

# **Biology Department**

# BIO 6083 Thesis A,B,C,D,E,F (6 units)

# 2025

Meeting day/times: TBA	Instructor title and name: Dianne Anderson	
Meeting location: TBA	<b>Phone:</b> 619-849-2705	
Final exam: N/A	E-mail: dianneanderson@pointlome.edu	
Office: Rohr Science 146	Office location and hours: by appointment	

### **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**

In BIO 6083, students write a thorough literature review and bibliography related to their chosen biology education problem, then design, carry out, and analyze the results of their original research, draw conclusions, and propose implications of their findings. This process culminates with the completion of the student's written thesis, as well as a public presentation of the research. Students register for each thesis unit (6083 a through f) in sequence corresponding to the 6 units necessary to complete the thesis requirement. Students may register for as many as three thesis units in a single semester (i.e., 6083a, 6083b, and 6083c) or as few as one unit. At the end of each semester a grade of Credit/No Credit is issued reflecting the student's satisfactory progress toward thesis completion. If in the final semester (BIO 6083f) of thesis enrollment the student

has not completed all requirements for the thesis, the student is automatically enrolled in thesis extension status for each subsequent semester until the thesis is completed. Graded Credit/No Credit. A thesis extension fee is charged (see fee schedule) for each semester of thesis extension.

This course involves a great deal of independent work by the student, as well as periodic meetings with the thesis advisor for direction. Each student will be assigned 2 additional faculty members to serve on the thesis committee. These committee members will read and comment on the thesis proposal as well as the final thesis draft, and will attend and provide feedback on the oral defense of the thesis. Together, the three professors will determine if the student earns the credit and is awarded the final thesis unit.

# COURSE LEARNING OUTCOMES (one for each unit of BIO 6083)

BIO6083a: Prepare proposal (inclu	cluding purpose, question(s), t	theory, methodology, ar	nd lit review), and clear pr	oject proposal with committee
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BIO6083b: Finalize protocols and write, then submit IRB proposal

BIO6083c: Collect data

BIO6083d: Analyze data, and write results section
BIO6083e: Write conclusions and finalize thesis report

BIO6083f: Prepare and submit journal manuscript, and give oral defense of project

## PROGRAM LEARNING OUTCOMES ASSESSED IN THIS COURSE

Three of the four PLO's will be assessed by three professors using the rubric at the end of this document upon completion of the thesis project:

- 1. Discuss major concepts and theories in biology.
- 2. Carry out and communicate various experimental methods and types of data analysis.
- 3. Demonstrate knowledge and skills in critical thinking, such as analysis and synthesis, as applied to primary literature in the field of biology, as well as in science education.

# **REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES**

There are no required textbooks or supplies for this course, but the document "PLNU Biology Thesis Guidelines" provides detailed information as to how the thesis work should be done. It is important that students read these guidelines before beginning their thesis, and then refer to the document as their work progresses.

### **GRADING**

Credit/No credit is assigned based on the satisfactory completion of unit as described above; no letter grades are given.

Incompletes will only be assigned under extremely unusual circumstances.

#### **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 who is available during class break times across the week. If you have questions for, desire to meet or share a prayer request please email mcvhaplain@pointloma.edu.

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 RECORDING NOTIFICATION

In order to enhance the learning experience, please be advised that this course may be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized personnel. Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

#### 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 <a href="Graduate Academic and General Policies">Graduate Academic and General Policies</a> for definitions of kinds of academic dishonesty and for further information.

# **ARTIFICIAL INTELLIGENCE (AI) Policy**

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc) to generate ideas, but you are not allowed to use AI tools to generate content (text, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor. AI must be cited in text and in a reference list at the end in APA format.

### **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 <u>Technology and System Requirements</u> 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 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.

### 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 <a href="mailto:pointloma.edu/Title-IX">pointloma.edu/Title-IX</a>. 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.