



**Biology Department**  
**Point Loma Nazarene University**  
**BIO1001: Human Biology and Bioethics**  
**3 Units**

**Spring 2020**

<b>Meeting days:</b> Lecture: Mon., Wed., Fri. Lab section 1: Tuesday Lab section 2: Tuesday	<b>Instructor title and name:</b> Dr. Walter W. Cho
<b>Meeting times:</b> Lecture: 11-11:55AM Lab section 1: 1:30-4PM Lab section 2: 8:30-11AM	<b>Phone:</b> x2398
<b>Meeting location:</b> Lecture: Liberty Station Lab section 1: Sator 105 Lab section 2: Sator 120	<b>E-mail:</b> waltercho@pointloma.edu
<b>Final Exam:</b> Wed., 5/6/20, 10:30AM-1PM	<b>Office location and hours:</b> Rohr Science, Room 134 Mon. 2:30-3:30PM, Thurs. 10AM-12PM, or by appointment

**PLNU Mission**

**To Teach ~ To Shape ~ To Send**

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

**COURSE DESCRIPTION**

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From the course catalog:

An exploration of assorted topics in human biology as they intersect with bioethical and sustainability issues of current interest in society. Topics include human physiology, health, reproduction, genetics, and ecology. Course examines the underlying scientific basis of specific examples and how they relate to everyday life. Course approach emphasizes the process of science, critical thinking, active learning, social relevancy, and building connections between case studies and general concepts of biology. Offered every year.

This course is designed to promote learning of key concepts in general biology with special emphasis on human biology and bioethics. The course lecture and lab activities will be designed to provide multiple opportunities for students to learn and to apply the major unifying ideas and to learn how scientific inquiry operates within the field of biology. When possible, students will be able to explore organisms and/or phenomena in the lab before hearing lecture material. Lecture sessions will consist of lectures interspersed with in-class activities to give students a chance to think about and to apply what they are learning. This course is one of the components of the General Education Program at Point Loma Nazarene University. By including this course in a common educational experience for undergraduates, the faculty

supports an introduction to the natural and social sciences as tools for exploring the world, with emphasis on collecting and interpreting data.

## **COURSE LEARNING OUTCOMES**

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Students in this course will:

1. Describe and discuss the major unifying ideas in biology (as represented by SHADE):
  - S** Relationships between **structure** and function are seen in living organisms.
  - H** Living organisms and ecosystems have feedback systems that regulate biological systems at many levels to maintain **homeostasis**/stability.
  - A** Populations of living organisms may change over time (evolution/ **adaptation**), and those changes are passed to future generations by DNA.
  - D** Living organisms are incredibly **diverse**, but they also show remarkable unity, especially at the cellular and molecular levels.
  - E** Living organisms obtain (by eating or by photosynthesis) and use **energy**.
2. Use the processes and tools of scientific inquiry (both hypothesis testing and discovery science) to test biological hypotheses and to skeptically evaluate scientific information.
3. Prepare and/or analyze graphs to interpret data and to draw valid conclusions.
4. Design and conduct at least one independent investigation.
5. Recognize biology as a problem solving science based on past and continuing experimentation, and evaluate biology's role and impact on society.

## **COURSE CREDIT HOUR INFORMATION**

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In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 3 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request.

## **REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES**

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### **Books/supplies for the course**

Belk & Maier (2012) *Biology: Science for Life with Physiology (4<sup>th</sup> edition)*

(ISBN 978-0321767837)

BIO1001 Course Reader (available at <https://store.cognella.com>)

You will occasionally need a #2 pencil and a basic calculator.

Additional reading may also be assigned.

### **Use of laptops in class**

I discourage use of laptops in the lecture sessions; however, if you feel strongly that you take your best notes via computer, and that the use will not be distracting to yourself or others around you, you may

do so. I may call on you more often than other students during class, just to make sure that you are on task ☺. If computer use becomes a problem for some students, everyone will lose the privilege. In contrast, I will sometimes ask you to bring your laptop to the lab, generally one per pair of students, so that you can look up information, work on lab reports, etc.

### ASSESSMENT AND GRADING

Assignment or assessment	Description	Percentage
3 lecture exams (10% each)	Combination of multiple choice and short essay	30%
Final exam	Multiple choice (partly comprehensive)	15%
13 Labs (can do 1 extra)	Pre-lab questions, in-lab graphs, drawings, answers to questions, etc.	20%
1 lab report	Materials/methods, results, and conclusions	5%
In-class activities; Assignments	A variety of tasks will be done in class, often with a partner;	20%
Quizzes	Quizzes based on reading assignments	10%
	<b>Total</b>	<b>100%</b>

Grades will be given on the basis of earned points as a percentage of total points possible.

Grading scale:

A	90%	A "+" will be assigned to the upper 2% in each range (except for A+ which can't be used), and a "-" will be assigned to the lowest 2% in each range. Examples: 91% = A-    69% = D+
B	80%	
C	70%	
D	60%	
F	50%	

Select questions on the final exam will be used to assess General Education Learning Outcome 1d. Critical Thinking: Students will be able to examine, critique, and synthesize information in order to arrive at reasoned conclusions.

### PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member has the option of filing a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice. If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF consistent with university policy in the grading section of the catalog. See [Academic Policies](#) in the undergrad academic catalog.

Students are expected to take the exams on the days scheduled unless they have an excuse cleared by me no later than the Friday preceding the exam. If there is an approved conflict you will be expected to take the Exam **prior to** the scheduled time. If something unexpected happens, we will make appropriate arrangements at that time. Makeup exams may not be the same as the original and will generally be more

difficult in nature. Un-excused misses will result in a zero grade. You will have two weeks from the time exams are handed back to discuss possible corrections, after which the grade becomes permanent.

Attending lab is mandatory and you will not be able to make up labs that are missed. In most cases, you will not be able to receive points for turning in assignments from a lab that you missed. In some cases, I will approve an excuse, and you will be able to get 50% of the points for a missed lab if you turn in the lab assignment on time. Make all attempts to attend the other lab section if you can't attend your own section.

Cell phones must be muted or on vibrate during class. Only in cases of emergency should you leave class to take a phone call, unless the lab is on a break. Texting should be extremely limited or non-existent – it really can wait until a break. NO food or drinks are allowed in the lab rooms. You may bring/use a water bottle in the lecture room, but NO food or other drinks are allowed.

In an effort to create the best learning environment possible, all students will be assigned to work in a group – whether in the lab or lecture. You may be surprised how much you can learn from one another, especially from people who you may not have chosen to work with. You are expected to show respect to your classmates and instructors by listening when others are speaking, refraining from discussing non-related issues during class, and not belittling the opinions of others, even when you disagree. Behavior intended to embarrass or ridicule others will not be tolerated and will have serious consequences. Likewise, gossip has no place in the Christian classroom.

Although you may discuss readings and lecture material among yourselves, I expect that you will each do your own work. Each assignment (in its entirety) must be written in your own words, and no electronic files should be exchanged. Another form of plagiarizing would be to copy and paste answers from a reading which involves using someone else's words as if they were your own. Much of the learning process involves articulating the answer in your own words, and bypassing this step will almost guarantee an inadequate understanding of the material. It is also plagiarism if you use old homeworks, lab reports, exams, etc. (from previous BIO101/1001 courses) to get ideas for how to complete current homeworks, labs, and exams.

### **INCOMPLETES AND LATE ASSIGNMENTS**

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All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas.

Unless otherwise specified, assignments turned in late will be graded as follows: 5% reduction per day up to 3 days late; more than 3 days late = no credit.

### **PLNU ACADEMIC HONESTY POLICY**

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Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for further information.

## **PLNU ACADEMIC ACCOMMODATIONS POLICY**

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While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. ([DRC@pointloma.edu](mailto:DRC@pointloma.edu) or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

## **FINAL EXAMINATION POLICY**

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Successful completion of this class requires taking the final examination **on its scheduled day**. The final examination schedule is posted on the [Class Schedules](#) site. No requests for early examinations or alternative days will be approved.

## **PLNU COPYRIGHT POLICY**

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Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.