BIO 6082: Research Proposal and Pilot Study (1 unit)
Biology Department
Dr. Dianne Anderson <u>   **Spring 2025**</u>

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 for BIO6082
Students identify a biology-related research problem, then prepare a brief literature review, research question, and research design, then carry out the pilot study with abbreviated analysis. For students planning to complete a thesis, the pilot study provides a chance to do important groundwork before launching into the actual thesis work. For students choosing the non-thesis option, the pilot study provides a glimpse into the research process used to generate knowledge.

Course learning outcomes
1. Develop a research question and construct a methodology to answer the question (continuation of BIO 6043).
2. Carry out the research by collecting and analyzing the data to answer the question.
3. Create and present both a written report and an oral presentation of the research study.

Course credit hour information
It is expected that the completion of the independent research and presentation required for this course will take approximately 38 hours, therefore, this class meets the PLNU credit hour policy for a 1-unit class.

Instructor and contact information
Due to the independent nature of this course, it will be important to contact me on an individual basis, either by e-mail, phone, zoom, or in person. I am happy to set up appointments at a time that works well for you!

Dianne Anderson, Ph.D.   dianneanderson@pointloma.edu   Rohr Science 146, (619) 849-2705

Class sessions and attendance
This course will only have 1 in-person group meeting for student presentations of the pilot studies. However, 2 zoom meetings will be scheduled at a time that works for everyone. In addition, each student should communicate with me as needed.

Assignments and grading
Grading scale: A 90% B 80% C 70% D 60%   F 50%
Final course grades will be recorded with – added to the lowest 2% and + added to the highest 2% within each range. For example, 91% = A- and 88% = B+

All assignments must be submitted to Canvas by midnight on the due date in order to earn full credit. Let me know if there are serious extenuating circumstances that would warrant an extension on deadlines.

Last day to add course: January 26, 2025   Last day to drop course: January 26, 2025

Spring 2025 BIO 6082 Course schedule and assignments

Assignment & Due Date	Description
Zoom #1 Mid-January	Discussion about the transitions from the fall class to the pilot study class, including the creation of an outline of the lit review with headings and subheadings (if appropriate) to submit for feedback before the lit review is due.
Lit review and Methodology 75 points February 1	Based on feedback from BIO 6043, revise and submit your introduction, literature review, methodology (including all documents needed to collect your data such interview questions, tests, etc.), and references. The literature review should have subheadings and citations and be written in paragraph form. The methodology section must be written in paragraph form with these four subheadings (see Canvas rubric for details): - Research design and justification (quantitative or qualitative) - Study setting and participants - Data collection (include instruments or tasks) - Data analysis (what analysis you plan to do). - References in APA format Consider having your paper reviewed by PLNU's **GPSWritingCenter@pointloma.edu** (more info provided later in this document). It is essential that you collect enough data to answer your question. To do this, you must have sufficient data to work with and to show that you can analyze and summarize it effectively. Surveys must have at least 10 questions with at least 2 open-ended questions. A pilot study cannot be based on a survey with only yes or no questions. It is strongly suggested that you collect some written answers or conduct interviews. Data collection minimums are 6+ interviews approximately 20 minutes long or 20+ survey responses using an instrument with 20+ MCQ or 10+ short answer. Submit a document to Canvas showing comments/feedback from BIO 6043, as well as the changes you have made. Below this "messy" version, add a "clean" version in the same document.
Zoom #2 Mid-February	Discussion about planned data collection and analysis
Data collection 25 points March 1	Collect all of your data, then submit a summary document (1-2 paragraphs) on Canvas describing how the data collection went (do not submit the actual data). How did it go? Often, what we plan is not actually what happens. No analysis of results is required at this point.
Peer review of data analysis 25 points March 15	Transcribe/code/analyze your data and write your data analysis section and conclusions sections. Explain your findings in detail and provide specific evidence for any claims that you make. Discuss your data analysis with another student.
Data analysis 100 points April 1	After incorporating peer feedback that you received, submit your data analysis and conclusions on Canvas.
Peer review of slides (Optional)	Create and present a 15-minute PowerPoint presentation summarizing your pilot study to your peers. Discuss your PPT slides with another student via zoom, then you will provide feedback on theirs.
Pilot Study Presentation 200 points Approx. April 15	After incorporating peer feedback that you received, submit your presentation on Canvas and give your presentation. Be prepared to answer questions about your study. See the Pilot Study Presentation rubric for details.
Pilot Study Report 500 points May 5	Create a written Pilot Study Report summarizing the project and your results, see rubric on Canvas for details. Paper is to be approximately 8-10 pages in length, double spaced.

PLNU GENERAL POLICIES AND INFORMATION

PLNU Spiritual Care

Bakersfield 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 Bakersfield campus we have an onsite chaplain, Rev. Brent Kall, who is available during class break times across the week. If you have questions, a desire to meet or share any prayer requests with Rev. Brent Kall, you may contact him directly at bkall@pointloma.edu. Also, there is a weekly Email Newsletter called "The Encourager" that provides a brief devotional and all his contact information.

Balboa 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 Balboa campus, we have an onsite chaplain, Rev. Kevin Portillo, who is available during class break times across the week. If you have questions, a desire to meet or share any prayer requests with Rev. Portillo, you may 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 who is available during class break times across the week. If you have questions, a desire to meet or share any prayer requests with Dr. Sylvia Cortez Masyuk, you may contact her directly at scortezm@pointloma.edu.

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 who is available during class break times across the week. If you have questions for or a desire to meet or share any prayer requests with the onsite chaplain, you may email Dr. Sylvia Cortez Masyuk at scortezm@pointloma.edu.

In addition, on the MV campus there is a prayer chapel on the third floor. It 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. For all student appeals, faculty and students should follow the procedures outlined in the University Catalog. See Graduate Academic and General Policies for definitions of kinds of academic dishonesty and for further policy information.

Artificial Intelligence (AI) Policy

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) in this course. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. Please use the following sources to guide your citations when using AI.

[MLA Style Center: Citing Generative AI](#)

[APA Style: How to Cite ChatGPT](#)

[Chicago Manual of Style: Citing Content Developed or Generated by AI](#)

PLNU Academic Accommodations Policy

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). 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 work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. The EAC makes accommodations available to professors at the student's request.

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. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

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. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any special accommodations.

Language and Belonging

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality.

If you (or someone you know) have experienced other forms of discrimination or bias, you can find more information on reporting and resources at www.pointloma.edu/bias.

Sexual Misconduct and Discrimination

In support of a safe learning environment, 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 accommodations and resources 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, faculty and staff are 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 or as shown in the PLNU Spiritual Care section of this syllabus.

If you (or someone you know) have experienced other forms of discrimination or bias, you can find more information on reporting and resources at www.pointloma.edu/bias

GPS Academic Resources

PLNU offers the following free academic resources virtually for Graduate Professional Studies (GPS) Students. Visit myPLNU through the links below for more information.

- The GPS Writing Center offers:
    - Zoom Writers Workshops offered each quad on a variety of helpful topics
    - One-to-one appointments with the Writing Coach
    - Microlearning YouTube Video Library for helpful tips anytime
    - Research Help Guide to help you start your research
    - The physical office is located on the third floor of the Mission Valley Regional Center off the student lounge
- Academic Writing Resources Course: Found on your Canvas Dashboard, this course is non-credit with 24/7 access, no time limits, and self-paced content. Watch a quick video run-through and take time now to explore!
- Grammarly: Students have unlimited FREE access to Grammarly for Education, a trusted tool designed to help enhance writing skills by providing real-time feedback, identifying areas for improvement, and providing suggestions. Grammarly's Generative AI is NOT available with our student accounts.
- Tutoring: Students have access to 24/7 live or scheduled subject tutoring through Tutor.com, including a Paper Drop-Off Service with feedback within 12 hours.

We are here to support you! Contact us anytime: GPSWritingCenter@pointloma.edu