

BIOL 4850S - Problems in Forensic Biology

Fall 2026 Syllabus, Section 01, CRN 43630,

Credit hours: 3

Instructor

Reza Alaeddini

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Public Instructor Information

Instructor Title: Assistant Professor of Forensic Science

Instructor Professional Qualifications: PhD, Chemical and Biomolecular Engineering, University of Sydney, Australia, 2010

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Course Description

4850S. Problems in Forensic Biology. Special forensic biological problems for which materials and equipment are available and for which the student is qualified. Prereq.: Senior standing or consent of the chairperson. 1-3 s.h.

This course provides a structured framework for undergraduate students to conduct independent research under faculty mentorship. Students engage in the full research lifecycle: formulating a testable research question, conducting a comprehensive literature review, designing a robust methodology (quantitative, qualitative, or experimental), collecting and analyzing data, and presenting their findings. The curriculum emphasizes the development of transferable research skills, ethical scientific conduct, and professional academic writing, accommodating diverse disciplinary approaches from the natural sciences, social sciences, and humanities. The final output could be a research paper, a professional research poster or a hardware artifact suitable for presentation at academic conferences.

Course Readings

Group	Title	Author	ISBN
Optional	Scientific Writing and Communication: Papers, Proposals, and Presentations	Angelika Hofmann	978-0190278540

Optional Textbook:

Scientific Writing and Communication: Papers, Proposals, and Presentations, Third Edition, covers all the areas of scientific communication that a scientist needs to know and master in order to successfully promote his or her research and career. This unique "all-in-one" handbook begins with a discussion of the basic principles of scientific writing style and composition and then applies these principles to writing research papers, review articles, grant proposals, research statements, and résumés, as well as to preparing academic presentations and posters.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Syllabus	Course Introduction	Review Syllabus
8/31	Project Initiation	Project Initiation	Topic selection; formulating the research question; initial literature scoping; identifying key methods Set up and share Zotero and OneNote
9/7	IRB application	IRB application	Submit Research Permission Application to university Research Office
9/14	Proposal & Materials	Proposal & Materials	Finalizing research design; creating detailed timeline; finalizing required resources.

9/21	Biweekly Update (every two weeks)	Biweekly Update	Biweekly Update, due in OneNote
10/5	Biweekly Update	Systematic data generation, collection, or observation	Biweekly Update, due in OneNote
10/19	Biweekly Update	Analysis and Synthesis	Biweekly Update, due in OneNote
11/2	Biweekly Update	Translating research into poster format; designing visual elements; drafting text; creating figures/tables	Biweekly Update, due in OneNote
11/16	Biweekly Update	Final revisions; formatting the poster; preparing for print	Biweekly Update, due in OneNote
11/30	Biweekly Update	What is your suggestion to further this research in future?	Biweekly Update, due in OneNote

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.