Sul Ross State University Spring 20256
BIOL 2121 Microbiology Lab (1 credit)
L01 Thursday 2-3:50 & L02 Thursday 7-8:50 in WSB 203

Lab instructor: Ms Asia Cornelius | **Office:** Biol grad office

E-mail: adc20gs@sulross.edu

Office Hours: TBD

No lab manual required

Course Description: This laboratory will focus on hands on learning of microscopy,aseptic technique, isolating and culturing bacteria, and identifying microorganisms.

Lab attendance: Lab attendance is mandatory. *There will be no makeup labs.* If you have a university approved excuse to be absent, you must make arrangements with the instructor **before** missing lab.

More than three (3) missed labs will result in a failing grade andpossible withdrawal from the course.

Anyone feeling ill should not come to lab. In the event that you miss class due to illness or other university-approved absences, contact your TA via email to request missed material. (Approved absences include SRSU athletic events, death in the family, illness, etc. See https://www.sulross.edu/wp-content/uploads/2021/07/fh-4_02-6_29_17.pdf for details.)

Grading Scale:

Pre-Lab Exercises……	100 pts
Lab Exercises……	90 pts
Lab Attendance/Participation……	110 pts
Human Skin Biome Project……	100 pts
Exams (3 @ 50 pts ea)……	150 pts
Total:	**550 pts**

Pre-Lab Exercises are due BEFORE the lab is begins. **No late work will be accepted.**

Lab Exercises are due the week AFTER the lab is completed. **No late work will be accepted.**

Human Skin Biome Project. Details will be provided in lab once we get closer to the project.

Exams. Students cannot miss exams unless they have a documented, university-approved excuse; in these cases, the instructor needs to be informed **more than 24 hours in advance** of the exam. Any missed exams must be taken within one week of the original exam.

Tentative Laboratory Outline

Date	Material
22 Jan	Introduction to the microscope; Lab Safety
29 Jan	Eukaryotic Microbe Diversity & Wet Mounts
5 Feb	Ubiquity of bacteria; Aseptic technique
12 Feb	Pure culture techniques, smear preparation, simple staining (methylene blue)
19 Feb	**Lab Exam #1**
26 Feb	Media Preparation
5 Mar	Negative staining; Gram staining
13 Mar	***SPRING BREAK!***
19 Mar	Spore staining; Motility determination; Human Skin Biome Project Part 1
26 Mar	**Lab Exam #2**
2 Ap	Evaluation of Alcohol, Efficacy of Disinfectants; Human Skin Biome Project Part 2
9 Ap	Kingdom Fungi, Human Skin Biome Project Part 3
16 Ap	Submit Human Skin Biome Project; **Lab Exam #3**

Studying: As a general rule, students should spend 2-3 hours studying for every 1 hour oflecture material. So, for this class, you need to allocate **2-3 hours per week** to study the lab material.

I HIGHLY RECOMMEND READING BEFORE LAB.

You have been given the tentative schedule- please review it and read material beforehand. I recommend reading your notes in conjunction with reading the relevant textbook chapters.

Studying is best done before & after the lab, and in small doses, not all at once the night before the exam.

LAB BEHAVIOR:

- Wear gloves when asked to do so (feel free to provide your own if you have allergies/sensitivities)
- Disinfect things that you touch- keep the lab clean!
- Wear closed-toes shoes and tie your hair back- no slides/sandals allowed
- Be on time- better to be early so we can begin on time
- Turn off your phone and put it away- NO CELL PHONES IN LAB
- Only your writing utensil and lab paper with you in lab. No electronics, food, drinks, etc
- Ask relevant questions and discuss topics in a civil and respectful manner
- Clean up your lab station and all materials used before you leave the lab room
- DO NOT sleep, eat, or drink in lab

CORE OBJECTIVES ADDRESSED:

1) Communication Skills – Students will effectively communicate the results of scientific investigations, using oral, written, and visual communication, either in group discussions or on written exams.
2) Critical Thinking Skills – Students will include creative thinking, innovation, inquiry, and analysis required to relate new information with previous information in a way that demonstrates the diversity and similarity due to evolutionary ancestry.
3) Empirical and Quantitative Skills – Students will use basic math skills to solve problems (e.g., related to genetic outcomes, cellular energy production, and probability) resulting in informed conclusions.
4) Teamwork Skills – Students will work effectively with others to support a shared goal during lab sessions on activities, such as dissections, problem-solving, and other experimental procedures.

MARKETABLE SKILLS: A student getting a degree in the biological sciences would be expected to acquire the following marketable skills by graduation.

1) Students will be able to organize, analyze, and interpret data.
2) Students will be proficient at using presentation software.
3) Students will acquire experience in managing time and meeting deadlines.
4) Students will gain the ability to speak effectively and write concisely about scientific topics.
   Students will acquire experience and guidance in the development of professional email correspondence

ADA Statement

SRSU Accessibility Services. Sul Ross State University (SRSU) is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartze Grisham, LPC, SRSU's Accessibility Services Director or Ronnie Harris, LPC, Counselor, at 432-837-8203 or email mschwartze@sulross.edu or ronnie.harris@sulross.edu. RGC students can also contact Alejandra Valdez, at 830-758-5006 or email alejandra.valdez@sulross.edu. Our office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine. Texas, 79832.

Student Responsibilities Statement

All full-time and part-time students are responsible for familiarizing themselves with the Student Handbook and the Undergraduate & Graduate Catalog and for abiding by the University rules and regulations. Additionally, students are responsible for checking their Sul Ross email as an official form of communication

from the university. Every student is expected to obey all federal, state and local laws and is expected to familiarize themselves with the requirements of such laws.

Counseling

Sul Ross has partnered with TimelyCare where all SR students will have access to nine free counseling sessions. You can learn more about this 24/7/365 support by visiting Timelycare/SRSU. The SR Counseling and Accessibility Services office will continue to offer in-person counseling in Ferguson Hall room 112 (Alpine campus), and telehealth Zoom sessions for remote students and RGC students.

Libraries

The Bryan Wildenthal Memorial Library and Archives of the Big Bend in Alpine offer FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu/. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123).
No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting library.sulross.edu/find-and-borrow/texshare/ or ask a librarian by emailing srsulibrary@sulross.edu.
Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL), ScanIt, and Direct Mail to get materials delivered to you at home or via email.

Academic Integrity

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own and avoid the temptation to engage in behaviors that violate academic integrity, such as turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. Students should also avoid using open AI sources *unless permission is expressly given* for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

Classroom Climate of Respect

Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference.