Course Syllabus – updated 8/25/24

BIOLOGY 200: INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS

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Office Hours: Wednesday 11:00 – 12:00 (Location TBD)

Meeting Time: Section 006: MWF 9:00 – 9:50 in SC2125
Section 007: MWF 10:00 – 10:50 in SC2125
First day of lecture: Monday August 26.

Please note: The best way to contact me outside of lecture or lab is by **email**. Email messages to cwarren@towson.edu generally will be replied to by the next business day. (I am not always able to reply on weekends.) You may also use my office hours to contact me. If you do not get a reply after 24 hours, please follow up with a second email – sometimes I miss email messages.

Email: Please use your Towson University supplied student email address for all course communications. Information about course grades or graded materials will not be sent via email. If you have a question related to grades, you should request an appointment.

IMPORTANT: IF YOU ARE ALSO TAKING BIOL200L, LAB BEGINS THE FIRST WEEK OF CLASS!!

COURSE DESCRIPTION

This course is designed to acquaint the student with basic principles of cell biology and genetics. It is the first half of the General Biology foundation coursework (200/206) and is required for several majors. Topics to be covered include scientific theory and design, biologically important molecules, cell structure and function, cellular energy generation, DNA structure, replication, transcription, translation, regulation of gene expression, cell division, genetics, and next generation DNA technologies. *This course is intended for science majors.* ***If you are not a science major, you should be taking BIOL120/120L or BIOL191/BIOL191L. If you are unsure, please contact me immediately.***

REQUIRED MATERIALS

Textbook: *Biology* (Raven, *et al.*), 13th edition (2023) with McGraw-Hill Connect Access, available to all registered students through *Direct Access*. All students enrolled in the course will automatically get access to the online textbook as well as to Connect, which is the online studying and practice platform. Students have access immediately to the material on the first day of class. Initial access is free; after the add/drop deadline, all students enrolled will be billed on their student accounts. Students can opt out of Direct Access to not be charged, but this would prevent students from having access to the online textbook, and the online homework, practice problems, and quizzes, which will count for a considerable portion of the total points in the class.

After the change of schedule date, your student account will be charged. You will receive communication from the bookstore by email with the details. If for some reason you do not want to purchase these required materials from the UStore via Direct Access, you can opt out of the program. Please note that once you opt out, access to the course textbook and Connect assignments will be removed, but your student account will

not be charged.

NOTE – If you decide to "opt-out" and purchase your textbook elsewhere, you will need to also obtain an unused Connect code. Otherwise, you will not have access to graded components of the course associated with the publisher's website.

For more information about direct access visit https://towsonustore.com/SiteText.aspx?id=40436 or email the bookstore directaccess@towson.edu.

Course Website: If you are officially enrolled in this course, you should automatically be enrolled in the course website hosted on Blackboard (http://blackboard.towson.edu). To log into Blackboard, use your Towson University User ID (your email user name) and your Towson University password. Usage of the course website on Blackboard is integral and essential to success in this course. Important materials and links for the course (including access to the textbook, homework, quizzes and exams) will only be available through the school's Blackboard system.

Computer Access: Computer access is required for this course. Computers are available to all students in Cook Library on a first come first serve basis. Plan accordingly. - https://libraries.towson.edu/using-the-libraries/technology/computers-in-the-library

Supplemental Readings/Video links: Selected readings or video links may be provided by the instructor and will be made available through the course website on Blackboard. Please, check the website regularly for updates.

COURSE OBJECTIVES

The following outline summarizes the objectives for BIOL200. It is not meant as a specific study guide and does not include the details you need to know to accomplish the goals. The objectives summarize the "big ideas" that we will be covering in this course.

This course is taught with the following broad goals in mind:
- To provide students with a broad perspective of the field of cell biology and genetics.
- To introduce students to how major kinds of organisms work and interact.
- To establish a background for further study in advanced biology courses.

The course objectives for this semester are:

I. Understand and apply the scientific method to solving problems

A. Recognize that the scientific method is simply a way of approaching a problem that begins with understanding a set of basic information.

B. Learn to develop hypotheses and design controlled experiments to test them.

II. Develop a sufficient understanding of chemistry to predict properties of biological molecules.

A. Understand the structure of atoms

B. Describe how and why atoms form chemical bonds with one another.

C. Identify the functional groups of organic (and biological) molecules and understand how functional groups determine properties of the molecules of which they are a part.

D. Recognize and be able to explain the roles and properties of carbohydrates, lipids, proteins, and nucleic acids.

E. Understand the properties of water that make it indispensable to life.

III. Know the structure of a "typical" plant, animal, and bacterial cell.

A. Learn the names and functions of each of the structures (organelles) within a cell.
B. Describe the way in which organelles work together to accomplish cellular functions.
C. Understand and apply concepts in transport across membranes

IV. Describe how cells and organisms reproduce and control growth.

A. Explain the process of mitosis and describe each step
B. Understand control of the cell cycle

V. Develop a "feel" for the principles of cellular energetics.

A. Describe the way in which the first and second laws of thermodynamics control chemical reactions, in general, and metabolic reactions, in particular.
B. Know the basic properties of enzymes and describe their function and regulation.
C. Understand the role of enzymes in the processes of photosynthesis and in cellular energy harvesting pathways.
D. Write an overview of the reactions that make up the metabolic pathways studied.

VI. Integrate the processes of sexual reproduction (meiosis and fertilization) with the ability to predict the frequencies of traits in the offspring.

A. Describe mitosis and meiosis, step by step.
B. Explain Mendel's laws of inheritance, gene linkage, and crossing-over.
C. Correlate Mendel's laws to the movement of chromosomes during meiosis.
D. Use probability to calculate the results of genetic crosses.

VII. Understand the "Central Dogma of Molecular Biology": DNA $\rightarrow$RNA $\rightarrow$ Protein.

A. Be able to explain the structure of DNA and RNA and correlate structures to their roles.
B. Describe the processes of DNA replication, transcription, and translation.
C. Understand the basic characteristics of the genetic code.
D. Describe mechanisms of regulation of gene expression in prokaryotes and general principles of gene regulation in eukaryotes.

Students shall accomplish these goals through classroom lecture, discussion, and online problem sets, as well as laboratory experimentation in the accompanying course BIOL200L.

Why Should Anyone Take This Course?

Each of you has a personal career goal that requires an in-depth understanding of biology. Some of you may wish to study the complexities of ecological systems; others of you may wish to understand the complexities of a single cell; some of you may wish to become teachers or physicians or veterinarians. Whatever your personal goal, it is absolutely essential to begin your *lifelong study of biology* with a firm foundation. That's why you should want to take this course and why you should want to do well in it. Here you will learn the fundamentals of the processes listed in the objectives above. In subsequent courses, you will learn more about these processes, adding new layers of detail on top of this foundation. ***The more solid this foundation, the easier it will be to succeed in your later biology courses.***

STUDENT RESPONSIBILITIES AND COURSE POLICIES

The following expectations are to enhance your ability to learn in this class, to avoid disruption and distraction, and to improve the quality of the classroom experience. "Every student has the *right* to learn, as well as the *responsibility* not to deprive others of their right to learn."

1. **Participation in the course.** You are expected to check Blackboard regularly and to participate in all posted exercises. You are expected to keep track of due dates and to submit your coursework on time.

Failure to participate may lower your performance on exams (and your grade in the course), as you are responsible for all material presented in the course, on Blackboard and from other provided resources.

2. **Class Behavior**. Free discussion, inquiry, and expression are encouraged in this class. It is okay to disagree with an idea but not to ridicule or make fun of another person and his/her ideas. Raised voices, derogatory language, name-calling, and intimidating behavior will NOT be tolerated. Disruption interferes with the learning environment and impairs the ability of others to focus, participate, and engage. Classroom/online behavior that interferes with either (a) the instructor's ability to conduct the class or (b) the ability of students to benefit from the instruction is not acceptable. Classroom/online behavior which is determined to be inappropriate and cannot be resolved by the student and the faculty member may be referred for administrative or disciplinary review and the student will be barred from further participation in class.

3. **Academic Integrity.** Any form of cheating (including on exams, quizzes, or plagiarism of assignments and papers) will not be tolerated. Cheating and plagiarism are defined in the Student Academic Integrity Policy (https://www.towson.edu/about/administration/policies/documents/polices/03-01-00-student-academic-integrity-policy.pdf) and should be reviewed by each student. Please also see the italicized text explanations below. The use of AI tools (including ChatGPT) is not allowed in this course and may be considered an academic policy violation. **The consequences of violating the Academic Integrity policy may result in the assignment of zero points for the examination, quiz or assignment/paper in question – and/or - the student may receive a failing grade for the entire course at the discretion of the instructor.**

   Students are responsible members of the academic community. You are therefore obligated not to violate the basic standards of integrity. You are also expected to take an active role in encouraging other members of the community to respect those standards. Should you have reason to believe that a violation of academic integrity has occurred, you are encouraged to make the suspicion known to a member of the faculty or University administration.

   Cheating means using, attempting to use, and/or disseminating unauthorized materials, information, notes, study aids, videos or other devices in any academic exercise. This includes unauthorized communication of information during an exercise or exam. Some examples include but are not limited to: Copying from another student's paper or receiving unauthorized assistance during any graded deliverable; using books, notes or other devices (e.g., calculators, phones, watches, laptops, or other internet enabled devices) when these are not authorized; procuring without authorization tests or examinations before the scheduled exercise (including discussion of the substance of examinations and tests when it is expected these will not be discussed); copying reports, laboratory work, computer programs or files and the like from other students; collaborating on laboratory or computer programs or files and the like with other students; collaborating on laboratory or computer work without authorization and without indication of the nature and extent of the collaboration; sending a substitute to take an examination, using solutions manuals, providing exam and assignment questions to student websites or using such a website to complete an assignment and/or exam (including free or pay websites that maintain textbook and/or instructor solutions). To clarify, copying or collaborating with other students or using external resources, including other people, on any type of assignments that are expressly designed to be completed individually is cheating.

   Recorded sessions and any associated materials are designated ONLY for registered students in the class. Any sharing or dissemination of recordings beyond the student body registered in the course and section

constitutes a violation of privacy and may also be categorized as cheating or defamation of character (depending on the circumstance), a possible copyright infringement.

Complicity in Academic Dishonesty means helping or attempting to help another commit an act of academic dishonesty. Some examples include but are not limited to: Allowing another to copy from one's paper during an examination or test; distributing test questions or substantive information about the material to be tested without authorization before the scheduled exercise; collaborating on academic work that is expressly designed to be completed individually; taking an examination or test for another student; signing a false name on an academic exercise; or sharing assignment or exam information before, during, or after the deliverable in written, electronic, video, or verbal form. (Note: Collaboration and sharing information are characteristics of academic communities. These become violations when they involve dishonesty. Students should seek clarification when in doubt).

Abuse of Academic Materials means destroying, stealing, or making inaccessible library or other resource materials. Some examples include: Stealing or destroying library or reference materials needed for common academic exercises; hiding resource materials so others may not use them; destroying computer programs or files needed in academic work; stealing or intentionally destroying another student's notes or laboratory experiments; receiving assistance in locating or using sources of information in an assignment where such assistance has been forbidden by the instructor.

4. **Diversity Statement**. Towson University values diversity and fosters a climate that is grounded in respect and inclusion, enriches the educational experience of students, supports positive classroom and workplace environments, promotes excellence, and cultivates the intellectual and personal growth of the entire university community. Should you feel that you are experiencing a negative environment related to diversity issues or cultural sensitivity, we encourage you to contact the Department's Assistant Chair, [Dr. Jack Shepard jshepard@towson.edu]. For more information go to https://www.towson.edu/fcsm/departments/biology/diversity.html

5. **Americans with Disabilities Act.** This course is in compliance with Towson University policies for students with disabilities. Students with disabilities are encouraged to register with Accessibility & Disability Services (ADS), 7720 York Road, Suite 232, 410-704-2638 (Voice) or 410-704-4423 (TDD). Students who suspect that they have a disability but do not have documentation are encouraged to contact ADS for advice on how to obtain appropriate evaluation. A letter from ADS authorizing your accommodation is needed before any accommodation can be made. Please provide the letter from ADS during the first week of class or as quickly as possible.

6. **Title IX policy**. Towson University (TU) is committed to ensuring a safe, productive learning environment on our campus that does not tolerate sexual misconduct, including harassment, stalking, sexual assault, sexual exploitation, or intimate partner violence [Policy 06.01.60]. It is important for you to know that there are resources available if you or someone you know needs assistance. You may speak to a member of university administration, faculty, or staff, but keep in mind that they have an obligation to report the incident to the Title IX Coordinator. It is a goal that you feel able to share information related to your life experiences in classroom discussions and in one-on-one meetings. However, it is required to share information with the Title IX Coordinator regarding disclosures but know that the information will be kept private to the greatest extent possible. If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the TU Counseling Center 410-704-2512 to schedule an appointment, and locally within the community at TurnAround, Inc., 443-279-0379 (24-hour hotline) or 410-377-8111 to schedule an appointment.

7. **Reporting Hate Crimes and Bias Incidents.** Towson University prohibits all students, staff, and faculty from committing or engaging in any hate crimes as defined under state and federal law, or any acts of bias, hate, or prejudice exhibited in conduct that is in violation of another University policy on campus, on University property, at University sponsored events, or when engaged in University activities and business on or off campus. The University must receive notice to respond effectively to alleged Hate Crimes or Bias Incidents in the University Community. Please report or file a complaint of a Hate Crime or Bias Incident in the following ways:
    - Report to University Police: Towson University's Police Department ("TUPD") will determine if incidents are criminal in nature. In cases of hate crimes, individuals can be punished with fines and/or imprisonment. Felony offenses demonstrated to be motivated by bias are subject to enhanced penalties.
    - Contact the Office of Inclusion & Institutional Equity: Online at: https://towson.edu/notattu email at: OIIE@towson.edu, telephone, In person or via regular mail.

8. **Counseling Services.** Students who are experiencing personal difficulties or mental health challenges are encouraged to seek free and confidential assistance at the Towson University Counseling Center (TUCC). Same-day appointments are available, and you can reach a crisis counselor by phone after hours. For more information about TUCC, please visit their website at https://www.towson.edu/counseling/. To make an appointment or for after-hours crisis assistance, please call 410-704-2512.

9. **Course repeat policy:** Students may not repeat a course more than once without prior permission of the Academic Standards Committee.

COURSE REQUIREMENTS AND GRADING POLICIES

Please remember that grades should not be viewed as a reward for effort, but as a general measure of comprehension, although significant effort may enhance your performance in BIOL200.

SmartBook Reading Assignments (75 points) - There will be a reading/SmartBook assignment for each chapter or topic in McGraw-Hill Connect, the online learning platform accompanying our textbook. Some chapters will be broken down into two or three smaller assignments. Please pay attention to due dates as I will not accept any late assignments or open an assignment after it has closed. These are adaptive learning assignments designed to help you learn and review content that is complementary to what is being covered in the lecture portion of the course. These assignments are untimed. You may work through the material at your own pace. Once you complete an assignment, it will go into Recharge/Study Mode, which allows you to repeat the questions as many times as you would like to prepare for exams. Work ahead – do not leave these for the last minute. While it is expected that you will earn all of the SmartBook points, only 75 points will count toward your final grade. There will be 85-90 points available, which means that you can miss one or 2 assignments without having a negative impact on your grade.

Lecture Exams. There will be **four end of unit exams** during the semester. (600 points, 150 points each. The unit exams will be given in class, and may contain a variety of question types (multiple choice, completing charts, short answer, fill in the blank, true-false). **Rescheduled or makeup exams will not be given.** If a second lecture exam is missed for an excused reason, that second missed exam score will be replaced with the percentage earned on the final exam. All exams are a combination of multiple choice and written short answer questions. Appeals to grading must be made within one week of the day that the test was first returned to the class. All appeals must be in writing.

Cumulative Final Exam (150 points)- The final exam will be given per the university's exam schedule on Monday December 18 at 8:00am (Sec 001) or 10:15am (Sec 002).

Lecture Quizzes (10 points each – 100 points total) - Online quizzes will be given in Connect at the end of every week. Quizzes will be available on Friday and can be completed anytime until **Monday at 9:00 am**. Thirteen or fourteen quizzes will be given. The lowest quiz scores will be dropped: the highest 10 quiz scores will be factored into the final course grade. There are **no make ups** for missed quizzes for any reason, as the quiz answers will become available at the due date/time.

Online Exam Reviews
Additional review assignments may be given in Connect, allowing you to practice answering questions and to assess your knowledge. These will not count toward the lecture grade.

Attendance Points.
While attendance isn't mandatory, attendance will be taken at each lecture. Up to 25 points of the course grade will be earned simply by coming to each class on time, signing in, and making an ongoing effort to take part in our class discussion and activities.

Late work policy: Specific due dates for assigned classwork/homework will be posted on Blackboard. **Any work that is turned in after the due date and time is considered late and will not be accepted.**

How to contest grading: If you believe something was graded incorrectly, you have one week after you receive the graded document to provide a factual written (not oral or e-mailed) rebuttal explaining why you think you deserve credit for your answer. Written comments will not be accepted on the day a graded item is returned to allow you time to collect your thoughts.

The final course grade will be calculated as follows (this is subject to adjustment):

Four unit exams (150 points each)	600 Points
Comprehensive (cumulative) final	150 Points
Weekly quizzes (10 best at 10 points each)	100 Points
Class attendance/participation	25 Points
Connect SmartBook Assignments	75 Points
Lowest exam score from units 1-4 dropped	-150 Points
TOTAL	800Points
Final Grade	**% of points earned/800 points**

Student letter grades will be assigned as follows. Note that grades will be rounded to the nearest tenth.

A	92.0 - 100%	C+	78.0 – 79.9%
A-	90.0 - 91.9%	C	70.0 - 77.9%
B+	88.0 – 89.9%	D+	68.0 – 69.9%
B	82.0 - 87.9%	D	60.0 - 67.9%
B-	80.0 – 81.9%	F	< 60.0%

Attendance, Excused Absences, Assessments, & Make-ups

Although attendance is not mandatory, missing a class may lower your performance on assessments, as you are responsible for all lecture material regardless of its inclusion in the textbook. There will also be

attendance points available. **For any and all absences (including expected ones), please fill out the Absence Form linked on Bb within 24 hours of missing class**. Because there are multiple weekly Quizzes (and not all of them count), there will be no post-administration make-ups for these, regardless of circumstances, including technical glitches. Students who miss one exam may use that as their dropped exam grade. Students who miss more than one exam for an excused reason will have the second missed exam score replaced with their score on the cumulative final exam.

It is the regular policy of the university to excuse the absences of students for the following reasons:
• illness or injury when the student is unable to attend class
• death of a family member (see the Student Bereavement Procedure on the Student Affairs website)
• religious observance where the nature of the observance prevents the student from attending class
• participation in university activities at the request of university authorities (e.g., Intercollegiate Athletics, Forensics Team, Dance Company, etc.)
• compelling verifiable circumstances beyond the control of the student

The key here is to plan ahead and communicate with the instructor as soon as you know you have a conflict or issue.

Additional information and where to find help

Students are expected to prepare fully for class and to participate actively in class discussion. The instructor will schedule a review session before the final exam. Students experiencing difficulty in understanding the course material should particularly make an effort to attend this study session and have any and all questions answered prior to the exam. Please, feel free to ask questions.

Advice for Success: First, it is impossible to learn all you need to know during the three hours of lecture each week. Educators have estimated that for every hour of in-class time, you should spend 1-2 hours of time out of class. We cannot learn the information and understand the concepts for you and we cannot make you learn and understand simply through lecture. So the question becomes, how can you most profitably spend these hours outside class? The following list summarizes some strategies.

1. Read the online textbook assignments and take notes **before** class. You will have a SmartBook assignment that will help walk you through the material as well.
2. Be an **active participant** during class sessions. Class time will be spent solving application and critical thinking questions. Ask the instructor for clarification.
3. **Practice teaching the material.** If you truly remember and understand the material you should be able to teach the material without reference to your notes or the text. Do this out loud and draw or write material as necessary. When you think you have mastered the material, teach it to someone who knows the material (a tutor or a classmate who has his/her notes and book open to check your coverage and facts). Once you have confirmed your mastery of the material, try teaching it to yourself again once a week to make sure you remember it over the entire semester.
4. **Attend Supplemental Instruction Sessions:** an S.I. leader will lead 3 sessions per week to review the material covered in class, as well as general study tips and strategies
5. **Organize a study group.** Meet at least 1-2 hours every week (not just before tests). Quiz each other and teach each other the material. Support for setting up study groups can be found at https://www.towson.edu/tutoring-learning/academic-support/study-groups.html
6. **Take advantage of student hours.** Please come and ask any questions or clarify any topics. I am also available by appointment in person and on zoom – please email me to set one up.

7. **Tutoring and Learning center workshops and tutoring.** Free tutoring is available at Towson University through the Tutoring and Learning Center https://www.towson.edu/tutoring-learning/

If you come up with other successful learning strategies, let us know about them so that we can share them with other students.

Emergency Statement: In the event of a University-wide emergency, course requirements deadlines and grading schemes are subject to changes that may include alternative delivery methods, alternative methods of interaction with the instructor, class materials, and/or classmates, a revised attendance policy, and a revised semester calendar and/or grading scheme. In cases of inclement weather or University-wide emergencies, alerts will be posted on the Towson homepage www.towson.edu and through the main University phone number: (410) 704-2000.

Important Dates:

Monday Aug 26, 2024	First day of classes
Monday Sept 2, 2024	Labor Day – TU Closed
Wednesday Sept 4, 2024	Last day to change schedule (ADD/DROP)
Friday Oct 25, 2024	Fall Break – TU Closed
Monday Nov 6, 2024	Last day to withdraw with grade W
Wed Nov. 27 – Sun Dec 1, 2024	Thanksgiving Break
Monday Dec 9, 2024	Last Day of Class
Wednesday Dec 11, 2024	FINAL EXAM Section 006 8:00 am
Monday Dec 16, 2024	FINAL EXAM Section 007 8:00 am

Tentative Course Schedule – The preliminary course schedule is below and posted separately in Blackboard. It is subject to change due to the pace of the class, new information/current events, or loss of class time due to circumstances beyond our control (weather, global pandemics). Any changes will be announced on the Blackboard course website.

Week	Class	Day	Date	Topic	Chapter
1	1	Mon	26-Aug	Introduction; What is Biology?	1
	2	Wed	28-Aug	Science of Biology; Atoms, Molecules	2
	3	Fri	30-Aug	Chemical Bonds; Properties of water (Chapter 2)	
2		Mon	2-Sep	LABOR DAY - no class	
	4	Wed	4-Sep	Properties of Water; pH - LAST DAY TO DROP/ADD	
	5	Fri	6-Sep	Introduction to biological molecules (3.1) - Carbon	3
3	6	Mon	9-Sep	Protein Structure (3.4) Nucleic Acids (3.3)	
	7	Wed	11-Sep	Lipids (3.5)	
	8	Fri	13-Sep	Membranes (5.1 - 5.3)	5
4	9	Mon	16-Sep	Transport across membranes (5.4 - 5.6)	
	10	Wed	18-Sep	Finish material and review for the exam	
	11	Fri	20-Sep	**Exam 1 - Chapters 1, 2, 3, 5**	
5	12	Mon	23-Sep	Intro to Cells; Prokaryotic cell structure (4.2)	4
	13	Wed	25-Sep	Eukaryotic cell structure (4.3 - 4.8)	
	14	Fri	27-Sep	Eukaryotic cell structure (4.3 - 4.8)	
6	15	Mon	30-Sep	Introduction to energy and metabolism (6.1 - 6.3);	6
	16	Wed	2-Oct	Enzymes (6.4 - 6.5)	
	17	Fri	4-Oct	Review Metabolism; Cellular Respiration (7.2 - 7.10)	7
7	18	Mon	7-Oct	Electron Transport Chain; Fermentation	
	19	Wed	9-Oct	Finish Chapter 7;	8
	20	Fri	11-Oct	Introduction to photosynthesis (8.1 - 8.3)	
8	21	Mon	14-Oct	**Exam 2 - Chapters 4, 5, 7**	
	22	Wed	16-Oct	Light Dependent Reactions (8.4 - 8.5); Carbon Fixation (8.6)	
	23	Fri	18-Oct	Cell Communication	
9	24	Mon	21-Oct	Introduction to Cell Division (10.1 - 10.3); Mitosis (10.4 - 10.5)	10
	25	Wed	23-Oct	Control of the Cell Cycle, Checkpoints	
		Fri	25-Oct	FALL BREAK - no class	
10	26	Mon	28-Oct	DNA as the genetic material (14.1 - 14.2) Genetic Code (14.3)	14
	27	Wed	30-Oct	DNA Replication (14.4);	
	28	Fri	1-Nov	DNA Repair (14.5)	
11	29	Mon	4-Nov	Finish material and review for the exam; LAST DAY TO WITHDRAW	
	30	Wed	6-Nov	**Exam 3 - Chapters 8, 9, 10, 14**	
	31	Fri	8-Nov	Introduction to sexual reproduction & meiosis (11.1 - 11.2)	11
12	32	Mon	11-Nov	Meiosis (11.3 - 11.4)	
	33	Wed	13-Nov	Mendelian genetics (12.1)	12
	34	Fri	15-Nov	Patterns of Inheritance (Chapter 12)	
13	35	Mon	18-Nov	Sex chromosomes, sex linkage and sex determination (13.1 - 13.5)	13
	36	Wed	20-Nov	Overview of Gene Expresssion (15.1 - 15.2)	15
	37	Fri	22-Nov	Transcription (15.3 - 15.6)	
14	38	Mon	25-Nov	Translation (15.7 - 15.8)	
		Wed	27-Nov	Thanksgiving Break	
		Fri	28-Nov	Thanksgiving Break	
15	39	Mon	2-Dec	Mutation (15.9)	
	40	Wed	4-Dec	Finish Material and review for the exam	
	41	Fri	6-Dec	**Exam 4 - Chapters 11, 12, 13, 15**	
	42	Mon	9-Dec	Last Day of Class - Review for Final Exam	
				Final Exam	