



ANS 597: **Laboratory Research Techniques**

Course Syllabus: Spring 2019

Class Meeting Time: T Th 8:00 am – 9:15 am
Instructor: Dr. Megan Owen
Office: AGIT 248
Office number/ fax: 903-886-5717 Fax 903-886-5990
Office hours: Posted, by appointment via email, and I have an open-door policy, meaning, when I am in my office, I will try make myself available to you.

E-mail: Megan.Owen@tamuc.edu

REQUIRED TEXTBOOK:

No textbook is required, but there will be assigned readings throughout the semester.

COURSE DESCRIPTION: Study of the application, utilization, and selection of various research sample collection and laboratory techniques.

COURSE OBJECTIVES:

1. To familiarize the students with the types and classifications of various assays biological scientists would encounter.
2. To provide the students with the basic knowledge of various assays biological scientists would encounter and how to interpret them in scientific articles.
3. To develop a working knowledge of the skills to execute a few different assays biological scientists would encounter.

STUDENT LEARNING OUTCOMES:

Students completing this course should:

1. Be knowledgeable about the types and classifications various assays.
2. Understand the basic knowledge of various assays in order to interpret them in a scientific article.
3. Be familiar with the skills to execute a few different assays.

COURSE REQUIREMENTS: (COURSE EXPECTATIONS)

Instructional methodology will include lecture and classroom discussion and engagement. Please refer to the grading policy for a breakdown of student evaluation. Outside readings and assignments will be included. You will be allowed access to power point presentations for lectures as well or they will be personally given handout materials for reading and discussion.

NO CELL PHONE USAGE WHILE IN CLASS

Cell phones should not be visible during lectures or testing and should be turned off/ on silent. If the student has a cell phone in their possession it should be off/ on silent mode.

Prior communication with the professor is required if access to the student's cellular phone is required. A "No Tolerance" policy will be exercised in this matter. Student will be excused from class in cases of non-compliance.

PLEASE TAKE YOUR HATS AND SUNGLASSES OFF PRIOR TO A QUIZ OR EXAM

All students will remove any hats (caps, hats of any kind) and/or sunglasses (of any form, unless prior permission is given from the professor or T.A.) and/or smart devices (such as smart watches, fit bit's, and headphones) when a quiz or exam is being handed out in both lecture and lab. Appropriate sun protection is encouraged while outside.

GRADING POLICY:

Grading: The final grade in the course will be based on your accumulated total points during the semester according to the following distribution:

	<u>Points</u>	<u>% of grade</u>
3 Exams	300	39
Homework.....	70	9
4 Journal Club discussions	400	52
TOTAL POINTS	770	100%

Final grades are based on the following scale:

- A = 89.5% or greater
- B = 79.5 - 89.4%
- C = 69.5 - 79.4%
- D = 59.5 - 69.4%
- F = fewer than 59.4%

Make-up exams will only be given for excused absences. All make-up exams will be given at a time and date designated by the faculty member before the final exam period. It is the responsibility of the student to make arrangements for make-up exams.

Final Exam policy: All students are expected to be at the comprehensive final examination time period as outlined by the university final exam schedule (Tuesday, May 7th, from 8:00 – 10:00). Once the final exam period begins, no student is allowed to leave the testing area/room until their exam is completed. At the same time, no student will be allowed to begin the test during this time period if another student has already completed testing and has left the designated testing area/room (in the case of a late arrival).

Students are responsible for materials presented as lectures, laboratories, handouts, and assigned readings. Furthermore, students will be responsible for all out of class assignments that pertain to the lecture material.

TECHNOLOGY

Lecture materials, supplemental worksheets, videos, and slides will be available and posted in the D2L system.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

No late assignments will be accepted. All assignments will be due on the given assignment date.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](#)

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx> or

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#) or

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#) or

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 132

Phone: (903) 886-5150 or (903) 886-5835; Fax: (903) 468-8148

Email: StudentDisabilityServices@tamuc.edu; Website: [Office of Student Disability Resources and Services](#) at

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer. Web url: <http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Academic Honesty

TAMUC expects its students to maintain high standards of personal and scholarly conduct. Students guilty of academic dishonesty are subject to disciplinary action. Academic dishonesty includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. Academic dishonesty will not be tolerated: Any student caught violating this policy will be given a zero for the affected assignment/exam or be administratively withdrawn from the course.

- **Plagiarism** - the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work.
- **Collusion** – the assistance or an attempt to assist another student in an act of academic dishonesty.
- **Self- Plagiarism** - The submission of the same work for academic credit more than once without permission.
- **Fabrication** - The falsification of data, information, or citations in any formal academic exercise.

- **Deception** - Providing false information to an instructor concerning a formal academic exercise e.g., giving a false excuse for missing a deadline or falsely claiming to have submitted work.
- **Cheating** - Any attempt to give or obtain assistance in a formal academic exercise without due acknowledgment.
- **Sabotage** - Acting to prevent others from completing their work. This includes cutting pages out of library books or willfully disrupting the experiments of others.

SUGGESTED COURSE OUTLINE:

- Orientation – Syllabus, expectations and requirements, assign homework
- Rules and Regulations of Research
- Types of Assays
- Biological Assays
- Blood Collection and Processing
- Fecal Collection and Processing
- Volumetric Practice and Theory
- Ultrasound Practice and Theory
- DNA Extraction
- PCR
- Western and/or Northern Blotting