



Course Syllabus

MCB 2004L

MCB / CRN 81150 / Fall 2026

1 Credit Hour/ 3 Contact Hours per week

Co-requisites: MCB 2004 must be enrolled or completed

Contact Information

Instructor

Name Mr. Timothy Cox
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Chemistry Lab Coordinator
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Office Hours
As needed
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Division Chair

Name: Dr. Dana Hutchinson, PT, DPT
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Division Administrative Assistant

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Course Information

Catalog Description:

Microbiology laboratory covers the study of bacterial techniques. Students learn how to culture and stain the bacteria as well as perform metabolic tests to aid in bacterial identification

Student Learning Outcomes:

By the end of this course, you will be able to:

- Maintain a safe laboratory environment
- Use a microscope with oil immersion lens
- Perform different staining techniques to identify bacteria microscopically
- Perform streak plates and other inoculations with aseptic technique
- Explain the effects of antibiotics, disinfectants, and temperature on microbial growth
- Identify bacteria using differential media and metabolic tests

Course Materials & Resources:

Laboratory Applications in Microbiology-A Case Study Approach by Barry Chess 5th edition, McGraw Hill ISBN 979-8-21-910506-7

Supplies needed for lab: Lab coat, box disposable gloves, safety glasses.

Students must wear enclosed shoes and long pants. Obtain all items before 2nd lab period meets.

Delivery Method:

This course meets face to face. Course material, assignments, and announcements may be offered via Canvas as a supplemental approach to learning at the discretion of the instructor. Please make sure that you have access to a computer with a webcam and internet service, in the event a change in course delivery is needed.

Student Expectations

In this course, communication and feedback will occur through various channels, including GCSC email, Canvas Inbox, Canvas Announcements, Review the statements below so that you understand the expectations for communication.

As a student at Gulf Coast State College, you are expected to:

- **Adhere to Course Guidelines:** Follow the guidelines detailed in the course syllabus, along with any additional instructions provided by the instructor. This includes understanding and complying with the course objectives, grading criteria, and academic policies.

- **Maintain Regular Contact:** Keep in touch with your instructor and classmates via your GCSC email or other designated communication channels. Regular contact helps clarify doubts, share ideas, and foster a collaborative learning environment.
- **Active Participation:** Engage actively in class discussions and submit assignments on time. Your active participation is crucial for your academic success and contributes to a vibrant learning community.

As your instructor, my commitment to you is to:

- **Provide Timely Feedback:** I will review and provide feedback on your assignments and submissions promptly. My goal is to help you understand your strengths and areas for improvement, which is crucial for your academic growth.
- **Respond Via Canvas Inbox:** I will respond to your emails or messages within 24-48 hours (excluding weekends), unless otherwise noted. I understand the importance of clear and timely communication in addressing your questions and concerns.
- **Maintain Out of Class Availability:** I am on campus quite regularly and will gladly be available by appointment. This is to ensure I'm available for any questions or concerns that may come up during the week.

Course Schedule

Lab session	Date	Exercise Topic	Laboratory Techniques
1	August 17-18	Exercise 1 Safety in Microbiology	GloGerm
2	August 19-20	Exercise 6 Ubiquity of Bacteria	
3	August 24-25	Exercise 6 Culture Morphology	
4	August 26-27	Exercise 7 Aseptic Technique/Viable Plate Count	
5	Aug 31-Sept 1	Exercise 7 Streak Plate for Isolation	
6	Sept 2-3	Exercise 2 Microscopy	
	Sept 7-8	HOLIDAY	
7	Sept 9-10	Exercise 8 Simple Stain	
8	Sept 14-15	Exercise 8 Gram Stain	
9	Sept 16-17	TEST 1 TECHNIQUE EVALUATION	
10	Sept 21-22	TEST 1	
12	Sept 23-24	Exercise 11 Acid Fast Stain/Endospore Stain/Capsule Stain/Flagella Stain	
13	Sept 28-29	Exercise 13 Cultivation of Anaerobes	
14	Sept 30-Oct 1	Exercise 14 Temperature Effects on Bacteria	

15	Oct 5-6	Exercise 18 Evaluation of Antiseptics		
16	Oct 7-8	FALL BREAK		
17	Oct 12-13	Exercise 20 Antimicrobial Sensitivity Testing		
18	Oct 14-15	Results		
19	Oct 19-20	TEST 2		
20	Oct 21-22	Exercise 36 Isolation and Identification of Staphylococci	71 CAT	88 NOV
21	Oct 26-27	Exercise 36 Results		
22	Oct 28-29	Exercise 37 Isolation and Identification of Streptococci		
23	Nov 2-3	Exercise 37 Results		
24	Nov 4-5	Exercise 38 Differentiation of Enterobacteriaceae		
25	Nov 9-10	Exercise 38 Results		
	Nov 11-12	HOLIDAY		
26	Nov 16-17	Exercise 86 API 20E		
27	Nov 18-20	TEST 3/Unknown Day 1		
28	Nov 23-24	Unknown Culture and Sensitivity		
	Nov 25-26	HOLIDAY		
29	Nov 30-Dec 1	Unknown Culture and Sensitivity		
30	Dec 2-3	Unknown Culture and Sensitivity		

Grading

GCSC Grading Scale

A = 90-100 B = 80-89 C = 70-79 D = 60-69 F = 0-59

Methods of Evaluation:

Tests are a mix of lab practical and procedure knowledge covering material presented in the labs and will consist of questions of varying format. Completing and studying the questions in your manual at the end of each exercise are good ways to prepare for these exams. There are no make-up tests. On the practical portion of the test you will need to demonstrate proficiency at techniques such as:

- Staining techniques: Gram stain, Acid-fast stain
- Aseptic technique when transferring cultures and isolation streak plate
- Interpretation of Identification system and Biochemical results from various tests performed in lab

Unknown identification - you will be given a culture of an unknown bacterium and you will apply the techniques you have learned in lab to identify the culture. More information will follow.

Calculation of Grades

Lab Practical Test 1 (Technique)	12.5%
Lab Practical Test 1 (Written)	12.5%
Lab Practical Test 2	25%
Lab Practical Test 3	25%
Unknown Identification	25%

Incomplete Grades

Grades of Incomplete in any course can only be assigned to students who have an emergency arise during the last two weeks of the course. To receive an Incomplete, students must:

- Submit a written request to the instructor prior to the last face-to-face class meeting. For online courses, a written Incomplete request must be received no later than the week before the Final Exam period begins.
- Have completed no less than 60 percent of the course requirements and be passing the course at the time the request for an Incomplete is submitted.

Important Note: The Incomplete option provides 30 days from the date grades are due to make up any missing work; if work is not submitted during this period, the grade will automatically change to an "F" in Lighthouse.

Course Policies

Accessibility Statement

Gulf Coast State College supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with Student Accessibility Resources. Appropriate academic accommodations will be determined based on the documented needs of the student. Please visit [GCSC's Student Accessibility Resource \(SAR\) webpage](#) to learn more. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

Attendance Policy

Regular class attendance and participation are significant factors that help to promote success in college. Students are expected to attend all class meetings of all courses for which they are registered.

You are expected to know the instructor's specific attendance policy, as stated in the syllabus for each course. In the event of absence, you should contact your instructor as soon as possible to indicate the reason and to inquire whether make-up work is possible. (Make-up work is offered solely at the discretion of your professor.)

If your absences in a class become excessive, as stated in the course syllabus, your professor may contact you, indicating that further absence may result in your withdrawal from the course. Your professor can withdraw you from a course for excessive absences without your permission.

Instructors will monitor attendance at the beginning of each semester. If you are not in attendance during this period, you may be withdrawn from the course. You will be financially responsible for the course and a "W or NS" will appear on your transcript. Withdrawal from a course may also have implications for financial aid.

- Attendance will be taken at each scheduled lab. You will be allowed 4 absences (excused or unexcused) for the Fall/Spring Semester. Although I do not suggest this as it is very difficult to get caught up in this lab. Summer, students are allowed to have 3 absences
- For Fall/Spring: If you are absent from your 5th lab before midterm, you may withdraw and receive a "W". Students who miss their 5th lab after midterm will not be allowed to sit for any future lab tests, and will likely earn a F.
- For Summer: If you are absent from your 4th lab before midterm, you may withdraw and receive a "W". Students who miss their 4th lab after midterm will not be allowed to sit for any future lab tests, and will likely earn a F.
- Labs involve hands-on activities that cannot be replicated outside the classroom. As a college student, you must accept the responsibility to acquire the information you will need to become successful in your chosen career.

Please note: It is the policy of GCSC that you will be withdrawn from lab and be classified as a No-Show (NS) if you are absent from the first 2 labs.

Students are allowed to miss up to 4 Labs for Fall/Spring semesters. Any

Make-Up Work Policy:

- If you miss, you may be able to attend another lab (same week), but this must be arranged through the Instructor. If you leave before your group is done with the experiment or if you arrive late, you may be counted as absent.

Student Expectation Statement:

Come to lab every time we meet wearing long pants and closed shoes. Always bring your Personal Protective Equipment lab coat, gloves, safety glasses.

Pre-read the exercises. This will help you do the labs correctly and quickly.

Watch the videos before every lab.

Withdrawal Policy

Two withdrawals are permitted per credit course. After that, a grade will be assigned. Please be concerned about withdrawals. When admitting students into certain programs, universities may calculate withdrawals as grades. It is your responsibility to verify the effects of enrollment and/or withdrawal upon your financial assistance (financial aid, scholarships, grants, etc.).

There are two kinds of withdrawals---student and administrative.

- *Student Withdrawal (W1)* - Students wishing to withdraw must complete the online Student Withdrawal Form before the scheduled withdrawal deadline as published in the College catalog. Student withdrawals initiated prior to the scheduled withdrawal deadline will be recorded as a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.
- *Administrative Withdrawal (W2)* – A faculty member may withdraw a student up to the published withdrawal deadline for violation of the class attendance policy in which case the student will receive a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.

Students cannot withdraw from developmental studies courses (college-preparatory classes) after the drop/add period without written permission from their instructor and/or their academic advisor.

Academic Integrity

Honest participation in academic endeavors fosters an environment in which optimal learning can take place and is consistent with the college's mission. Academic misconduct, including cheating or plagiarism, is destructive to the spirit of an educational environment. GCSC professors report every instance of student academic misconduct to the college for inclusion on the student's records.

Most course syllabi include an academic honesty policy and the consequences for violating this policy. Familiarize yourself with course policies regarding authorized or unauthorized use of AI to avoid the pitfalls of academic dishonesty.

The following definitions will apply:

"Cheating"

includes but is not limited to use of any unauthorized assistance in taking quizzes, tests, or examinations; dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; the acquisition without permission of tests or other academic materials belonging to a member of the College's faculty.

"Plagiarism"

includes, but is not limited to, the use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment as well as the purchase of papers or projects. It can also include overuse of an editing program like Grammarly or submitting work written by an Artificial Intelligence (AI) generator like ChatGPT. Make certain to consult your course syllabi for your instructor's guidelines of AI material.

"Self-plagiarism"

occurs when a student submits the same or considerably similar document to fulfill requirements in different classes. For example, if a student submits a term paper in Religion they originally wrote for an English class, this is self-plagiarism. Once a paper receives a grade in one class, it cannot be submitted again for another class.

"Generative Artificial Intelligence (AI)"

is technology that uses machine learning to create new content, such as text, images or code, based on user input. These systems are trained on vast amounts of data, including large language models and image or code generators. Common examples include ChatGPT, GitHub, Copilot, Google Gemini, Perplexity, and the Grammarly AI function.

Sanctions for incidences of academic misconduct, depending on the severity of the incidence and/or its repetition, may range from receiving an F grade (or 0) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the college.

Classroom Recording

In accordance with federal and state privacy laws, students may record class lectures for their own personal educational use, in connection with a complaint to the college, or as evidence in internal or external legal proceedings. Students may not publish or upload the recordings or any components thereof without the knowledge and written permission of the faculty member. Failure to obtain permission to publish could lead to the students' having to pay damages, attorney fees, and court costs. For more information about what can be recorded, please see the guidelines in the GCSC Student Handbook.

Generative Artificial Intelligence (AI) Policy

The use of generative AI tools in academic work requires clear guidelines to maintain academic integrity. Please review the policy selected for this course regarding the use of AI tools such as

ChatGPT, Copilot, Grammarly's AI features, and similar platforms for assignments, research, and other coursework.

See the student handbook for further information. Students with questions about acceptable use should consult their instructor.

Prohibited Use of AI

The use of AI-generated content is strictly prohibited in all assignments, coursework, and throughout all stages of the work process, such as brainstorming, outlining, or drafting. This includes but is not limited to, tools such as ChatGPT, Copilot, and Grammarly's AI function. Use of AI tools will be treated as a violation of academic integrity and may result in penalties, including a zero on the assignment and additional disciplinary actions as outlined in the college's academic integrity policy.

Anti-Discrimination Policy

Gulf Coast State College does not discriminate against any person in its programs, activities, policies or procedures on the basis of race, ethnicity, color, national origin, marital status, religion, age, gender, sex, pregnancy, sexual orientation, gender identity, genetic information, disability, or veteran status. All questions or inquiries regarding compliance with laws relating to non-discrimination and all complaints regarding sexual misconduct or discrimination may be directed to Amanda Reed, Executive Director of Human Resources/Title II/504/Title IX Coordinator and Employment Equity Officer, Gulf Coast State College, 5230 W. US Highway 98, Panama City, FL 32401; 850-769-1551, ext. 3516. Rules, policies, fees, and courses described in this catalog are subject to change without notice.

Syllabus Policy

For any syllabus posted prior to the beginning of the term, the instructor reserves the right to make minor changes prior to or during the term. The instructor will notify students via e-mail or Canvas announcement when changes are made in the requirements and/or grading of the course.

Student Support Resources

Gulf Coast State College is committed to providing you with the resources you need for success as a student and beyond. View all the academic and student support resources provided at GCSC on the [Student Services web page](#).