

SYLLABUS: Advanced Research Techniques

Biol 6310

TBA

Location: Faculty Research Laboratories

Course Coordinator:

Dr. Renato Aguilera, Ph.D., Biological Sciences Graduate Program Director

4.144 BioSciences

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INSTRUCTIONAL GOALS

The goal of this course is to provide incoming graduate students the opportunity to perform research in the laboratories of two Biosciences Ph.D. mentors with the ultimate goal of allowing them to find the best environment for the trainees to complete their degrees. During the first semester of this two semester course, the student will enroll and will receive an in progress grade (P) and will not need to re-enroll for the second semester rotation. Students will be expected to actively participate in laboratory meetings and provide presentations of research papers and/or results. Trainees will write a report after each semester laboratory rotation in the format of a research paper with the following components: (1) Summary/Abstract (include the specific aims of project), (2) Brief Introduction, (3) Materials and Methods, (4) Results, (5) Discussion (or Results and Discussion) and (6) References. It is expected that data in the form of figures will be included in the report. It is important to state at the beginning the aim(s) of the project and the results obtained during the rotation. The report will be reviewed and returned for correction. Grades will not be entered until the corrections have been returned to the Graduate Program Director. If reports are not provided within a year of completion of the rotations, the final grade will be lowered to a B after one semester and a C after that. In addition, trainees will not be allowed to proceed to their qualifying exams if reports are not submitted prior to these exams.

Learning objectives of this course:

- Learn new research techniques
- Learn how to write a research article
- Understand the literature associated with the techniques and the research project
- Obtain sufficient information to make a decision on the laboratory and mentor to pursue the Ph.D. thesis

RESOURCES

Each Ph.D. student will be expected to perform semi-independent research in the laboratory of a Biological Sciences faculty member with the ultimate objective of finding the correct environment to pursue a long term Ph.D. research project. The faculty mentor will provide the necessary laboratory training, space and equipment and supplies to pursue the aims of the rotation project. The trainee must take the CITI Responsible Conduct in Research online course that is required of all researchers at UTEP as well as laboratory safety training modules offered by EH&S. Trainees will need to keep an accurate research notebook and have weekly meetings with their mentors to ensure timely progress of their projects. Trainees will also be required to become familiar with the research publications that are the basis for the specific aims of the project and should participate in all required laboratory meetings.

COURSE SCHEDULE

Training schedule will vary and depend on the times that are available to the trainee. Some trainees may choose to work after hours or during the weekends if other courses impede their participation on research projects that require extended hours.

POLICIES AND PROCEDURES

Policy on Academic Dishonesty: Academic Dishonesty will not be tolerated. All university guidelines will be strictly followed. Plagiarism will not be tolerated all references should be ascribed to figures/tables that may have been taken from a web source. Please read these guidelines carefully. If you have any questions regarding university policy please contact the Dean of Students.

Grading Policies:

All participants must complete two written laboratory rotation reports that will be reviewed by the course director and sent back for corrections. After corrections are submitted, most participants will receive an A letter grade and only those that turn reports late or do not make corrections will be given a lower grade.

ADDITIONAL INFORMATION

DISABILITY STATEMENT: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148 or at dss@utep.edu or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.