



## Course Information

Course Number: MICRO 202L  
Course Title: Introductory Microbiology Lab  
Credit Hours: 1

## Instructor Information

Instructor: Mrs. Allison Thomes  
Phone: 701-356-2050  
Email: athomes@west-fargo.k12.nd.us  
Course Location: Class 218J, Lab 215J, Office 214J  
Office Hours: Period 2A (10:25 – 11:55) & 3B (12:30 – 2:00)

## Course Description

MICRO 202L is an overview of the structure and use of microscopes, staining procedures, aseptic technique, and common microbiological laboratory procedures useful in the identification of bacteria. Corequisite: MICR 202.

## Textbook and Required Materials

MICROBIOLOGY, AN INTRODUCTION 12th Ed. Tortora, Funke, and Case. Pearson Education. ISBN 13: 978-0-321-92915-0.

## Learning Goals/Outcomes

Upon completion of this course, the student will be able to:

1. Demonstrate effective written and oral communication.
2. Utilize skills of aseptic technique, sterilization, propagation of pure cultures, diagnostic tests to identify microbes, and use of oil immersion microscopes.
3. Utilize proper lab safety and practices conducive to physical wellness and health
4. Use reasoning and analytical skills to explain exercises and apply acquired knowledge to solve problems

## Course Goals:

1. To teach student basic microbiology laboratory techniques, including light microscopy, aseptic technique, microbiological media, growth and metabolism of microbes, and the use of standard lab equipment.
2. To make students aware of the ubiquity and importance of microorganisms.
3. To promote the value of collaboration and time management.

## **Grading and Evaluation**

- All exams and lab reports must be turned in or an incomplete will be received for the course.
  - Students must schedule make-up exams and labs with me in ADVANCE if an absence is known ahead of time. Credit will NOT be given for work and assessments missed due to unexcused absences.
- Late assignments will be accepted ONE day late for half credit. Late assignments submitted more than one day late will not be eligible for credit.
- Grades will be based on the following scale and weighted categories:

90-100% = A

80-89% = B

70-79% = C

60-69% = D

59%-0% = F

Daily work/Quizzes = 30%

Exams/Labs/Projects = 70%

## **Tie to Assessment Outcomes**

Microbiology 202/202L support Liberal Arts assessment outcomes

## **ADA Statement**

NDSCS is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning in this course, please discuss your concerns with the instructor. If you have a disability and require accommodation, contact the Accessibility Coordinator at NDSCS.Accessibility@ndscs.edu or 701-671-2623 as soon as possible in the semester. Student Accessibility Services is located in Old Main 230. The Accessibility Coordinator will send instructors notice of approved accommodations. If you have already been approved for accommodations, you are encouraged to talk with your instructor to discuss arrangements to implement your accommodations.

## **Equal Opportunity Statement**

North Dakota State College of Science is an equal opportunity employer and equal opportunity educator. NDSCS is fully committed to equal opportunity in employment decisions and educational programs and activities. All practices are in compliance with all applicable federal and state laws, for all individuals without regard to age, color, gender identity/expression, genetic information, marital status, national or ethnic origin, physical and mental ability status, public assistance status, race, religion, sex, sexual orientation, familial or parental status, status as a U.S. veteran/service member, or participation in lawful activity off the employer's premises during nonworking hours which is not in direct conflict with the essential business-related interests of the employer.

For more information, refer to the NDSCS College Catalog under *Non-Discrimination Statement and Equal Opportunity Policy*.

## **Academic Integrity**

Acts of academic dishonesty, including but not limited to cheating, plagiarism, falsifying research data or results or assisting others to do the same will be cause for sanction up to and including reduction in grade, failure of course or removal from class. Repeat offenses may result in additional sanctions.

For more information, refer to the NDSCS College Catalog under *Academic and College Policies and Procedures*.

Copying from any source (classmates, textbooks, webpages, etc.) and passing it off as your own work is plagiarism and will not be tolerated.

The use of AI in place of your own writing will result in a zero.

### **Early Entry Course Withdrawal**

Students who wish to drop a college course must contact the NDSCS Early Entry Program Coordinator at 701-671-2406. Notifying the high school of a drop/withdrawal **does not** withdraw the student from the NDSCS college class. If the student has not officially withdrawn from the college course, an “F” will be recorded on their permanent college transcript. View the current Refund Schedule at: [Refund Schedules for Early Entry \(Dual Credit\)](#).

### **Continuity of Instruction**

NDSCS is committed to the continuity of instruction in the event of an emergency disruption that may result in the suspension of activities, including in-person classes at NDSCS. NDSCS is committed to preparing for any significant operational disruption or closure, which could result from flooding, weather, medical emergency, campus evacuation or other emergency.

An emergency closing of the College, campus closure, and/or suspension of in-person classes does not equate into a suspension of instruction. Faculty contract days remain in effect, though the means of instructional delivery may change.

All communications and updates are sent out in official College email and posted at NDSCS.edu

### **Land Acknowledgement Statement**

**NDSCS acknowledges that we occupy the sacred ancestral lands of the First Nations cultures of North Dakota. Without them, we would not have access to our gathering, dialogue, and learning spaces.**

## Course/Instructor Expectations

- **Collaboration:**
  - **Be Scientists** (Ask questions, think critically, analyze, communicate, and listen)
  - **Be a collaborative teammate and lab partner.**
- **Respect:**
  - **Be Respectful!** Respect others in the classroom through your words and actions; dress appropriately
    - **NO CELL PHONES ALLOWED IN CLASS.** These must be put away once the bell rings and cannot be taken out until bell rings (full District Policy is on School Website).
    - Hats must be removed during labs
    - Close-toed shoes **must** be worn during labs
    - No food allowed in class or lab
  - **Be Honest!** Use Academic integrity; use proper citations for ideas/words that are not your own  
**Refer to the student handbook for a thorough description and consequences of cheating.**
- **Responsibility**
  - **Be Present and Time!** This means in your seat and ready to learn when the bell rings.
- **Be Prepared! Bring iPad/stylus charged every day; Complete homework assignments** and come prepared to be an **active, contributing member of the class.**

## Tentative Outline:

- **Unit 1: The Microbial World**
  - Ubiquity of Microorganisms Intro Lab
  - Types of Microbes Microscope Lab
  - Streak Plate/Slant Lab Applying Aseptic Technique
- **Unit 2: Microbial Anatomy and Antibiotics**
  - Gram Stain Lab
  - Antibiotic Resistance Lab
- **Unit 3: Microbial Growth and Control**
  - Clostridium botulinum Case Study
  - Mystery Juice Lab
- **Unit 4: Microbial Metabolism**
  - Fermentation/Types of Media Labs (4 Types of Plate Media, 4 Types of Tube Media)
  - Microbial Unknown Lab (Formal Lab report required 10-15 pages minimum)
- **Unit 5: Microbial Genetics and Biotechnology**
  - Paper Plasmid Lab
  - pGLO Bacterial Transformation Lab
- **Unit 6: Viruses**
  - "Tracking a virus" Simulation
- **Unit 7: Epidemiology**
  - "A Fatal Bite" Case Study
- **Unit 8: Innate and Adaptive Immunity**
  - Paper ELISA Labs: Antibody and Antigen Detection
  - ELISA Labs: Antibody and Antigen Detection

Developed/Revised: 8/19/2025