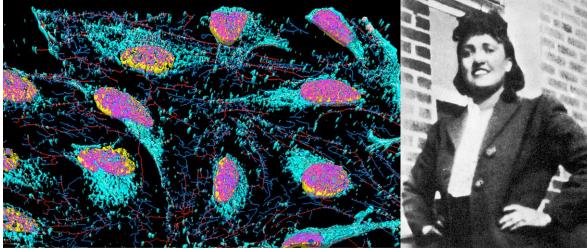
# BISC-220 (Cell Biology and Physiology) Lecture Syllabus

University of Southern California (USC), Spring 2025 Section 13028, 4 units (Satisfies General Education D requirement)



HeLa cells (left) are considered to be "immortal" cells that are part of a cell lineage grown from the cancer cells harvested from the cervix of a woman named Henrietta Lacks (right). While these cells have served as a powerful tool for in vitro molecular biology research for many decades, the story behind their initial collection exists at the (at times painful) intersection between bioethics and social justice in United States history. You can learn more about Henrietta's story from the book "The Immortal Life of Henrietta Lacks" by Rebecca Skloot, which includes several quotes and anecdotes from surviving members of the Lacks family.

Left Image: HeLa cells imaged with fluorescent microscopy, Right Image: Henrietta Lacks

#### Lecture Days and Times: Tuesdays and Thursdays from 2:00 - 3:20 pm Lecture Location: <u>Taper Hall of Humanities (THH)</u> Room 201, also simulcast and recorded via Zoom Lecture Zoom Information:

- <u>Meeting ID:</u> 946 0756 9654
- Meeting Passcode: 2025220
- Meeting Link

Lecturer: Rita Barakat ["REE-duh BEAR-uh-cat", she/ her], PhD, rbarakat@usc.edu

**Office Hours:** Thursdays from 11:30 am - 1:30 pm in **Room TBD**, *OR* by appointment in-person or via Zoom (appointments must be made at least 24 hours in advance through <u>Google Appointment Calendar</u>)

#### Laboratory Director: Brett Spatola, PhD, spatola@usc.edu

**Office Hours:** Open-door policy (drop in any time during regular business hours) in <u>Zumberge Hall of Sciences (ZHS)</u> Room 362

Information Technology (Dornsife ITS) Hours and Website: Monday - Friday from 9:00 am - 5:00 pm, Dornsife ITS

## **Course Description**

The overarching goal of this course is to provide biology and other life science majors with the necessary foundations in *molecular and cellular biology* and *mammalian physiology*. Topics explored will include (but are not limited to): the molecular composition of prokaryotic and eukaryotic cells, the central dogma describing the processes of DNA transcription and translation, the cell cycle and cell division, cell metabolism and enzyme kinetics, and surveys of mammalian physiological systems.

#### Prerequisites and Corequisites: None

#### Concurrent Enrollment: None

Recommended Preparations: High school-level biology and general chemistry, BISC-120 or BISC-121



#### **Learning Objectives**

By the end of the semester, students will be able to:

- **Describe** the ways in which molecular and cellular structures influence their function in the context of specific physiological systems.
- *Illustrate* the relationship between enzymes that catalyze essential biochemical reactions such as those that occur during cellular respiration and photosynthesis.
- *Identify* key cellular structures, tissues and organs that work synchronously to coordinate bodily responses and maintain homeostasis.
- **Explain** the consequences of cellular dysfunction at the physiological level, and the impacts on this dysfunction on (human) health and disease development.

**Textbook (Recommended):** Campbell Biology (12<sup>th</sup> Edition), by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky and Rebecca Orr. Published by Pearson, ISBN: 9780135988046.

## **Assigned Readings**

All assigned readings listed on the course syllabus are recommendations, but are not required readings. <u>Exam questions</u> will not be based on information that is only included in the textbook, though information presented in lectures will be aligned to and overlap with information included in these assigned readings. You may use earlier (10<sup>th</sup> or 11<sup>th</sup>) editions, though chapters and page numbers may vary.

## **Course Notes and Lecture Structure**

All lectures will be held in-person in THH 201 at the specified days/ times unless otherwise noted in the lecture calendar (at the end of this document). Lectures will also be streamed live and recorded via Zoom, and the Zoom meeting information will be made available on the course Brightspace page. All lectures will be <u>recorded</u> and automatically made available via the course Brightspace page within 24 hours of the live lecture broadcast. The instructor is not responsible for any technical errors that may result in loss of a lecture recording, and lectures will <u>not be re-recorded</u> in the event of a technical issue. Therefore, it is in the students' best interest to attend all lectures live in-person unless unable to do so due to illness or another documented reason (such as a family emergency or professional opportunity).

Any recurring schedule conflicts with live lectures require a formal petition from the Registrar's Office and must be approved by all instructors involved. Please contact the course instructor and lab director if you anticipate that you will have this kind of conflict with the lecture (or laboratory) portions of the course. Lecture slides, exam review materials and any other pertinent digital materials will be made available on the course Brightspace page at least 24 hours in advance of when they will be utilized. Additionally, weekly lecture quizzes will be administered via the course Brightspace page and important announcements regarding the course will be posted on the course Brightspace page.

#### Weekly Question & Answer Sessions

Each of the four instructors in the course will host weekly Question & Answer (Q&A) sessions via Zoom, and students enrolled in the course are welcome to attend any instructor's Q&A session (though please note that the specific content presented in each section may vary slightly and thus, it is in the students' best interest to attend their section instructors' Q&A sessions whenever possible). Please see the table below for information on the dates/ times and Zoom links for each instructors' Q&A sessions. These sessions are intended to provide students with an opportunity to ask questions related to lecture content, and listen to questions from their peers. Some Q&A sessions may be recorded and these recordings will be made available on the respective section's course Brightspace page at the discretion of the individual instructor. If students have questions about their own individual performance in the class and/ or career and academic advising, they should schedule an appointment to meet with their instructor outside of the Q&A sessions.

Weekly Question & Answer (Q&A) Calendar			
Instructor	Instructor Email	Dates and Times	Zoom Link
Professor Albert Herrera	<u>aherrera@usc.edu</u>	Will start in March	Click Here!
Professor Andrew Hires	<u>shires@usc.edu</u>	Will start in March	Click Here!
Professor Alan Watts	watts@usc.edu	Fridays from 3:00 - 4:00 pm (PT)	<u>Click Here!</u>
Professor Rita Barakat	<u>rbarakat@usc.edu</u>	Mondays from 2:15 - 3:15 pm (PT), recorded	<u>Click Here!</u>

## Supplemental Instruction

We strongly recommend that students participate actively in the peer-led <u>Supplemental Instruction (SI) Program</u>. The SI leaders will hold regular study sessions via Zoom, beginning in the second week of classes. They will also conduct review sessions before each exam. Individual SI leaders will be announced for each section via the section's Brightspace page.

SI leaders are selected for the high grades they earned in assigned courses and for their overall academic strength, success in advanced biological studies, and superior communication skills. We highly recommend them as sources of academic and pre-professional advice.

## Technology

This course is utilizing the university's new Learning Management System (LMS), <u>D2L Brightspace</u>, which has now replaced Blackboard as the university-wide LMS. <u>Prior to the start of the course</u>, please make sure that you have access to the lecture and laboratory Brightspace pages, and that you take some time to familiarize yourself with the Brightspace platform. Follow the instructions below to log in to Brightspace, and should you have any questions or concerns, we encourage you to contact the course instructor and/ or the Brightspace ITS team (at <u>brightspace@usc.edu</u>, or call (213) 740-5555, choose option 2 then 2).

A computer with stable internet access and the latest version of <u>Zoom</u> installed are strongly recommended for full participation in this course. If you have any questions, comments or concerns regarding these technological requirements, please contact the course instructor, lab director and if necessary, <u>Information Technology Services</u> (ITS, <u>consult@usc.edu</u>) as soon as possible so that we can help to accommodate your needs.

#### Assessments (Quizzes and Exams)

Throughout the course, ten quizzes, each worth 3 points, will be administered via Brightspace to assess your understanding of the material presented in lecture during that week. Quizzes will become available <u>on Fridays at 10:00 am (PT)</u> and will be due (and no longer be available) by the <u>following Monday at 9:00 am (PT)</u>, unless otherwise noted on the quiz calendar (below). You may use your lecture notes, the textbook or other resources to complete these quizzes, however, we strongly encourage you to treat these quizzes as "mini" exams and prepare accordingly.

The style, format and difficulty level of the quiz questions are designed to be similar to exam questions, and thus, these quizzes are meant to serve as "problem sets" that provide you with an opportunity to practice and prepare for the exams. As with all other assignments in the class, there are <u>no make-ups or extensions for quizzes</u>, unless you provide a valid reason for missing a quiz in writing.

Lecture Quiz Calendar			
Quiz #	Start Date/ Time	End Date/ Time	Lecture(s) Covered
1	Friday, 1/31 at 10:00 am	Monday, 2/3 at 9:00 am	Lectures 1 - 6
2	Friday, 2/7 at 10:00 am	Monday, 2/10 at 9:00 am	Lectures 7 - 8
3	Friday, 2/14 at 10:00 am	Tuesday, 2/18 at 9:00 am	Lectures 9 - 12
4	Friday, 2/21 at 10:00 am	Monday, 2/24 at 9:00 am	Lectures 13 - 14
5	Friday, 2/28 at 10:00 am	Monday, 3/3 at 9:00 am	Lecture 15
6	Friday, 3/7 at 10:00 am	Monday, 3/10 at 9:00 am	Lectures 16 - 17
7	Friday, 3/28 at 10:00 am	Monday, 3/31 at 9:00 am	Lectures 18 - 21
8	Friday, 4/4 at 10:00 am	Monday, 4/7 at 9:00 am	Lectures 22 - 25
9	Friday, 4/11 at 10:00 am	Monday, 4/14 at 9:00 am	Lectures 26 - 27
10	Friday, 4/18 at 10:00 am	Monday, 4/21 at 9:00 am	Lecture 28

The four lecture exams will be based on content presented in the lecture portion of the course, and content covered only in the laboratory section and/ or in the textbook reading assignments <u>will not be tested</u>. While the exams are not strictly "cumulative", the nature of the course content is such that understanding of foundational concepts presented early in the course will be necessary for understanding future topics. Thus, it is recommended that you review select topics from previous sections of the course prior to each exam. Each exam will consist of multiple choice questions, to be answered using a scantron (which will be provided).

Exams will take place <u>in-person in specified locations</u> (to be announced on the course Brightspace page). Students with <u>Office of Student Accessibility (OSAS)</u> Letters of Accommodation are responsible for providing these letters to the instructor and laboratory manager in a timely manner, and to schedule to take their exams at the <u>OSAS Testing Center</u> at the same starting time as the main exam cohorts.

Please mark the following dates and times for the four lecture exams in your calendar.

See the *Absences, Extensions and Make-ups* section below for more information on the administration of lecture exams and for examples of excused exam absences.

## Laboratory

Please make sure to review the associated *Laboratory Course Syllabus and Manual* (to be posted on the laboratory section course Brightspace page) to ensure that you have all the necessary information and materials for the lab portion of the course. <u>In-person attendance in the laboratory section of the course is mandatory</u>, and failure to attend lab sections will result in a significant loss of laboratory section points.



Any foreseeable conflict(s) with laboratory sections should be indicated to the course laboratory director (Dr. Brett Spatola, <u>spatola@usc.edu</u>), and the teaching assistant for that section in writing as soon as possible to avoid loss of points.

## Grading Breakdown and Curving

Your overall course grade will be broken down into the following categories/ point values, for a total of *1000 points*. <u>There</u> are no extra credit opportunities in this course, so please do not ask about them.

Course Grading Breakdown			
Deliverable	Quantity	Points per Deliverable	Total Points
Lecture Exams	4	150	600
Lecture Quizzes	10	3	30
Laboratory Section			370
	COURSE TOTAL:		1000

It is not our intention to curve course grades, however, a curve may be applied to final grades depending on the grade distribution. Final grades which correspond to 80% or more of the total points in the class (i.e. a final grade of 800 points or more) will not be curved. Please note that any advisory curves posted throughout the term are not indicative of the final course grades, as these curves will vary based on overall course performance on individual exams and in the laboratory sections.

#### Communication

If you ever need to communicate with the course instructor outside of class, please visit during scheduled office hours, or you can send an email with **your name and "BISC-220" in the subject line** to <u>rbarakat@usc.edu</u> to share written inquiries. All emails sent after 6:00 pm (PT) may not receive a response until the following day. In general, all emails sent during a weekday (Monday - Friday) will receive a response within 24 hours, and all emails sent during a weekend (Saturday - Sunday) will receive a response within some exceptions for holidays.

It is strongly recommended that you check in with the course instructor and/ or lab director at least once throughout the semester in office hours, and we recommend that you set up an appointment at least 24 hours in advance to best accommodate your schedule. Questions about grading <u>should only be directed to the instructor and laboratory manager</u>, and not teaching assistants.

#### Absences, Extensions and Make-ups

Please read this section carefully, and if you have any questions about these policies, do not hesitate to reach out to the instructor (<u>rbarakat@usc.edu</u>) and the laboratory director (<u>spatola@usc.edu</u>).

There are <u>absolutely no extensions</u>, <u>make-up exams or make-up lab assignments in this course</u>, except in the case of certain extenuating (and documented) circumstances.

- If you miss one exam in the course for a valid (documented) reason, your exam grade will be an average of your other three exam scores. Otherwise, you will receive a "0" for the missed exam.
- If you miss the final exam in the course, you will receive an Incomplete (IN) grade for the course.
- If you miss two or more exams for <u>valid (documented) reasons</u>, <u>you will receive an Incomplete (IN) grade for the course</u>.

Regarding Incompletes (IN) in the course, these must be resolved within <u>one calendar year</u> of when you originally enrolled in the course and do not require you to re-enroll in the course in order to make up missed work. Students are expected to BISC-220 Spring 2025 Syllabus, **5** 



coordinate with their original instructor(s) to determine the most appropriate timeline for making up any and all missed work in order to resolve the Incomplete. It is strongly recommended that students do not postpone making up missed work and also seek guidance from their academic advisor during this process.

As we will be conducting the course in-person, it is important that you follow the guidelines below as it relates to your physical health and well-being. Despite the lack of restrictive public health policies and requirements in-place, COVID-19 and other infectious diseases are still prevalent in the community, so in order to protect yourself and your classmates, please make sure to do the following:

- If you feel sick, notify the lab director and teaching assistant via email *immediately* and *do not attend the lecture or laboratory sections in-person.*
- Explain your valid reason for being absent (physical/ mental health-related or family emergency) and include relevant documentation to verify your illness or injury. Please note that the <u>Student Health Center</u> does not provide doctor's notes for illness, however, you can fill out the <u>Self-Verification Form</u> available on their website and inperson to attest to your illness.
- Provide information about how you intend to *stay on top of the information* presented in the section(s) you missed (i.e. scheduling a visit for office hours with the instructor, lab director and/ or teaching assistant).

## Policy Concerning Student Athletes

Student-athletes may not be penalized when University-sanctioned competitions conflict with course activities or examinations. When a class will be missed for a sanctioned competition, it is the student athlete's responsibility to approach the instructor in advance. The student-athlete must provide the instructor with a letter from the Director of <u>Student Athlete</u> <u>Academic Services (SAAS)</u>. The letter must certify that the competition is a University-sponsored event that deserves accommodation. Accommodations will not be made for other types of conflicting events. Details on the University's policy can be found on the <u>Website of the Provost</u>.

Arrangements for the accommodation must be agreed upon in advance of the event. If multiple team members will be absent, each must make an individual arrangement with the instructor. If an assignment is due on the date when class is missed, the instructor may require that it be turned in before the missed class or at the first class meeting after the student returns. If a test has been scheduled for the date when class is missed, the instructor may arrange with SAAS to have the test administered by an academically qualified proctor (not a coach) during the trip. Alternatively, the instructor may agree to prorate the exam score (substitute the missing exam score with a score based on the average of the student's scores for the other exams compared to the class average for those exams).

#### **Diversity, Equity and Inclusion**

The BISC-220 faculty and teaching assistants take issues regarding diversity, equity and inclusion very seriously when it comes to curricula, student engagement and beyond. As a result, we expect you to be kind, courteous, patient and openminded at all times during your participation in this course, and to be empathetic towards your peers and instructors, as their lived experiences and beliefs may differ from yours but are equally important and valid. If you or a colleague in the course is concerned about any harassment, discrimination or any other troubling behavior, please notify the course instructor and/ or lab director immediately. In addition, the <u>Student Health Center</u>, the <u>Office of the Ombuds</u> and <u>the Office for Equity</u>, <u>Equal Opportunity and Title IX (EEOTIX)</u> are all resources available to you to address issues related to harassment and discrimination of any kind.

#### **Special Accommodations**

If you require any special accommodations (including, but not limited to: closed captions during laboratory sections via Zoom/ Google Slides, additional time to complete written exercises and quizzes, alternative assignments due to a physical or mental/ psychological condition, etc.), please let the course instructor and laboratory manager know so we can do our best to accommodate your needs. In addition, please ensure that you are registered with the <u>Office of Student Accessibility</u> <u>Services (OSAS)</u> so that your accommodations are met in a timely manner.

#### **Emergency Preparedness / Course Continuity**

If an officially-declared emergency makes travel to campus infeasible, <u>USC Emergency Information</u> will provide information related to safety and course continuity. We expect that instruction will be continued by means of Brightspace, teleconferencing, and other technologies. Alternative assignments may be given if classes are canceled for prolonged periods. If you have not already done so, please register with <u>TrojansAlert</u> to facilitate communication during emergencies.

#### **Students Who Are Repeating the Class**

The faculty and staff of this course are dedicated to helping you succeed academically. If you are repeating this class because you had to withdraw, earned an unsatisfactory grade, or need to remove a mark of IN (Incomplete) from a previous semester, please take advantage of all the help we have to offer. You should try to attend every lecture, review the material promptly, complete all online and lab assignments to the best of your ability, prepare early for exams, and be ready to change your approach if initial results are not satisfactory. Above all, manage your time to maximize your academic and personal success. Please identify yourself and seek help from the instructors, the lab manager, and your SI Leader. We are here to help!

#### Academic Integrity

There is a <u>zero-tolerance policy</u> for any cheating or plagiarism of any kind in this course. Those who are caught engaging in this breach of academic conduct will automatically receive a <u>zero grade for the assignment in question</u>, and potentially other consequences as dictated by <u>USC Code of Ethics</u>.

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the <u>USC Student Handbook</u>. All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the student handbook or the <u>Office of Academic Integrity's website</u>, and university policies on <u>Research and Scholarship Misconduct</u>.

#### **Course Content Distribution and Synchronous Session Recordings Policies**

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. (Living our Unifying Values: The USC Student Handbook, page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to



providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relation to the class, whether obtained in class, via email, on the internet, or via any other media. (Living our Unifying Values: The USC Student Handbook, page 13).

#### **Support Systems and Resources**

## Counseling and Mental Health - (213) 740 - 9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

#### 988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline consists of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273 - 8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

#### Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740 - 9355 (WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

#### Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740 - 5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

#### Reporting Incidents of Bias or Harassment - (213) 740 - 5086 or (213) 821 - 8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

#### The Office of Student Accessibility Services (OSAS) - (213) 740 - 0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

## USC Campus Support and Intervention - (213) 740 - 0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

#### Diversity, Equity and Inclusion - (213) 740 - 2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

#### <u>USC Emergency</u> - UPC: (213) 740 - 4321, HSC: (323) 442 - 1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

<u>USC Department of Public Safety</u> - UPC: (213) 740 - 6000, HSC: (323) 442 - 1200 – 24/7 on call Non-emergency assistance or information.

#### Office of the Ombuds - UPC: (213) 821 - 9556, HSC: (323) 442 - 0382

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.



## Occupational Therapy Faculty Practice - (323) 442 - 2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

	Lecture Calendar (subject to change)				
Week #	Lecture #	Dates	Topic(s)	Recommended Readings	
1	1	Tuesday, 1/14	Course Overview and Basic Chemistry	Campbell (12 <sup>th</sup> Edition): Chapters 1 - 5	
	2	Thursday, 1/16	Biochemistry and Macromolecules	Campbell (12" Edition): Chapters 1 - 5	
	3	Tuesday, 1/21		<i>Campbell (12<sup>th</sup> Edition):</i> Chapter 6	
2	4	Thursday, 1/23	The Cell and Organelles		
	5	Tuesday, 1/28	Semipermeable Membranes	Campbell (12 <sup>th</sup> Edition): Chapter 7	
3 6 Thursday, 1/30 Intercellular Communication	Intercellular Communication	Comptell (19th Edition), Chapters 11 and 18			
	7	Tuesday, 2/4	Intracellular Signaling and Gene Expression	<i>Campbell (12<sup>th</sup> Edition):</i> Chapters 11 and 18	
4 -	8	Thursday, 2/6	Cell Respiration Part 1: Glycolysis and Anaerobic Respiration		
	9	Tuesday, 2/11	Cell Respiration Part 2: The Krebs Cycle	<i>Campbell (12<sup>th</sup> Edition):</i> Chapters 8 - 9	
5	10	Thursday, 2/13	Cell Respiration Part 3: The Electron Transport Chain and Oxidative Phosphorylation		
		Friday, 2/14	Exam 1 (covering lec	tures 1 - 7)	
	11	Tuesday, 2/18	Photosynthesis Part 1: The Light Reactions		
6	12	Thursday, 2/20	Photosynthesis Part 2: The Dark Reactions	<i>Campbell (12<sup>th</sup> Edition):</i> Chapter 10	
_	13	Tuesday, 2/25	Enzyme Kinetics and Inhibition	Campbell (12 <sup>th</sup> Edition): Chapter 8	
7	14	Thursday, 2/27	DNA Replication and the Central Dogma	Campbell (12 <sup>th</sup> Edition): Chapters 16 - 17	
8	15	Tuesday, 3/4	The Cell Cycle and Cell Division	<i>Campbell (12<sup>th</sup> Edition):</i> Chapters 12 - 13	
	16	Thursday, 3/6	Non-Mendelian Genetics and Genomics		
9	17	Tuesday, 3/11	The Cardiovascular System	Campbell (12 <sup>th</sup> Edition): Chapter 42	



	18	Thursday, 3/13		
		Friday, 3/14	Exam 2 (covering lect	ures 8 - 15)
10		USC SPRING RECESS (3/16 - 3/23)		
	19	Tuesday, 3/25	The Respiratory System	Campbell (12 <sup>th</sup> Edition): Chapter 42
11	20	Thursday, 3/27	The Immune System	Campbell (12 <sup>th</sup> Edition): Chapter 43
12	21	Tuesday, 4/1	The Renal (Excretory) System	Campbell (12 <sup>th</sup> Edition): Chapter 44
12		Thursday, 4/3	Exam 3 In-class Review Session	
	22	Tuesday, 4/8	The Endocrine System	<i>Campbell (12<sup>th</sup> Edition):</i> Chapter 45
13	23	Thursday, 4/10		
		Friday, 4/11	Exam 3 (covering lectures 16 - 21)	
14	24	Tuesday, 4/15	The Reproductive System	Campbell (12 <sup>th</sup> Edition): Chapter 46
14	25	Thursday, 4/17		
15	26	Tuesday, 4/22	The Nervous System	Campbell (12 <sup>th</sup> Edition): Chapter 48
GI	27	Thursday, 4/24		
16	28	Tuesday, 4/29	The Musculoskeletal System and Muscle Contraction	Campbell (12 <sup>th</sup> Edition): Chapter 50
10		Thursday, 5/1	Exam 4 (Final Exam) In-clas	s Review Session
		Wednesday, 5/7	Exam 4 (Final Exam covering lectures 22 - 28)	



Important Registration Deadlines	
Friday, 1/31	Last day to register and add classes, last day to drop classes without mark of "W", last day to change enrollment option to "Pass/ Not Pass", last day to purchase or waive tuition refund insurance.
Friday, 2/28 Last day to drop a course without the mark of "W" on official transcript only, last day to ch "Pass/ Not Pass" option to letter grade.	
Friday, 4/11	Last day to drop a class with a mark of "W".

