

MMED 5020 Research Practicum

Fall 2020

CLASS DAYS and TIME: Monday, Tuesday, Wednesday, Thursday, Friday at times determined by the faculty instructor of each Research Practicum experience

CLASSROOM: Report to the laboratory of the Research Practicum instructor

COURSE DIRECTOR: Maria Gaczynska

OFFICE LOCATION and HOURS: By appointment with Maria Gaczynska, HHB 2.062

EMAIL: gaczynska@uthscsa.edu

TELEPHONE: 210-567-7262

READ THIS DOCUMENT CAREFULLY - YOU ARE RESPONSIBLE FOR ITS CONTENTS.

COURSE DESCRIPTION AND OBJECTIVES

Independent research experiences under the direction of a faculty advisor for students who choose the Course-Based Plan of Study for the Master of Science in Personalized Molecular Medicine Program. Research experiences include training in metabolomics, flow cytometry/FACS analysis, single cell analysis, molecular and cell biology approaches, systems approaches, computational biology, or drug design depending on the interests of the student. Research experiences also include directed research projects in research laboratories involving experimental design, data collection, data analysis, statistical analyses, and data presentation. During the Research Practicum, students will learn about the underlying principles of a particular method and how to apply this method to address a specific scientific aim. Students may participate in conducting mini-projects to gain first-hand experiences within a given topic. A written Practicum Report will be generated by the student at the end of each semester of Research Practicum culminating in an oral presentation by the student highlighting the key findings.

Pre-requisites – None

Semester credit hours – Variable, 2.5 SCH to 5.5 SCH

By the end of this course, each student should be able to:

- Identify the strengths and weaknesses of specific molecular or cellular approaches.
- Conduct independent experiments using molecular and cellular approaches to address scientific questions.
- Interpret the underlying principles, experimental design, data and statistical analyses of specific molecular and cellular biology experiments.
- Write and orally present a Practicum Report describing the data collected and highlighting the key findings of the Research Practicum project.

COURSE ORGANIZATION

The main teaching modalities used in this course include:

- 1) Didactic lectures on specific molecular and cellular approaches with the purpose of conveying important concepts.
- 2) Hands on laboratory work with the purpose of gaining research experiences in a variety of cellular and molecular approaches.

- 3) Design of a Research Practicum written report and a powerpoint presentation of key findings with the purpose of learning how to present scientific results.

Materials – Laboratory protocols will be provided. Laptop for presentations and viewing the lecture notes.

Access to Course Materials – General class information, messages from instructors, lecture notes and PDF files of papers will be posted to the class Dropbox folder and e-mailed to students.

Reading Assignments – Original papers will be assigned by each instructor.

ATTENDANCE

Attendance and participation are mandatory. One large component of the grading is class participation so if a student misses a class due to sickness, the student needs to inform the instructors and course directors as soon as possible since this may result in an incomplete for the student. Any scheduled absences must be approved by the course director prior to the absence.

TEXTBOOKS

No required textbooks.

GRADING POLICIES AND EXAMINATION PROCEDURES

Students will be graded on their attendance, participation, written Practicum Reports, and final Practicum presentations. While grading is not primarily based on exams in this course, some instructors may wish to have quizzes or exams for their students to test knowledge and/or lab proficiency. Instructors will provide their grades for each student along with any comments for improvement and these grades and comments will be e-mailed to each student following their classes. A final grade will be assigned by the course director based on the grades given to the students by each instructor.

Grading System

A = 90-100% B = 80-89% C = 70-79% F = < 69%

REQUESTS FOR ACCOMODATIONS FOR DISABILITIES

In accordance with policy 4.2.3, **Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA)**, any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100). to his/her appropriate Associate Dean of their School and a copy to the ADA Coordinator. Additional information may be obtained at <http://uthscsa.edu/eoo/request.asp>.

ACADEMIC INTEGRITY AND PROFESSIONALISM

Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets for another student, and any act designed to give unfair advantage to a student or the attempt to commit such an act. Additional information may be obtained at <http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/academicdishonestypolicy/>

TITLE IX AT UTHSCSA

Title IX Defined:

Title of the Education Amendments of 1972 is a federal law that prohibits sex discrimination in education. It reads “no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.”

University of Texas Health Science Center San Antonio's Commitment:

University of Texas Health Science Center San Antonio (UTHSCSA) is committed to maintaining a learning environment that is free from discriminatory conduct based on gender. As required by Title IX, UTHSCSA does not discriminate on the basis of sex in its education programs and activities, and it encourages any student, faculty, or staff member who thinks that he or she has been subjected to sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to immediately report the incident to the Title IX Director.

In an emergency, victims of sexual abuse should call 911. For non-emergencies, they may contact UPD at 210-567-2800. Additional information may be obtained at <http://students.uthscsa.edu/titleix/>

EMAIL POLICY

Course information and instructions will be e-mailed to students. Additionally, students should communicate with the course director via e-mail.

USE OF RECORDING DEVICES

Recording devices during the lectures are allowed with the permission of each instructor.

ELECTRONIC DEVICES

Electronic devices such as cell phones, computers, tablets, etc. are permitted in class, but we ask that you silence your cell phones during class.

CLASS SCHEDULE
MMED 5020
Research Practicum
Spring 2020

TBD

WEEK	DATE	TOPIC	Assignment	Instructor and Modality
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				
Week 7				
Week 8				
Week 9				
Week 10				
Week 11				
Week 12				
Week 13				
Week 14				
Week 15				
Week 16				
Week 17				