

**BIO 4097 Biology Senior Seminar**  
**Dr. Dianne Anderson**

**Fall 2020**

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*"Science can only ascertain what is, but not what should be, and outside of its domain value judgments of all kinds remain necessary." --- Albert Einstein*

**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.

**Instructor**

Dr. Dianne Anderson

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Zoom Office Hours: Monday, Tuesday, Wednesday, Thursday from 3:00-4:00PM or by appointment

Join office hours using this link: <https://pointloma.zoom.us/j/95248189087>

**Schedule**

Class meetings: Class will be held on Mondays from 4:30-5:30 PM via Zoom.

Weekly reading/assignment: Short readings with questions or online quizzes will be assigned for each week's discussion. These must be completed and submitted to Canvas prior to the discussion on each topic.

**Required book**

*Every Good Endeavor: Connecting Your Work to God's Work* (2014) by Timothy Keller

**Introduction to the course**

This course is, in many respects, a capstone to your college experience in one of the majors offered by the Biology department. The discussion format that will be used extensively in this course would not work without the background that you have received from the courses within your major. In many class sessions, we will be looking at current bioethical and controversial issues. As we examine issues within the themes of evolution, creation care, and general bioethical topics, we will emphasize the relationship between Christian faith and scientific study. The quality and direction of our discussions will largely be the responsibility of you, the students. In addition to the discussions, you will write a summative essay that addresses your thoughts on either evolution or environmental stewardship (your choice unless you are an Env. Sci. major).

**Course learning outcomes**

**1) Students will analyze, critically evaluate, and discuss ideas, arguments, and differing points of views on various topics that affect science, faith, and morality.**

We will be reading and discussing ideas from a variety of perspectives. In doing so, we want to be hospitable to the ideas of others recognizing that through discourse we can learn from and better

understand each other as we respectfully challenge ideas and allow our thinking to be challenged.

**2) Students will construct a defensible position on particular issues of science and faith in both written and oral formats.**

As part of your training here at PLNU, you have been exposed to various topics that integrate faith and science. Hopefully, through personal reflection, you have arrived at your own definition of 'truth' with regards to some of these issues (although this definition of 'truth' will continue to evolve throughout your life). It is important that you are able to articulate this view in such a way that you can explain and defend your position. This includes fully summarizing your own thoughts, addressing alternative views, and then being able to explain/defend your thoughts to others in a clear and organized manner. This will allow you to hold strong to your values while demonstrating grace and respect towards other's differing viewpoints.

**3) Students will acquire skills in working with others as a member of a team.**

For the discussions, you will be assigned to a team. However, each person in the team should be prepared to present his/her own portion of the presentation. You will be evaluated on the quality of the presentation, including (a) how well your portion flows (beginning to end) and (b) the accuracy and thoroughness of the content. However, you should also work together with your team so that the 2 or 3 portions (teams will be groups of 2-3) also flow well together. No matter what your career and life goals entail, you will frequently need to work effectively in a group setting. Good teamwork involves every person making a contribution. If tasks are assigned and one person does not live up to their part, the whole group suffers. If one person always wants to take charge and run the show, others can feel frustrated or diminished. Leadership does need to occur, but collaboration and compromise are important skills to develop for effective group work. Don't let your teammates down. **A major portion (20%) of the presentation grade will be based on adequate participation, preparation, and ability to work with your team (as assessed by evaluations of your peers).**

**Biology Department and PLNU assessment**

Some of the course assignments, as well as two standardized exams, will also be used as pieces of evidence for the assessment of the effectiveness of both the biology department program learning outcomes (PLO) and PLNU as a whole (core competencies) as required by the university accrediting agency. These assessment purposes and corresponding assignments/exams are shown in the table below. These assignments and exams are required as part of your grade. You will receive points for meeting minimum requirements on the MFT biology exam, and it is important that you do your best on these exams as the results have important implications for the future directions of the department.

<b>Assessment purpose</b>	<b>Corresponding assignment/exam</b>
Core competency: Written communication	ETS Proficiency Profile (exam)
Core competency: Oral communication	Oral presentation on bioethical issue
Core competency: Information literacy	Science/faith essay and oral presentation
Core competency: Critical thinking	ETS Proficiency Profile (exam)
Core competency: Quantitative reasoning	ETS Proficiency Profile (exam)
PLO #1: Biology content knowledge	ETS – Major Field Test in Biology (exam)
PLO #2: Department participation	Spreadsheet survey of participation
PLO #3: Rationally defensible integration of science and faith	Science/faith essay
PLO #4: Preparation for the future	Exit survey

### Student-led bioethics discussion

The format of this course is largely discussion, and most of these class discussions will be led by you, the students. Each small group of students will be responsible for leading one discussion over the course of the semester. PLNU is blessed with very bright students and, although I will join the discussions as a participant, your thoughts and viewpoints are just as valuable as mine.

***My evaluation will be on quality of participation, preparation, and presentation skills, but will in no way be based on positions that you take during the various discussions. You should feel totally free to speak your mind and back up your opinions with good reasoning.*** My main goal is to challenge you to think critically as you approach scientific issues as they interface with faith and life. ***I may interject with certain scientific facts, offer my own views, or challenge your views, to help strengthen your own understanding, not to force you to believe a certain way.***

### Attendance and Academic honesty policies

Students are expected to attend each class session. Class attendance will be kept and the school's policies will be enforced as outlined in the academic handbook and according to the policy attached at the end of this syllabus. Since this is a participation course, your attendance is VERY important. I will keep attendance records and enforce the policy if I sense it is being abused. You can see that attendance, participation, and attitude during these discussions are a major portion of your total grade (20%). There will generally be no makeup opportunities for discussion or participation points. All missed assignments and classes will result in a zero grade.

### Grading

CV and cover letter	25 points
Integration of science & faith essay (evolution, env. stewardship, etc.)	
Annotated bibliography	25 points
Outline	25 points
Final essay	100 points
Presentation on bioethical issues	
Sources for presentation	10 points
Presentation and class discussion	90 points
Completion of discussion pre-questions (8 weeks @ 10 points each) (vocation readings and bioethical discussion readings/quiz)	80 points
Class participation and attitude	50 points
ETS MFT Biology Exam (achieve at least minimum score for full credit)	25 points
Completion of ETS Proficiency Profile	20 points
	<b>TOTAL 450 points</b>

GRADE		GRADE	
A	92%	C	72%
A-	90%	C-	70%
B+	87%	D+	67%
B	82%	D	62%
B-	80%	D-	60%
C+	77%	F	Below 60%

### Class Participation

The key to participation in the class discussions is to not wait until the last minute to do your reading. If you try to participate without having read the material, everyone will know (it will be obvious).

This is the purpose for having the pre-discussion questions/material due prior to our discussion—so that you can reflect on the material and actively take part in the dialog during class.

### **Course credit hour information**

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 1-unit class delivered over 15 weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 38 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules.

### **State Authorization**

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

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## **GENERAL PLNU POLICIES**

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### **PLNU COPYRIGHT POLICY**

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.

### **PLNU ACADEMIC HONESTY POLICY**

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 definitions of kinds of academic dishonesty and for further policy information.

### **PLNU ACADEMIC ACCOMMODATIONS POLICY**

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 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.

## **PLNU ATTENDANCE AND PARTICIPATION POLICY**

Regular and punctual attendance at all **synchronous** class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions (virtual or face-to-face), the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

### **Asynchronous Attendance/Participation Definition**

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

## **SPIRITUAL CARE**

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith. If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#).

## USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If a student is in need of technological resources please contact [student-tech-request@pointloma.edu](mailto:student-tech-request@pointloma.edu).

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

## BIO 4097 Class schedule– Fall 2020 (Details for each week will be posted in Canvas)

DATE	TOPIC	READING/ASSIGN	WHO
<b>Week 1</b> Aug. 17	Intro to Senior Seminar		<u>Professor</u>
<b>Week 2</b> Aug. 24	What makes a good C.V? What makes a good cover letter?	<i>List of sources for presentation due</i>	<u>Professor</u>
<b>Week 3</b> Aug. 31	CV and cover letter workshop	<i>CV and cover letter due</i>	<u>All</u>
<b>Week 4</b> Sept. 7	Student-led discussion #1	Short reading and discussion Q's	<u>Student presenters:</u>
<b>Week 5</b> Sept. 14	Student-led discussion #2	Short reading and discussion Q's	<u>Student presenters:</u>
<b>Week 6</b> Sept. 21	Student-led discussion #3	Short reading and discussion Q's	<u>Student presenters:</u>
<b>Week 7</b> Sept. 28	Student-led discussion #4	Short reading and discussion Q's	<u>Student presenters:</u>
<b>Week 8</b> Oct. 5	Student-led discussion #5	Short reading and discussion Q's	<u>Student presenters:</u>
<b>Week 9</b> Oct. 12	ETS Proficiency exam (45 min.)	<i>Annotated bibliography for essay due</i>	
<b>Week 10</b> Oct. 19	Open Discussion (faith, vocation, finances, etc.)	<i>Expanded outline of essay due</i>	
<b>Week 11</b> Oct. 26	ETS Biology Field exam (2 hours)	<i>Science &amp; Faith Essay due</i>	
<b>Week 12</b> Nov. 2	Vocation #1	Vocation readings/discussion Q's	<u>All</u>
<b>Week 13</b> Nov. 9	Vocation #2	Vocation readings/discussion Q's	<u>All</u>
<b>Week 14</b> Nov. 16	Vocation #3	Vocation readings/discussion Q's	<u>All</u>
<b>Week 15</b> Nov. 23	Student interviews, survey, evaluation	Complete survey & eval.	
<b>Week 16</b> Nov. 30	Finals week – no class		