

2019 Syllabus for BIOL487: Directed Research

308 ISC

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Office Hours: Mon/Wed 1:30-3:00 & T 2:00-3:00

The schedules and policies associated with this course may be subject to revision or change as a consequence of changing circumstances or events. Reasonable notification will be provided to students prior to any major changes in course policies or procedures.

Course Description & Goals

This course provides an opportunity for individual students to conduct research in a specific area of study, completed under the direction of a faculty mentor.

The primary objective of this course is to provide hands-on and authentic experience with the scientific research process.

LEARNING OUTCOMES are to:

1. Describe the context of the “reproducibility crisis” in science
2. Identify areas where specific manuscripts are not reproducible
3. Hone your writing skills
4. Read and synthesize relevant and contemporary literature
5. Adopt a reproducible workflow for this and future research projects
6. Communicate your scientific knowledge in meaningful and effective ways
7. Overcome challenges inherent in scientific research

GRADES in this class will be more closely tied to your growth and development as a researcher in the following areas than they will be towards specific tasks or competencies.

The format of this class will be a collaborative and iterative writing format. Your responsibility will be to have new material (at least 100 new words, or at least 200 edited words) prepared in the manuscript by every Tuesday at 11pm. My responsibility will then be to have read, commented on, and/or edited the new material by Thursday at 11pm. This collaborative writing will be managed through the RStudio/GitHub reproducible framework.

By the end of the semester, I expect you to have accomplished the following:

- Read one relevant article per week and summarize its main points in the annotated bibliography
- Draft the introduction, methods, results, and discussion of our research manuscript in JWM format.

Percentage	Grade
≥ 94	A
90-93.9	A-
87-89.9	B+
83-86.9	B
80-82.9	B-
77-79.9	C+
73-76.9	C
70-72.9	C-
67-69.9	D+
60-66.9	D
< 60	F

Attendance Policy

Regular attendance and participation in class is critical to your success at Concordia College. Because any absence, excused or unexcused, detracts from the learning experience, you are expected to be present during the scheduled course time. However, I also understand that you are an advanced learner capable of balancing your personal schedule, coursework, and research. As such, I trust you to make up the requisite research hours if you are absent during scheduled course times.

Accommodations for Students with Disabilities

In accordance with the Americans with Disabilities Act, Concordia College and your instructor are committed to making reasonable accommodations to assist individuals with documented disabilities to reach their academic potential. Such disabilities include, but are not limited to, learning or psychological disabilities, or impairments to health, hearing, sight, or mobility. If you believe you require accommodations for a disability that may impact your performance in this course, you must schedule an appointment with Disability Services to determine eligibility. Students are then responsible for giving instructors a letter from Disability Services indicating the type of accommodation to be provided; please note that accommodations will not be retroactive. The Disability Services office is in Academy 106, phone 218-299-3514; <https://www.concordiacollege.edu/accomodations>

Respect for Diversity

It is my intent that students from diverse backgrounds and perspectives be well-served by this course, and that the diversity that students bring to this class be viewed as a resource. Please let me know ways to improve the effectiveness of the course for you, personally, or for other students or student groups. As a student in this class, you are required to treat other members of the class with respect and kindness. Disrespectful, rude, or exclusive behavior will not be tolerated.

OFFICIAL DIVERSITY STATEMENT: Concordia College aspires to be a diverse community that affirms an abundance of identities, experiences, and perspectives in order to imagine, examine, and implement possibilities for individual and communal thriving. Critical thinking grounded in the liberal arts compels us to participate in intentional dialogue, careful self-reflection, and honest interactions about difference, power, and inequity. As responsible engagement in the world calls us to recognize worlds that are familiar or unfamiliar, visible or less visible, Concordia will act to increase and support diversity in all areas of campus life.

Academic Integrity (from Student Handbook)

“The Concordia community expects all of our members to act with integrity—to act with honesty, uprightness and sincerity. Every member of our academic community is charged with the responsibility of encouraging and maintaining an environment of academic integrity.

“Academic misconduct is defined as any activity that comprises the academic integrity of the college or undermines the educational process. Academic misconduct includes but is not limited to cheating, plagiarism, falsification, facilitation, or impeding.

Concordia College has university-wide policies about academic integrity, and all students are responsible for being familiar with and adhering to them. These policies are in place to protect students, first and foremost. **My role as instructor is to teach each of my students how to become responsible scholars.** As a student at Concordia College and as a student in this class, you are expected to fully and properly acknowledge the work of others. Every instance of plagiarism will be reported, as per the policies of the college, but please do not hesitate to ask me for clarification in advance.