



Readings in Evolutionary Medicine (BIO 6021, 1 unit)
Biology Department, Fall 2022
Dr. Dianne L. Anderson

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 is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Course description:

This semester, the special topics course will focus on Evolutionary Medicine, an approach to understanding human physiology, human diseases/conditions and public health from an evolutionary perspective. This is a graduate course focused on the reading, understanding, and presentation of relevant journal articles.

Course logistics:

Class meetings will be in-person on eight Tuesdays from 6:00-8:00PM in Latter 2. BIO 6021 is scheduled for any Tuesdays not used for the Perspectives on Science course. BIO 6021 schedule is built entirely around the Perspectives on Science speaker schedule so that students can take both courses without conflicts. So - BIO 6021 meets more often in September and will be done at the end of November.

Instructor:

Dr. Dianne Anderson

dianneanderson@pointloma.edu

619-849-2705/Office is located in Rohr Science #146

Office hours Mondays, Wednesdays, and Fridays 1:30-3:00 or zoom by appointment

Course learning outcomes:

1. Distinguish between the content and value of review articles, original research articles, commentaries, and clinical briefs.
2. Describe various research methods used in the field of evolutionary medicine.
3. Identify the research question, claim, evidence, and justification in an original research article.
4. Relate claims made in original research articles to a broader context, with an understanding of the possible impacts on clinical science.
5. Effectively communicate complex scientific ideas in informal discussions, as well as in brief summative presentations.
6. Experience the communal enjoyment that comes from group exploration of new ideas.

Required texts:

There will be a combination of review papers, clinical briefs, and/or original research papers to read before each of the class sessions. The papers will either be posted on Canvas or you will be able to easily access them online. Many of the papers will come from the open-access journal titled Evolution, Medicine, & Public Health (EMPH).

Assessment and grading:

Before each course meeting, complete the assigned reading, then write and submit the pre-class assignment:

1. For a research article, identify the research question, claim, evidence, and justification, and describe the research methods.
2. For all other readings (except for clinical briefs), submit a list of 5 main points of each reading, as well as 2 possible discussion questions for each article

For each class session, a different student will be assigned to lead the discussion two of the readings. On the last meeting of the semester, you will present an EMPH article of your choice. There is no final exam in this course.

A grade of B- or better is required for credit: A = 92%, A- = 90%, B+ = 88%, B = 82%, B- = 80%

Assignment	Possible points
Pre-class assignments (8 wks x 10 pts/week)	80 pts.
Meaningful participation during class discussions showing obvious knowledge of and understanding of the reading material (8 wks x 10 pts/week)	80 pts.
Leading two article discussions (2 wks x 10 pts/week)	20 pts
Preparation and presentation (10 minutes) of one original research, review or commentary EMPH article	20 pts
Total	200 pts.

Incomplete and late assignments:

All assignments are to be submitted/turned in by due date. Assignments submitted up to 24 hours late will be worth up to 50%, but after 24 hours late, no credit will be earned. Incompletes will only be assigned under extremely unusual circumstances.

Readings in Biology - Evolutionary Medicine
Biology Department, Fall 2022 Course schedule
(detailed reading list on Canvas)

Date	Topics
Aug. 30	Intro to course and discussion of general evolutionary medicine articles The challenges of conducting evolutionary medicine research Assignment of discussion leaders for each article Health Sciences version of the Conceptual Inventory of Natural Selection (CINS)
Sept. 13	Reproduction: Breastfeeding and C-sections
Sept. 20	Mismatches: Allergies, skin color, and fever
Sept. 27	Chronic diseases: Multiple sclerosis
Oct. 4	Chronic diseases: Cardiovascular disease, Type II Diabetes and lower back pain
Oct. 25	Cancer
Nov. 22	Infections
Nov. 29	Sleep

GENERAL PLNU POLICIES

PLNU SPIRITUAL CARE

Balboa Campus:

PLNU strives to be a place where you grow as whole persons. To this end we provide resources for our graduate students to encounter God and grow in their Christian faith. At the Balboa campus we have an onsite chaplain, Rev. Kevin Portillo who is available during class break times across the week. If you have questions, desire to meet with Rev. Portillo or prayer requests you can contact him directly at KevinPortillo@pointloma.edu.

Liberty Station Campus:

PLNU strives to be a place where you grow as a whole person. To this end we provide resources for our Graduate students to encounter God and grow in their Christian faith. At the Liberty Station campus we have an onsite chaplain, Rev. Dave Hazel, who is available during class break times across the week. If you have questions, desire to meet or share a prayer request with Rev. Hazel you can contact him directly at dhazel@pointloma.edu or feel free to call or text (913-231-3975).

Mission Valley:

PLNU strives to be a place where you grow as a whole person. To this end we provide resources for our Graduate students to encounter God and grow in their Christian faith. At the Mission Valley (MV) campus we have an onsite chaplain, Rev. Gordon Wong, who is available during class break times across the week. If you have questions for, desire to meet or share a prayer request with Rev. Wong you can contact him directly at mcvhaplain@pointloma.edu or gordonwong@pointloma.edu.

Rev. Wong's cell number is 808-429-1129 if you need a more immediate response.

In addition, on the MV campus there is a prayer chapel on the third floor which is open for use as a space set apart for quiet reflection and prayer.

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 the [Academic Honesty Policy](#) in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

USE OF TECHNOLOGY

In order to be successful in the online or hybrid 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, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams require a computer with a camera (tablets are not compatible) to complete exams online.

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

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course. Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and

support are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix

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. See [Academic Policies](#) in the Graduate and Professional Studies Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.