

BIO 6082: Research Proposal and Pilot Study (1 unit)

Biology Department

Dr. Dianne Anderson

Spring 2024

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 meeting for student presentations of the pilot studies. However, regular communication with me by e-mail, phone or in-person is highly recommended so that feedback can be given in time for modification before due dates, and there will be required interactions via zoom 2-3 times during the course.

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 21, 2024

Last day to drop course: March 3, 2024

Spring 2024 BIO 6082 Course schedule and assignments

Assignment	Description	Due date
<i>Methodology</i> 75 points	<p>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 methodology section must be written in paragraph form with these four subheadings (see Canvas rubric for details):</p> <ul style="list-style-type: none"> - 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 <p>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. <u>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.</u></p>	February 1
<i>Data collection</i> 25 points	Collect all of your data, then submit a summary document (1-2 paragraphs) on Canvas describing <u>how</u> the data collection went (do not submit the actual data). How did it go? Often, what we plan, and what actually takes place are different. No analysis of results is required at this point.	March 1
<i>Peer review of data analysis</i> 25 points	Transcribe/code/analyze your data and write your data analysis section and conclusions sections. What are your results, and what do they mean? Explain your findings in detail and provide specific evidence for any claims that you make. Discuss your data analysis with 2-3 others via zoom. Peers will provide data on your analysis, and you will provide feedback on theirs.	March 15
<i>Data analysis</i> 100 points	After incorporating peer feedback that you received, submit your data analysis and conclusions on Canvas.	April 1
<i>Peer review of slides</i> 25 points	Create and present a 15-minute PowerPoint presentation summarizing your pilot study to your peers. Discuss your PPT slides with 2-3 others via zoom. Peers will provide data on your slides, and you will provide feedback on theirs.	One week before presentations
<i>Pilot Study Presentation</i> 200 points	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.	Approx. Apr. 15 (day/time chosen by students)
<i>Pilot Study Report</i> 500 points	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.	May 1

PLNU General Policies

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 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, 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, Rev. Dave Hazel, 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. Hazel, you may 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 who is available during class break times across the week. If you have questions for, a desire to meet or share any prayer requests with the onsite chaplain, you may email them at mcvhaplain@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. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Graduate Academic and General Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

During the first week of class, you will be asked to submit an Academic Honesty Verification Statement. Submitting the statement is a requirement of this course. By submitting the Academic Honesty Verification Statement, you will be verifying all assignments completed in this course were completed by you. Carefully review the Academic Honesty Statement below. Statement: “In submitting this form, I am verifying all the assignments in this course will be completed by me and will be my own work.”

Artificial Intelligence (AI) Policy

Use of Artificial Intelligence (AI) tools (e.g., ChatGPT, iA Writer, Marmot, Botowski) is not permitted, and use of these tools will be treated as plagiarism.

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.

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.

You may report an incident(s) using the [Bias Incident Reporting Form](#).

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.

PLNU Attendance and Participation Policy

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements.

If the student is absent for more than 10 percent of class sessions, 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 withdrawal date or, after that date, receive an “F” grade.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements. Refer to [Academic Policies](#) for additional detail.

Synchronous Attendance/Participation Definition

For synchronous courses that have specific scheduled meeting times (including in-person, hybrid, and synchronous online courses), absences are counted from the first official meeting of the class regardless of the date of the student’s enrollment. For courses with specific attendance requirements, those requirements are outlined in the course syllabus.

Online Asynchronous Attendance/Participation Definition

Students taking online courses with no specific scheduled meeting times are expected to actively engage throughout each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes, but is not limited to:

- Engaging in an online discussion
- Submitting an assignment
- Taking an exam
- Participating in online labs
- Initiating contact with faculty member within the learning management system to discuss course content

Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.

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 requires 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.

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!
- **[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**