

BIOLOGY SEMINAR BIO4097 SYLLABUS SPRING 2021 (1 UNIT)

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

"Sometimes when uncertain of a voice from its very loudness, we catch the missing syllable in the echo. In God and Nature we have Voice and Echo " -- Henry Drummond, Natural Law in the Spiritual World,

"It is the modest, not the presumptuous, inquirer who makes a real and safe progress in the discovery of divine truths. One follows Nature and Nature's God; that is, he follows God in his works and in his word." --Henry, Viscount Bolingbroke St. John (1678–1751), Letter to Mr. Pope

INSTRUCTOR: Dr. Mike Dorrell

Dr. Dorrell's contact information:

Rohr Science 158, 619-849-2962, mdorrell@pointloma.edu

Office Hours: M, W 10:30 – 12:30. By appointment... Feel free to set up a time by email. I'm happy to schedule a zoom meeting with you at a time that works.

SCHEDULE

Class meetings: Discussions will be on W from 5:00-6:00 in Latter 1.

COURSE DESCRIPTION

Examination and discussion of selected biological issues with an emphasis on the relationship between Christian faith and scientific study. Course is to be taken by Biology, Biology-Chemistry and Environmental Science majors during their last semester prior to graduation. Offered every year.

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 primary discussion format that will be used in this course would not work without the background that you have received from the courses within your major. We will be looking at current bioethical 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, there will be a summative essay that covers your thoughts on either evolution or environmental stewardship (your choice).

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.

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. [PLO #3 (Bio-BS, Bio-BA) or PLO #5 (Bio-chem, Env. Sci)]

- 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 evaluating your own thoughts, and being able to explain/defend those 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 work with a team to evaluate, present, and lead a bioethical discussion.

- 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), (b) the accuracy and thoroughness of the content, However, you should also work together with your team so that the 3 portions (most teams will be groups of 3) also flows 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 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 you’re your peers and during the facilitation of the discussion in class).**

Assessment purpose	Corresponding assignment
Core competency: Written communication	Science/faith essay and ETS Proficiency Profile
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
Core competency: Quantitative reasoning	ETS Proficiency Profile
PLO #1: Biology content knowledge	ETS – Major Field Test in Biology
PLO #2: Department participation	Spreadsheet survey of participation
PLO #3: Rationally defensible integration of science and faith	Science/faith essay
PLO #4: Preparation for post-graduate career / studies	Student interviews

ATTENDANCE

Class attendance will be kept and the school's policies will be enforced as outlined in the academic policy near the end of this syllabus. Since this is a participation course, your attendance is VERY important. You can see that attendance, participation, and attitude during these discussions are a major portion of your total grade (20%). Students are expected to attend each class period. There will be no makeup opportunities for discussion or participation points. All missed assignments and classes will result in a Zero grade.

Grading: (approximate; I reserve the right to adjust percentages as appropriate)

Essay: Integration of science & faith (evolution or env. stewardship)	100 points
Presentation for the bioethics discussion	90 points
Completion of discussion pre-questions	90 points
Class participation and attitude	100 points
Homework (essay reference list, outline, CV, cover letter, etc)	95 points
ETS Exam score	25 points

GRADE		GRADE	
A	93%	C	73%
A-	90%	C-	70%
B+	87%	D+	67%
B	83%	D	63%
B-	80%	D-	60%
C+	77%	F	Below 60%

*****Note that we have an ETS Major Field test. The exam is 2 hours (instead of the normal 1 hour class time-frame), so plan accordingly to attend either the Monday or Wednesday offerings. You MUST take the ETS exam to pass this course.*****

Discussion readings: The group leading each discussion will find / prepare some short material to distribute to the class as advanced preparation for discussion.

- **The reading should be recent enough to be relevant (generally within 3-5 years).**
 - Examples: (Anything that helps prepare students for discussion; be creative)
 - 1 or 2 short informational readings,
 - readings on the general viewpoints of different sides of the issue.
- Create a short (~5) list of questions to keep everyone accountable for the reading with a couple of thought questions at the end for students to consider for discussion.
 - ***due to me by the end of Tues., 1 week (8 days) ahead of scheduled discussion***
- **ALL STUDENTS:** you must complete the reading and Q's on Canvas by Monday night prior to discussion meeting.

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 the Saturday prior to our discussion—so that you can reflect on the material and actively take part in the dialog on Wednesday evening.

See assignment description and rubrics expectations for the oral presentation and the science/faith essay.

CLASS SCHEDULE

Topics and team member names will be added based on survey and group assignments.

Visit Canvas for readings and questions.

DATE	TOPIC	READING/ASSIGN	WHO
Week 1 March 3	Intro to Senior Seminar Select teams, topics, and dates		<u>Professor</u>
Week 2 March 10	CV and cover letter information Information on a good presentation / prep for student- led discussions	Pre-class information on presentations	<u>Professor</u>
Week 3 March 17	Vocation #1	Vocation readings/discussion Q's	<u>All</u>
Week 4 March 24	Inequities in science	Reading on eye color and intelligence	<u>Professor</u>
Week 5 March 31	CV and cover letter peer feedback (asynchronous)	CV's and cover letters due Monday. Peer feedback due Friday.	<u>All</u>
Week 6 April 7	ETS Proficiency exam (45 min.)	<i>Info Literacy Assign #2 due (annotated bibliography for essay)</i>	<u>All</u>
Week 7 April 14	Student-led discussion #1	Short reading and discussion Q's	<u>Student presenters:</u>
Week 8 April 21	Student-led discussion #2	Short reading and discussion Q's <i>Expanded outline of essay due</i>	<u>Student presenters:</u>
Week 9 April 28	Student-led discussion #3	Short reading and discussion Q's	<u>Student presenters:</u>
Week 10 May 5	Vocation #2 (asynchronous)	Vocation readings/discussion Q's	<u>All</u>
Week 11 May 12	Student-led discussion #4	Short reading and discussion Q's	<u>Student presenters:</u>
Week 12 May 19	ETS Biology Field exam (2 hours)	<i>Science & Faith Essay due</i>	<u>All</u>
Week 13 May 26	Student-led discussion #5	Short reading and discussion Q's Make sure that departmental survey is completed	<u>Student presenters:</u>
Week 14 June 2	Student interviews / suggestions and Q and A with the professor		<u>All</u>
Week 15 June 9	Finals week - no class		

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PLNU COPYRIGHT POLICY

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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

If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. See [Disability Resource Center](#) for additional information.

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 can file a written report which may result in 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. See [Academic Policies](#) in the Undergraduate Academic Catalog.