

BIOL 500 Online– Introduction to Graduate Study and Research
Western Kentucky University
Syllabus and Course Information Sheet
Spring 2019

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Class Schedule:
Thursdays; (Lectures posted on Blackboard)

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WELCOME TO BIOL 500

Congratulations to you all for joining the Western Kentucky University academic family and a warm welcome to you all as graduate students of biology. This course is designed to prepare you for your graduate experience in Biology. The course features topics such as writing a literature review, researching literature, comprehensive study of general biology, and review and critique of peers in scientific communication. The course information sheet will help you to understand the objectives we will achieve through this course, the methods used to measure and gauge your progress throughout the course, and the WKU academic policies and rules.

COURSE DESCRIPTION

Every new biology graduate student is confronted with three (pertinent) challenges in their tenure as graduate students:

- 1) What procedures must I follow to stay on task at my institution?
- 2) What particular skills must I learn to be an effective graduate student at my institution?
- 3) What particular skills must I learn to be an effective scientist in my discipline, as indicated by a Master of Science degree from my institution? (i.e., what does it mean to be a Master of Science?)

This course will allow the successful student to accomplish #1 and initiate the process of accomplishing #2 and #3 from the above challenges.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES

Upon completion of this course, the student shall be able to:	How the student will develop the learning outcomes	How the student will be assessed on these learning outcomes
1. continue in the WKU Biology graduate program,	Completion of relevant forms	Signatures of forms
2. critically evaluate scientific literature	Perform critical literature reviews	Grading of reviews
3. find and acquire appropriate funding for research	Perform searches for appropriate grants and write a research proposal	Peer-assessment of research proposal
4. comprehend and communicate scientific information	All elements of course topics	Grading and assessment of participation.
6. write a research proposal	Many various assignments plus public	Grading and feedback on assignments; peer review

	presentation of research ideas	
7. understand ethical practices in biological research	CITI training	Assignment credit for training completion
8. demonstrate proficient level of knowledge in important biological topics	Studying	An online “comprehensive exam, which is a component of the Master of Science in Biology Program

EXPANDED COURSE DESCRIPTION

Please refer to the lecture schedule at the end of this document

REQUIRED TEXTBOOK

There is no textbook for this course. But I will be giving you relevant handouts related to the course lectures and assignments. Reading assignments will be provided via WKU Blackboard site.

CLASS POLICIES

Attendance: WKU believes that regular class attendance is a crucial component for student success even on a flexible online format. Every class lecture is a vital foundation for subsequent class meetings. Without full participation and regular class attendance, students will be at a severe disadvantage for achieving success at college. It is my responsibility as a faculty member, to determine how participation is achieved in all my classes. I will require students to regularly attend online classes and will keep a record of attendance from the first day of class and/or the first day the student’s name appears on the roster through final examinations through a discussion board component. When a student has 5 days unexcused absences, I will record the student’s unexcused absences. The student will receive an emailed warning from me that upon one more day of unexcused absence, the student will be dropped from all classes in which the unexcused absences are reported. Some of the forms of absence that can be considered officially excused are: (1) Sick and medical emergencies (2) Representing WKU at an official institutional function. Other excuses will be considered, at my discretion, with documentation.

Dropping: If a student chooses to drop the course, it is that student’s responsibility to ensure proper documentation with WKU. Failure to do so could result in a grade of F in the course. If you wish to withdraw from the course you should do so by the dates mandated by the University. Be sure you are aware of these dates because credit for the course will not be changed after the university’s designated time. You also cannot drop the class or Withdraw after the designated time.

Disabilities: "Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Services at (270) 745-5004. Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services."

Eating and drinking are allowed during class limited to only bottled water or juices and noise-free snacks.

Dishonesty Statement: WKU does not tolerate cheating, plagiarism or other acts of dishonesty. Definitions of these acts and procedures for dealing with them are described in the WKU standards of professional conduct on the university website and in the student handbook.

Civility Statement: Members of the WKU community, which includes faculty, staff and students, are expected to act responsibly in classroom and campus. WKU holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner befitting a responsible College and Civilian community. Responsible College and Civil behavior applies to attire as well as language and behavior. Please dress appropriately for the academic classroom sessions.

COURSE REQUIREMENTS AND CRITERIA FOR GRADING

Component	Points
Assignments: <ol style="list-style-type: none"> BIOL 516 proposal preliminaries: (100 points) <ul style="list-style-type: none"> Introduction Draft – 30 points Bibliography of papers and reading reaction to two papers – 30 points Literature Review draft – 40 points Proposal completion (Final review by BIOL 516 mentor) – 100 points Completion of Qualifying Exam – 70 points 	270
Participation (subjective on my part, but should be a bonus): <ol style="list-style-type: none"> Program of study form completion – 10 points PIVOT funding search exercise – 10 points CITI training completion – 10 points 	30
Total	300

Grades will be assessed based on the classic scale: 0-59.9% = F; 60-69.9% = D; 70-79.9% = C; 80-89.9% = B; 90-100% = A.

SCHEDULE (**with deadlines in red**)

Week	Topic (Assignments in red)
1	Introduction – What to expect from the course
2	This is Biology – A journey through the basics of general biology and the philosophy of biology
3	Facets of lab safety – the CITI program
4	The Research Process – Facets of scientific method Examples of basic and applied research studies
5	Creating a Teaching and Research portfolio – thinking beyond your CV
6	The interdisciplinary nature of biological sciences – importance of models in research
7	Research methods – Differences between thesis and non-thesis students Focal points of online research – working towards a meaningful product at the end of a BIOL 516 exploratory research
8	The Research Journey - Choosing a Mentor for Your BIOL 516 Research, Documenting Your Work, Professional Organizations, Exploring Your Research Interests, Applying for Grants Forms involved in graduate study including Program of Study draft – How to select your courses and a research mentor/committee (if needed for oral exam)
9	Completion of Program of Study form
10	BIOL 516 Proposal preparation – A hypothetical outline How to write an effective abstract of your study
11	The Process of Literature Review Critical thinking – Complete reading assignments, critical assessment of two papers Literature search - Creating a bibliography of 20 citations related to your research
12	Preparing a Research Grant Searching for Funding – PIVOT funding search exercise

	Exploratory study draft for BIOL 516
13	Literature Review Draft Mandatory meeting with BIOL 516 mentor
14	Final review of proposal
15	Virtual seminar - Poster outlining your BIOL 516 study and peer review of each other's studies
16	The Complete Research Proposal – BIOL 516 outline Qualifying Exam completion – Exam open throughout semester