information for guidance on making confidential reports of misconduct or interpersonal violence, as well as campus and community resources available to students.

Clery Act

The US Department of Education requires universities to disclose and publish campus crime statistics, security information, and fire safety information annually. Statistics for the three previous calendar years and policy statements are released on or before October 1st in our [Annual Security Report](#). Another requirement of the Clery Act, is that the campus community must be given timely warnings of ongoing safety threats and immediate/emergency notifications. For more information about when and how these notices will be sent out, please see our [Jeanne Clery Act](#) page.

Drug Free Schools and Communities Act

The Drug Free Schools and Communities Act (DFSCA) requires institutions of higher education to establish policies that address unlawful possession, use, or distribution of alcohol and illicit drugs. The DFSCA also requires the establishment of a drug and alcohol prevention program. The Center for Prevention lists information about alcohol and drugs, their effects, and the legal consequences if found in possession of these substances. [Center for Prevention – DFSCA](#)

Copyright infringement

This is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act. Each year students violate these laws and campus policies, putting themselves at risk of federal prosecution. For more information about what to expect if you are caught, or to take preventive measures to keep your computing device clean, visit our [copyright page](#).

Tentative Lecture Schedule (subject to change as necessary)

Week	Dates	Topic	Chapter
1	Sept. 6	Syllabus and Overview of Genetics	1
	Sept. 8	Reproduction and Chromosome Transmission	2
2	Sept. 13	Reproduction and Chromosome Transmission/Mendelian Inheritance	2/3
	Sept. 15	Mendelian Inheritance	3
3	Sept. 20	Sex Determination and Sex Chromosomes <i>Optional Quiz 1 available</i>	4
	Sept. 22	Extensions of Mendelian Inheritance	5
4	Sept. 27	Extranuclear Inheritance, Imprinting, and Maternal Effect	6
	Sept. 29	Genetic Linkage and Mapping in Eukaryotes	7
5	Oct. 4	EXAM 1	
	Oct. 6	Genetic Linkage and Mapping in Eukaryotes	7
6	Oct. 11	Variation in Chromosome Structure and Function	8
	Oct. 13	Genetics of Bacteria (Horizontal Gene Transfer)/Molecular Structure of DNA and RNA	9/11
7	Oct. 18	Molecular Structure of DNA and RNA <i>Optional Quiz 2 available</i>	11
	Oct. 20	Molecular Structure of Chromosomes and Transposition	12
8	Oct. 25	DNA Replication and Recombination	13
	Oct. 27	DNA Replication and Recombination	13
9	Nov. 1	Gene Transcription and RNA Modification	14
	Nov. 3	EXAM 2	
10	Nov. 8	Gene Transcription and RNA Modification/Translation of mRNA	14/15
	Nov. 10	Translation of mRNA	15
11	Nov. 15	Gene Regulation in Bacteria	16
	Nov. 17	Gene Regulation in Bacteria/Gene Regulation in Eukaryotes <i>Optional Quiz 3 available</i>	16/17
12	Nov. 22	Gene Mutation and DNA Repair	19
	Nov. 24	NO CLASS – THANKSGIVING BREAK	
13	Nov. 29	Gene Mutation and DNA Repair	19
	Dec. 1	Population Genetics	
14	Dec. 6	EXAM 3	23
	Dec. 8	Population Genetics	23
15	Dec. 13	Molecular Technologies <i>Optional Quiz 4 available</i>	20
	Dec. 15	Medical Genetics and Cancer	22
16		Final Exam: Wednesday, Dec. 21, 10:15am-12:15	