



**Special Topics: Readings in Health & Human Biology (BIO 6090 Section 1, 1 unit)
Biology Department, Spring 2020**

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:

Special topics courses are offered occasionally to focus on a topic of interest, or to teach a course for the first time. This semester, the special topics course will focus on Health & Human Biology. This is a graduate course that will concentrate on the reading, understanding, and presentation of relevant journal articles, websites, and government documents. The subject area will be the main public health, societal, and medical measures which were introduced over the past 150 years to improve human health and longevity as well as some relevant diseases and conditions. The current difficulties with extending human longevity will be explored.

Course logistics:

Class meetings will be on Tuesdays from 5:00-7:00 PM approximately every 2 weeks in Sator 116. The schedule is built entirely around the Perspectives on Science schedule so that students can take both courses. Since this is a one-unit course and meets on average every two weeks for two hours, it is expected that 4 hours of preparatory work will be required before each session. In other words, the average amount of time on activities related to the course would be 3 hours per week reading, writing, preparing, and attending.

Instructor:

Dr. Paul Silva
psilva777@pointloma.edu

Office hours in Sator 116 thirty minutes before class. Depending on students' preference I may also run optional short public health videos during this time to help with understanding.

Course learning outcomes: By the end of the course the student should be able to explain the complementary nature of the public health system and medical system in the US.

1. The student will be able to summarize the more important underlying biological determinants of world and US health, including key globally important diseases.
2. The student will be able to explain how life expectancy has doubled and human health greatly improved over the past 150 years by identifying the main improvements in public health, societal organization, and medical care that most affect overall health.
3. The student will have examined the challenges to continued improvement in health in the face of recent mild decreases in US longevity despite continuing medical advances.
4. The student will have analyzed the effects of unhealthy lifestyles on longevity.
5. The student will have a knowledge basis for developing ways to think about how best to improve our general population health.

Open access course materials, no textbook: There will be 4 articles or websites to review for each of the class sessions. Purchase of a textbook is not necessary.

Assessment and grading:

Before each course meeting, submit a list of 5 main points of each reading, as well as 2 possible discussion questions for each reading. These assignments are due at midnight prior to the class session to discuss particular readings.

For each class session, each student will lead the discussion of one reading. All students need to show good knowledge of the materials discussed during the session. Each student will contribute five to ten minutes to a group power point presentation on a topic once during the course.

The course is pass/fail. To obtain a passing grade all assignments must be completed and classes attended. In case of emergencies or sickness substitute assignments will be given and/or sessions scheduled. The maximum number of missed sessions under all circumstances is two. In the case of one or two excused absences, points will be lost and will need to be made up with extra assignments. Missing three classes results in no credit for the course.

There is no final exam in this course.

Assignment	Possible points
Pre-class assignments: 5 main points/2 discussion questions (7 wks x 10 points/week)	70 pts.
Meaningful participation during class discussions showing obvious knowledge of and understanding of the reading material (7 wks x 10 points/week)	70 pts.
Leading seven reading discussions (7 wks x 10 points/week)	70 pts
Preparation and group presentation (2-10 ppt slides each, 5-10 minutes each)	20 pts

Total	230 pts.
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Incomplete and late assignments:

All assignments are to be submitted/turned in by midnite prior to the class session when they are due—including assignments posted in Canvas. Incomplete grades will only be assigned under extremely unusual circumstances.

General PLNU Policies

SPIRITUAL CARE

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 each campus location, we have an onsite chaplain who is available during class break times across the week. If you have questions, a desire to meet with the chaplain or prayer requests you can send an email to: gradchaplainmissionvalley@pointloma.edu

In addition there are resources for your Christian faith journey available at the [Graduate & Professional Student Spiritual Life web page](#).

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](#) in the Graduate and Professional Studies Catalog 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 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.

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 Graduate and Professional Studies Catalog for additional detail.

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Course schedule

Week/ Date	Topics	Articles, web sites, videos
Week 1 Jan. 21	BACKGROUND 1. Introduction, WHO, what is health? Life expectancy USA 2. Public Health key definitions 3. Epidemiology 4. World Health	1. https://www.who.int/about/who-we-are/constitution 2. https://www.cdc.gov/publichealth101/documents/public-health-key-terms.pdf 3. https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section1.html 4. https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death Extra credit: https://ourworldindata.org/life-expectancy Extra credit: https://www.google.com/amp/s/slate.com/technology/2013/09/life-expectancy-history-public-health-and-medical-advances-that-lead-to-long-lives.amp (Laura Helmuth article)
Week 2 Feb. 4	WATER 1. Clean water 2. Wastewater treatment 3. Giardiasis 4. Cryptosporidiosis	1. https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section2.html 2. https://www.nber.org/papers/w10511 (Click on PDF to download) 3. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Giardiasis.aspx 4. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Cryptosporidiosis.aspx
Week 3 Feb. 11	GARBAGE, FLIES, VERMIN 1. Plague - California 2. Plague - CDC 3. Flea born typhus - California	1. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/FactsAboutPlagueinCA.pdf 2. https://www.cdc.gov/plague/index.html

	4. Flea born typhus - CDC	3. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/FleaBorneTyphusFlier.pdf 4. https://www.cdc.gov/typhus/murine/index.html
Week 4 March 24	MOSQUITOS 1. Malaria, the disease 2. History of elimination of malaria in USA 3. Malaria major problem in Africa 4. History yellow fever in USA	1. https://www.cdc.gov/malaria/about/disease.html 2. https://www.cdc.gov/malaria/about/history/elimination_us.html 3. https://www.who.int/news-room/fact-sheets/detail/malaria 4. https://www.google.com/amp/outbreaknewstoday.com/a-short-history-of-yellow-fever-in-the-us-89760/amp/
	Topics for group presentation chosen	
Week 5 March 31	HOUSING AND NUTRITION 1. Tuberculosis - World with section on HIV 2. Tuberculosis perceptions 3. Malnutrition including obesity 4. Overcrowding	1. https://www.who.int/news-room/fact-sheets/detail/tuberculosis 2. https://pdfs.semanticscholar.org/6319/b59a1dbd9f968066ea0cb7a09964e3a4ebb6.pdf (Explanations for 20th century tuberculosis decline) 3. https://www.who.int/news-room/fact-sheets/detail/malnutrition 4. https://www.academia.edu/25934732/EDITORIALS_453_Overcrowding_and_infectious_diseases_-_when_will_we_learn_the_lessons_of_our_past
Week 6 April 14	MATERNAL CHILD HEALTH 1. Road to modern obstetrics 2. World obstetrics 3. Breastfeeding - natural passive immunization and biome 4. World child health	1. https://blog.everymothercounts.org/the-disturbing-shameful-history-of-childbirth-deaths-7b32ad1d8178 2. https://ourworldindata.org/maternal-mortality 3. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)01024-7/fulltext (Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krusevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet. 2016;387(10017):475–490. doi: 10.1016/S0140-6736(15)01024-7)

		4. https://ourworldindata.org/child-mortality
Week 7 April 28	<p>IMMUNIZATION</p> <ol style="list-style-type: none"> 1. History vaccines 2. Recommended vaccines 3. San Diego hepatitis A outbreak controlled 4. History of Spanish flu epidemic 	<ol style="list-style-type: none"> 1. https://vaccine-safety-training.org/history-of-vaccine-development.html 2. https://www.cdc.gov/vaccines/vpd/vaccines-diseases.html 3. https://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs/community_epidemiology/dc/Hepatitis_A.html 4. https://www.cdc.gov/flu/pandemic-resources/1918-pandemic-h1n1.html
Week 8 We don't meet in class	<ol style="list-style-type: none"> 1. Social, psychological, and religious integration 2. Cardiovascular disease: further big gains possible with lifestyle changes; incremental gains with medical breakthroughs 3. Several year fall in US life expectancy continues 4. Substance abuse/harms <p>Extra credit: drug overdose deaths - CDC</p> <p>Extra credit: Substance abuse deaths San Diego-Methamphetamine</p> <p>Extra credit: CDC - deaths from stimulant drugs</p>	<ol style="list-style-type: none"> 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3671693/ 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4759485/ 3. https://www.aafp.org/news/health-of-the-public/20181210lifeexpectdrop.html (Mishra, S. Does modern medicine increase life expectancy: Quest for the moon rabbit? Indian Heart Journal. 2016 Jan-Feb; 68(1): 19–27.) 4. https://www.nhs.uk/news/lifestyle-and-exercise/study-compares-drug-harms/ <p>Extra credit: https://www.cdc.gov/nchs/data/databriefs/db329-h.pdf</p> <p>Extra Credit: https://www.countynewscenter.com/local-meth-deaths-set-record</p> <p>Extra Credit: https://www.cdc.gov/mmwr/volumes/68/wr/mm6817a3.htm?s_cid=mm6817a3_e</p>

