

## **Biology 3: Introduction to Biology**

**Fall 2019**

## **Course Syllabus**

Instructor: Adam Welday, Ph.D.  
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Office hours: Tu, Th After Lab (10pm)  
Office hr location: Classroom or cubicles in SCI 222  
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Course Section #: 12976  
Lecture: Tu, Th 6:50-8:20 in SciTech 103  
Lab: Tu, Th 8:30-10pm in SciTech 104  
Course Website: <https://ilearn.laccd.edu> (Canvas)  
eText and HW: <https://www.openstaxcollege.org> (eText)

**Course Description:** Biology 3 is a lower division, non-major's course designed to meet part of the general education science requirements. This course also serves as a prerequisite for several classes in programs related to health sciences such as nursing, dental hygienist, etc. This course is NOT designed to meet science requirements for students pursuing a bachelor's degree with a major in a life science, nor will it satisfy prerequisites for many post bachelor's professional schools including medical, dental or veterinary programs.

The course is intended to introduce you to the living world around you and your place within it. You will learn how living things function and how members of the living world interact with each other and the environment they live in.

Many students start this class having some experience with biology through high school or other experiences and have already made a conclusion about whether they love it or hate it and sometimes even whether their brains are science/biology capable or not. Everyone here has a brain that is certainly capable of comprehending this material and EVERYONE here can do well in this class if they are open minded, put in the necessary time and hard work, and importantly, develop efficient reading and study skills through consistent use of good reading and study habits. I hope that by taking this class seriously, you will learn to appreciate and love biology and realize how a deeper understanding of the living world can be meaningful to your life even if you pursue seemingly unrelated academic and career goals.

### **Required Materials:**

**Lecture Text: Concepts of biology by Openstax College, 1<sup>st</sup> edition (free).** Primarily you will use LRNR (see below) for access to this book, however, digital copies can be downloaded in pdf and/or ibook formats through [www.openstaxcollege.org](http://www.openstaxcollege.org). Print copies can be ordered also through the openstax website or amazon, chegg, etc.

**In Class Student Response System: Several possible options and purchase may be required.** I will be using one or more other services to enhance the in class experience and purchase may be required. I don't know the pricing just yet and it will probably be \$26 or less or possibly even free, however, I reserve the right to require paid services and/or purchased materials up to a total of \$75 (compare this to the bookstore price of \$175 for other bio 3 sections). Many of these services will require a web enabled device such as a smartphone, tablet or computer to be used in class. If you do not have access to a compatible device, please contact me to discuss options (I have a few devices I might be able to lend for the semester but would require a fully refundable deposit)

**Lecture Activity Book: IF USED: Printed copies may be made available through the bookstore (purchase will be required, small fee).** While awaiting bookstore copies, I may post some worksheets for in lecture activities and if so THEY MUST BE PRINTED AND BROUGHT TO LECTURE FOR CREDIT!!!

**Lab Manual: Printed from home (free).** Each protocol will be posted online at least 24 hours prior to lab. All protocols will be posted to canvas and they MUST BE PRINTED AND BROUGHT TO LAB!!! Do NOT buy the lab manual by Pendarvis and Crawley assigned to this class through the bookstore

**Quiz Forms: Custom quiz forms will be required (purchase may be required, small fee).** I am working on having these available at the book store and may require purchase. For now though, I will provide them.

**Contacting Me/Office Hours:** I want you to feel comfortable contacting me and meeting with me for anything class related. Too often students make a big deal about meeting with professors and feel they shouldn't bother the professor unless they REALLY need help. Please know that you don't need to have done all (or even any) of the reading, have any questions prepared or have something in particular you want to talk about, so if you want to do better in any way or want to talk to me for any reason, please don't be shy, just contact me or drop in during office hours, really! You can reach me by either calling/texting the phone number above (literally at ANY time, see below) or sending me an email. However, if you text or email with course material questions, I usually prefer responding verbally through the phone or in person, so let me know when and how to best contact you to talk if possible. I will also often be available every day after lab. I know these are long days and staying longer after lab may seem less than ideal, however, it is during these times that I can work much closer with each student and tailor discussion appropriately for each students particular strengths and weaknesses. I strongly encourage you to contact me if you are having ANY difficulties with the material and AS EARLY AS POSSIBLE! It is much easier to help you during one-on-one sessions or in small groups during office hours than during lecture with so many students each with different backgrounds, learning styles and understanding. Students often don't tend to utilize my office hours until late in the semester when they realize they are not likely going to receive the grade they want but it is often already too late and/or extremely difficult to change their grade dramatically. Again, I strongly recommend getting help early and often if you can use help in any way.

**Phone contact:** Please feel free to call and/or text me literally ANY time day or night. The number above is a google voice number that I can turn off and on depending on whether I am available. In the past I have discussed mitosis over the phone at 2am because I happened to be up and a student was working nights and couldn't call earlier (don't expect this though ;)). If you text me and/or have to leave a voicemail, please tell me who you are.

**Grading:** Final grades are non-negotiable. 88.99% is a B not an A and will not be bumped up “just because...”

However, I will often adjust grading for each exam and many quizzes prior to releasing results. Adjustments are made based on overall class performance (i.e. not based on any particular student’s or set of students’ performance). All adjustments are made only if they improve overall class statistics.

	Qty		Points each		Total points	Total%	Percentage	Grade
Reading Quizzes (25, drop 2)	23	x	10	=	230	23.0%	89-100%	<b>A</b>
Midterm Exams	4	x	100	=	400	40.0%	78-88.99%	<b>B</b>
Cumulative final	1	x	100	=	100	10.0%	65-77.99%	<b>C</b>
Lab activities and participation (drop 1)	13	x	5	=	65	6.5%	50-64.99%	<b>D</b>
Pre-Lab Quizzes (drop 1)	13	x	5	=	65	6.5%	49.99% and below	<b>F</b>
Post-Lab Quizzes (drop 1)	13	x	10	=	130	13.0%		
Surveys and other misc assignments	1	x	10	=	10	1.0%		
<b>Course Total</b>					<b>1300</b>	<b>100.0%</b>		

**Final grades:** The point breakdown above is just an estimate and is subject to change based on actual number of assignments assigned. For your final grade, this breaks down to about 75% from lecture (about 50% from lecture exams, 25% from HW and quizzes) and 25% from lab. After the 3<sup>rd</sup> exam and prior to the last day to drop with a ‘W’ (Sun, Nov 17) the point breakdown will be re-assessed and finalized based on overall class performance thus far and the amount of points remaining in unassigned work and exams. Students will be informed at that time the amount of points remaining and any changes to the grading scheme including any assignments not reflected above but added later. There will be no make-up or extra credit points but I reserve the right to lower grade thresholds, drop extra quizzes, assignments and/or exams based on overall class performance. However, this is at my sole discretion and based on the entire class performance, not individual students: so don’t expect to be able to argue for a better grade.

**Time Commitment:** You are enrolled in a 4-unit college science class with a lab which requires at least 6hrs per week working and studying on your own outside of lecture and lab class times. Students often do not realize the time required to succeed in such a class. If you are taking 12 units that requires a total time commitment of around 36 hrs per week, 15 units requires 45 hrs/week, which is equivalent to a full time job. This is not a made up number to scare you, it is pretty standard for all colleges and universities – Harvard, Cal State LA, UCLA and community colleges such as LACC. Classes are designed so that an average college level student at that campus will require a commitment of approximately 3 times as many hours per week as the units they are taking (including classroom time). As this class is 4 units, that means students should be spending 12hrs/week devoted to this class alone. Since you will be spending approx. 3hrs/wk in class and 3hrs/wk in lab, this means students should be spending 6 hrs/wk reading, reviewing, studying and completing assignments. Most students do not require more than 1-3 hrs/wk reading the content the first time through, so for most weeks, that means you should be spending at least 3+ hrs/wk reviewing lecture notes and studying the textbook. However, if you are struggling with language difficulties, poor reading comprehension and/or poor study skills then it may require even more time.

While I truly understand and can sympathize with the difficulties juggling the many other time commitments and responsibilities students may have, it is up to each student to determine whether they can handle the workload or if they should take the class at another time. I am not trying to scare you, I just want you to succeed I have seen too many not succeed because they don’t have enough time and/or physical/mental energy for this class.

**Reading/Quizzes/Lecture Activities:** In order to succeed you **MUST READ PRIOR TO EVERY**

**LECTURE.** Each lecture will start with a short quiz based on the reading assigned. My lectures assume you have done the reading and there may be in-class clicker questions worth points and/or class activities as well, so you will be lost and could lose points if you do not read ahead of time. Since students that do the reading and homework tend to do very well on quizzes, the quizzes serve as a reward for keeping up with the work by boosting up their overall grade.

**Quizzes:** Most if not all lectures will start with a short quiz, so don’t be late, make-up quizzes and/or extra time will not be given in any circumstance. I drop 2 quizzes to cover unexpected circumstances that may cause you to miss a quiz. More than two missed quizzes will be recorded as a zero. Whether a quiz is announced or not, the reading is due prior to lecture as scheduled in the syllabus and you should expect a quiz whether announced or not and whether a reading guide is posted or not, so do the reading and prepare for a quiz at the start of EVERY lecture!

**Lecture Activities:** Lectures may include one to several interactive activities that are based on worksheets and/or in class “clicker” type questions where each student will connect to a website to answer questions in real time and overall class results will be displayed. If I use many printed worksheets, I will make them available in a course pack

bought at the bookstore (if unavailable, pdfs will be posted for printing at home). Worksheets may be collected at any time for credit, so keep all completed worksheets in a binder.

**Exams:** Exams are mostly multiple choice but also contain some fill in the blank and/or short answer questions. PHONES MUST BE TURNED OFF AND PUT AWAY DURING ALL EXAMS AND QUIZZES. The **final will be cumulative** covering all material throughout the course but will be focused on the major concepts from each chapter. **All exams count!** A missed exam is a zero and can result in being dropped from the class if I am not contacted within 24 hrs. **Make-up Exams:** Make up exams will only be given for documentable emergencies and select religious holidays (if notified by the census date). If a documentable emergency does occur, you must contact me within 24 hrs of the exam to schedule a make-up exam and provide proper documentation. Having other obligations such as work and/or family and friend responsibilities is not a valid excuse for missing an exam. You have until the census date: Sun, Sep 8, to notify me of religious observances that conflict with scheduled exams so that alternative arrangements may be made. Make up exams must be arranged with me PRIOR to the absence. If a make-up exam is granted, only one make-up exam will be allowed during the semester. **Make-up exams will be mostly, if not entirely, essay questions** but the exact format is at my discretion. Make-up exams must be taken within 1 week of the originally scheduled exam. There are NO make-ups for quizzes, homework, lab assignments or in-class work **Review Sessions:** For most exams if possible, I will have review session on the calendar day before the exam which may fall on Sunday for Monday exams, usually in the evening around 6-8pm. They are entirely optional.

**Online Access/Classroom Technology:** This class relies heavily on online resources both inside and outside the classroom. Reliable daily access to these online resources is required to keep up with the reading and assignments and complete some classroom activities and assignments. Phones are possibly okay for some of the content, but a full computer with internet access is highly recommended for outside reading and homework. If you do not have access to a computer with reliable internet access, you can use the campus computers in the library or elsewhere. Not having access and/or running into technical issues will not excuse not completing any assignments!! It is your responsibility to ensure you have reliable online access.

**Classroom Technology.** I may be using services in the classroom requiring internet access. Our classrooms have good wifi access that is free through our college. If I use in class online services, you will need a device to access these resources during class. Phones and tablets are preferred due to their smaller size allowing for uncluttered desk space for taking notes. Laptops are also okay and some students may prefer taking notes with their laptops. **All devices must be used solely for classroom activities.** Texting, web surfing, engaging in social media, etc. are not allowed. If you are discovered using these devices for non-classroom activity, you may be asked to leave the room and may lose ALL participation points or may be docked points when not doing activities. If you don't have access to a suitable device on a daily basis you must discuss this with me to see if other arrangements can be made. If you forget your device, or the battery goes dead or you run into any technical issues, you will not be able to participate and will lose any points associated with those missed activities. Exceptions will not be made, so make sure you have a fresh charge prior to each class. If you have battery issues there are cheap external battery packs that can charge your device and prolong its use.

**Websites Used:** We will be using services from LRNR, canvas and others. I will be sending out email announcements and post slides through canvas. To login to canvas, follow the instructions at the temporary weebly website.

- *Weebly Website:* <http://profwelday.weebly.com> (temporary, for info logging in to canvas)
- Login information to other websites will be provided at a later date through class announcements and emails.
- *For Openstax college:* <https://openstaxcollege.org/textbooks/concepts-of-biology> to download the textbook, buy a printed copy (not recommended but acceptable), etc.

**Technological issues:** Unfortunately, technical problems may still arise but they can be very difficult if not impossible to verify, therefore **I cannot accept technical difficulties as an excuse for late submissions or incomplete assignments**. If a problem does arise outside of class, then you must contact me IMMEDIATELY with a clear statement of the problem either by email, text, or phone (again, it does not matter if it is 4am, you can still email, call or text because I turn the google voice number off) and I will try to help you get it in on time if I am available. The best way to ensure you can submit a complete assignment is to do it early, so if technical problems do occur there is time to try to fix it.

**Lab:** Labs are meant to give hands on experience applying your knowledge and understanding to concepts learned in lecture and from reading and HW assignments. Therefore you must be physically present since lab supplies and setups are only available during the scheduled times, there is no way to make up missed labs. There are both campus policies and even state laws that govern certain lab requirements. **Most labs will also start with a prelab quiz** which will be based on the protocol for that week and/or the weekly biology article if assigned. **Most labs will also have a postlab quiz** on material from the previous lab session

**Lab participation and worksheets:** Each lab has an assignment with worksheets to be filled out during lab. The worksheets may or may not be collected and may be collected at any future date, so keep all work in a binder until after the semester is over and grades have been submitted. Often, I will allow you to use YOUR OWN filled out worksheets and/or notes during the post-lab quiz, so it is in your best interest to fully think through and complete the worksheets and lab procedures as well as take good notes. Simply going through the procedures and/or just copying other student's work will often result in poor post-lab quizzes. In order to do well in lab, you must think about what you are doing and WHY, not just what you did. Lab will almost always run the entire time, so do not

expect to ever get out early. If you finish early, you will be expected to use the lab time to help other students and/or for studying for this class only. Don't expect to finish quickly and leave lab early because even if you finish the basic protocol, there are usually other tasks I assign to help further your understanding and/or help your fellow classmates understand further. The lab isn't just about doing, it's about understanding what you are doing and why as well as knowing how it applies to what you have learned in other parts of the course. So this is your time to explore and deepen your understanding. Furthermore, lab is designed to be a collaborative experience, not just for you and your group but for the entire class. Therefore, if you leave early you will lose all participation points for that lab even if you feel you have completed the procedure and assignments. If you are not working on material related to this class and/or are found to be on your phone or other device texting, chatting, or anything else, you will also lose participation points.

**Attendance/Participation:** Attendance is required for every lecture and lab. According to state and campus regulations, if you miss a total of more hours than the hours the class meets per week, you can and will be dropped or receive a failing grade. That means if you miss more than 3 hrs of lecture (more than 2 lectures) and/or miss more than 3 hrs of lab (more than 1 full lab), you will be dropped or given a failing grade. This means that if you miss two full days (of lecture and lab) because you couldn't get work off, couldn't get a babysitter, had to pick up someone from the airport, were sick or too tired to make it you can't miss another day for ANY reason and if you end up in the hospital with a documented emergency, I will still have to drop you. Thus, you should only miss class if you absolutely cannot make it.

**Participation points:** Participation points if awarded will be granted based on the activities of the session, whether lab or lecture. Not all lectures will have activities but phone usage and other distracted activities can cause you to be docked points (same applies to lab, see above). If there is an activity during a lecture you will not be able to make up that activity if you miss the lecture, so make sure you attend ALL lectures.

**Important Enrollment Dates:** Last day to turn in an add card: Sun, Sep 8. Last day to drop without a "W" is Mon, Sep 9. Last day to drop with a "W" is Sun, Nov 17. According to new district regulations, you can only attempt a course 3 times. You will not be allowed to enroll a 4<sup>th</sup> time. If you do not drop before Mon, Sep 9, it will count as an attempt even if you drop at a later date. If you decide to drop the class after Mon, Sep 9, with a "W", you must drop by Sun, Nov 17 to avoid receiving a failing grade in Bio 3.

**Cheating:** While every college student should know not to cheat, it is not uncommon that some students will try to cheat in some way. While too many of those students that cheat in college classes get away with it, trust me it is not worth the risk. ALL ELECTRONIC DEVICES AND ANYTHING THAT CAN DISPLAY BIOLOGY INFORMATION (PAPER OR ELECTRONIC) MUST BE PUT AWAY. If you are caught cheating and it is reported it will become part of your permanent record. Since your academic record is associated with your SSN it will even show up on some background checks and thereby may influence future employment opportunities. If you are caught cheating I absolutely will file an "Academic Dishonesty Report." I have done it in the past and each time it broke my heart. Please don't break my heart!

**Student Success:** If you have read this far and haven't already run away screaming to drop the class, I just want you to know that most of these policies are put in place to help you succeed – not just in this class but also in learning skills important as a student in any program or major and in life in general. To some people with more experience as a dedicated student, some of these policies may seem a bit heavy handed. However, in my experience, most students taking this class haven't had much experience as a dedicated college student and/or have taken a long break since they have been. Also in my experience, almost all of the students that put in the required time and still struggle in this course, struggle not because the content is too hard but because they don't yet have the skills to learn the content efficiently. Thus, for most students in this course, it is actually more important to learn how to learn efficiently than to just spend time passively reading and trying to memorize "facts." If nothing else, please know that I really do want you to do well and while I won't lower the standards for what should be learned and understood from this course, I will do everything I feasibly can to help you meet and exceed those standards. ...but I need your help to help you, so please contact me as soon as you think you can use ANY help whatsoever.

## Course Schedule and Assigned Reading:

Wk	Date	Topic	Reading due <u>PRIOR</u> to lecture
1	Tu	27-Aug	Class introduction
	Th	29-Aug	Intro to biology
2	Tu	3-Sep	Cells, tissues, organ systems
	Th	5-Sep	Scientific Method, Evolution and natural selection
3	Tu	10-Sep	Phylogenetic trees, Diversity of life, DNA and Genes, intro to chemistry
	Th	12-Sep	Energy, Homeostasis, Digestive system
4	Tu	17-Sep	Nervous sys and Endocrine sys
	Th	19-Sep	Cardiovascular and Respiratory sys
5	<b>Tu</b>	<b>24-Sep</b>	<b>Unit 1 Exam</b>
	Th	26-Sep	Atoms, elements, chemical bonds, and water
6	Tu	1-Oct	Biological molecules, Plasma Membrane
	Th	3-Oct	Enzymes and Cellular Respiration
7	Tu	9-Oct	Photosynthesis
	Th	10-Oct	Fermentation, other metabolic pathways
8	<b>Tu</b>	<b>15-Oct</b>	<b>Unit 2 Exam</b>
	Th	17-Oct	Mitosis
9	Tu	22-Oct	Sexual reproduction and meiosis
	Th	24-Oct	Genetics
10	Tu	29-Oct	Central Dogma of molecular biology
	Th	31-Oct	Central Dogma of molecular biology
11	Tu	5-Nov	Non-mendelian traits, Cancer
	<b>Th</b>	<b>7-Nov</b>	<b>Unit 3 Exam</b>
12	Tu	12-Nov	Diversity of life, phylogenetic trees
	Th	14-Nov	Evolution
13	Tu	19-Nov	History of life, prokaryotes, origin of eukaryotes, Ecology
	Th	21-Nov	Plant evolution
14	Tu	26-Nov	Animals, Vertebrate evolution
	Th	28-Nov	No Class - Thanksgiving
15	Tu	3-Dec	Biotechnology
	<b>Th</b>	<b>6-Dec</b>	<b>Unit 4 Exam</b>
16	Tu	11-Dec	Cumulative Review (optional but strongly recommended)
	<b>Th</b>	<b>13-Dec</b>	<b>Cumulative Final 7:30-9:30pm</b>

Important Enrollment Dates:		
Sun	Sun, Sep 8	Last day to add
Sun	Sun, Sep 8	Last day to drop without a "W"
Sun	Sun, Nov 17	Last Day to Drop with a "W"
Holidays (Campus Closed)		
	Thu, Nov 28	Thanksgiving

**Course:** BIOLOGY 003  
**Title:** INTRODUCTION TO BIOLOGY



## Course Description

In this survey course for nonmajors, students learn general biological principles, activities, and the relationships of living organisms to each other and the world they live in with emphasis on their correlations to the human organism. The course includes a study of the nutritional, medical, and genetic aspects of the modern world.

## Units/Transferability

4 unit(s) transferable to UC/CSU

## Prerequisites/Co-requisites/Advisories

No Prerequisite. No Corequisite. Advisory: English 021

## Course Student Learning Outcomes

1. Demonstrate the application of Mendelian inheritance involving monohybrid and dihybrid allelic traits. 2. Demonstrate proficiency in the usage of the compound light microscope. 3. Identify the names and functions of eukaryotic cell structures.

## Grading Scale or Criteria

A - Excellent	F - Failing
B - Good	P - Pass; at least equivalent to a "C" grade or better
C - Satisfactory	NP - Not Pass; equal to "D" or "F" grade
D - Less than satisfactory	

## Drop and Repeats

Effective July 1, 2012 students are allowed three (3) attempts to pass a single class within the Los Angeles Community College District. If a student gets a "W", "D", "F", or "NP" as a grade in a class, that counts as an attempt. If you think you will not be able to complete this course with a C or better, please drop by the due date.

*For all important dates make sure to visit <http://www.lacitycollege.edu/services/admissions/dates.html>*

## Attendance Policy

Students who are registered and miss the first time the class meets may lose their right to a place in the class. Whenever students are absent more than 10% of the total meeting days of the class, the instructor may exclude them from class. If the instructor determines that there are no mitigating circumstances that may justify the absences, the instructor may exclude a student from the class. Students are responsible for officially dropping a class that they stop attending.

## Financial Aid

If you need help paying for books and other college expenses, call the Financial Aid Office at (323) 953-4000 ext.2010 or email [finaid@lacitycollege.edu](mailto:finaid@lacitycollege.edu).

## Accommodations

Students with a verified disability who may need authorized accommodation(s) for this class are encouraged to notify the instructor and the Office of Special Services (323-953-4000, ext.2270 or email [oss@lacitycollege.edu](mailto:oss@lacitycollege.edu)) as soon as possible, and at least two weeks before any exam or quiz. All information will remain confidential.

## Student Code of Conduct

Violations of academic integrity include, but are not limited to, the following actions: cheating on an exam, plagiarism, working together on an assignment, paper or project when the instructor has specifically stated students should not do so, submitting the same term paper to more than one instructor, or allowing another individual to assume one's identity for the purpose of enhancing one's grade (see LACCD Board Rule 9803.28). Penalties may include a grade of zero or "F" on an exam or paper, or even suspension from the College.

## Prohibited Discrimination

The policy of the Los Angeles Community College District is to provide an educational, employment and business environment free from Prohibited Discrimination, as defined by Board Rule 15003. Employees, students, or other persons acting on behalf of the District who engage in Prohibited Discrimination as defined in this policy or by State and Federal law shall be subject to discipline, up to and including discharge, expulsion, or termination of contract. The specific rules and procedures for reporting allegations of Prohibited Discrimination and for pursuing available remedies are included in Administrative Regulation C-14. A copy may be obtained from the Title IX Coordinator or from the District's Office for Diversity, Equity, and Inclusion.

Any member of the Los Angeles City College community, which includes students, faculty, and staff, who believes, perceives, or actually experiences conduct that may constitute prohibited discrimination, has the right to seek the help of the College. Every employee has the responsibility to report such conduct to the Title IX Coordinator or other designee(s) of the College President when it is directed toward students. Potential complainants are advised that administrative and civil law remedies, including but not limited to injunctions, restraining orders or other orders, may be made available. For assistance, contact the Title IX Coordinator at (323) 953-4000, Ext. 2758, or the Office of Diversity, Equity, and Inclusion, at (213) 891-2315.