

2018 Syllabus for BIOL487: Directed Research

Weekly Schedule: Tuesdays 2-4pm

308 ISC

Instructor: Dr. Althea A. ArchMiller

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Office Hours: Mon/Wed 10:30-11:00 & T/Th 10:30-12:00

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 and programming skills
4. Maintain detailed and organized statistical analysis programs and datasets
5. Develop a reproducible workflow for your future research projects
6. Communicate your scientific knowledge in meaningful and effective ways
7. Overcome challenges inherent in scientific research

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/directories/offices-services/counseling-center-and-disabilityservices/disability/>

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)

“Students are responsible for maintaining and encouraging academic integrity at the college. We expect all students to act with integrity in the classroom and in completing and submitting assignments. Ultimately, students bear the responsibility of ensuring the integrity of their own work. Students are expected to meet at least the minimal requirements of each course with work of appropriate quality.

“At no time is cheating on examinations, quizzes, or assignments acceptable at Concordia. Students are also expected to exercise appropriate caution to avoid plagiarism on written assignments.”

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.

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

- Test the reproducibility of at least one study. This includes saving and processing data, writing scripts, reporting on your findings in the reproducibility_notes document and in the Google form, and drafting an email of your results to the author(s).
- Draft the introduction, methods, results (if applicable), and literature cited of our research manuscript in JWM format.
- Initialize presentation file and design for 2019 Centennial Lecture (February 12, 2019)

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.

I will not tolerate any instance of academic dishonesty, including cheating, plagiarism, falsification, facilitating others' violations, or impeding (see student handbook for definitions).

Instances of academic dishonesty will result in either a failing grade for that activity or for the course, according to the perceived intent and extent of the instance(s) of academic dishonesty. All academic integrity violations will be reported to the Office of Academic Affairs.

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