

MCB 2010C: Microbiology (Mixed Mode)
Valencia College, Fall 2024
4 credit hours



Instructor: Dr. Sarah Rosario
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Office: AHS 217
Course Dates: August 19-December 8

Office Hours: Monday 9:30-11:30am (AHS 217)
Tuesday 9:00-10:00am (AHS 217)
Wednesday 9:00-10:00am (AHS 217)
Thursday and Friday 9:00am-12:00pm via Zoom

What will I learn?

This is a lecture- and lab-based course designed to provide students with an overview of the major concepts involved in clinical microbiology. It presents students with a survey of various types of microorganisms with an emphasis on the study of bacteria. The areas of study for this course include bacterial morphology, physiology and genetics, eukaryotic microbes and viruses, bacterial pathogenesis, human disease and epidemiology, and host defense mechanisms. It will serve as a foundation for advanced courses in biology and allied health sciences.

The lab is an integral component of this course and is designed to reinforce and extend the course material within this setting. The procedures of scientific inquiry will be heavily relied upon and the lab experience is an excellent way to accomplish many class objectives. Although often taught in a collaborative, “hands-on” manner, you are individually responsible to know and be able to perform each lab. Lab and lecture are designed to complement each other and are not mutually exclusive of each other.

What are the goals of this course?

To prepare nursing and other allied health majors to function safely and knowledgably in environments where pathogenic microbes are present causing human disease or where microbes are the subject of academic, medical, or scientific inquiry. At the end of the course, students will be able to:

- Describe the characteristics of microbes.
 - Explain factors that influence microbial propagation.
 - Explain microbial metabolism.
 - Differentiate between bacterial and eukaryotic genetic mechanisms.
 - Explain methods of microbial control.
 - Describe the role of microbes in health and disease.
 - Describe the role of the immune system in combating infections.
 - Demonstrate proficiency in microbial laboratory techniques.
 - Describe laboratory diagnostic techniques used in the identification of infectious agents.
 - Describe relevant infectious diseases.
- Apply the scientific method when analyzing laboratory results and medical information.

What content will be covered each week?

Week of	Topic
8/19/2024	Module 1: The Main Themes of Microbiology
8/26/2024	Module 2: The Chemistry of Biology
9/2/2024	Module 3: Tools of the Laboratory
9/9/2024	Module 4: Bacteria and Archaea
9/16/2024	Module 5: Eukaryotic Microorganisms
9/23/2024	Module 6: Microbial Genetics
9/30/2024	Module 7: Acellular Pathogens
10/7/2024	Module 8: Microbial Nutrition and Growth
10/14/2024	Module 9: Microbial Metabolism
10/21/2024	Module 10: Controlling Microbial Growth
10/28/2024	Module 11: Antimicrobial Chemotherapy
11/4/2024	Module 12: Host-Pathogen Interactions
11/11/2024	Module 13: Innate Immunity
11/18/2024	Module 14: Adaptive Immunity
11/25/2024	Module 15: Laboratory Diagnosis of Infection

What dates do I need to put in my calendar?

- August 19th- Class begins
- August 26th- Drop/Refund Deadline
- September 2nd- Labor Day Holiday- College Closed
- September 13th- Exam I due on Canvas
- October 4th- Exam II due on Canvas
- October 25th- Withdrawal Deadline-"W" Grade
- October 25th- Exam III due on Canvas
- November 15th- Exam IV due on Canvas
- November 27th-December 1st- Thanksgiving Holiday- College Closed
- December 6th- Exam V due on Canvas
- December 8th- Classes end

How is my grade determined?

Grades will be calculated as follows:

Grade Component	Percentage
Unit Exams	50%
Chapter Quizzes	15%
Lab Assignments	15%
Homework (Connect)	15%
Class Participation	5%

A = 89.5-100%, B = 79.5-89.4%, C = 69.5-79.4%, D = 59.5-69.4%, F = below 59.5%

Under no circumstances will your test scores, total points, or final grades be discussed on the telephone or over e-mail. FERPA rights to privacy prevent the divulging of scores or related materials by these means. Assignment scores and current course average can be accessed in Canvas.

What do materials do I need?

1. Cowan. Microbiology: A Systems Approach, 7th Edition (2023). McGraw-Hill. (eText)
2. CONNECT/LEARNSMART ACCESS CARD
3. Additional materials will be available on Canvas

Valencia College uses the Canvas learning management system, and this course requires the use of the Connect program from McGraw-Hill. Reliable access to the internet is necessary to complete the requirements of the course. It is recommended that students use the Chrome or Firefox browsers.

What are the expectations about class attendance?

This is a mixed- mode course. The lecture portion of the course is entirely online, and we will meet for hands-on laboratory activities once a week. The lecture materials and assignments are available in Canvas 24 hours a day, 7 days a week. Logging into the course regularly throughout the week will help you to manage your time and keep up with the course schedule. You should have reliable access to the internet. Computer labs are available for student use on each Valencia campus. On the West Campus the Computer Access Lab is in the library, Building 6, Room 101.

Weekly laboratory sessions will provide you an opportunity to apply the concepts learned during lecture in hands-on activities. In the lab, you will learn techniques and procedures that are essential for a success in future life sciences courses. You will prepare for the activities by reading the pre-lab materials in the laboratory manual. It is important that you arrive on time for lab because your professor will go over the materials and procedures at the beginning of class. Please note, to protect your safety, you will not be admitted to the laboratory if you are not wearing proper attire. You must have a lab coat and closed toed shoes. To ensure that you get the most out of the learning experience, in-person laboratory attendance is mandatory. If you miss a lab session, you will not be permitted to complete the laboratory assignments. Exceptions may be made if you contact your professor within 48 hours to explain your absence. Students that miss more than two lab sessions will be assigned a failing grade in the course at the discretion of the instructor. **If you do not attend lab during the first week will identify you as a “no show” for attendance purposes and will result in an administrative withdrawal from class.**

What if I need to withdraw from the course?

Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the withdrawal deadline of **October 25th** at **11:59pm** will receive a grade of “W”. A student is not permitted to withdraw after the withdrawal deadline. Any student who withdraws from a class during a third or subsequent attempt in the same course will be assigned a grade of “F.”

Students on financial aid should consult an advisor or a counselor before withdrawing from a course; there may be financial aid implications to the student which he or she must know about to make an informed decision before withdrawing from a course. Students with some scholarships who withdraw or are withdrawn from a class must pay the college for the cost of the class. Other scholarship sponsors may also require repayment.

Before you withdraw from this course, you should be aware that course withdrawals:

- Will increase the cost of your education
- May affect your financial aid status
- May affect your transfer grade point average
- May result in your having to pay the full cost of instruction fee to retake the course
- May affect your anticipated graduation date
- May result in your being denied access to limited access programs
- May affect your eligibility for the Honors Program
- May affect your immigration status if you are attending Valencia on a nonimmigrant visa
- Will result in your required repayment of course fees paid by a Bright Futures scholarship.

For a complete policy and procedure overview on Valencia Policy 4-07, please visit:
<https://catalog.valenciacollege.edu/academicpoliciesprocedures/courseattemptscoursewithdrawal/>

How will learning be assessed?

Chapter quizzes are worth 15% of your final course grade. These quizzes are multiple choice, open note assignments. You will have 20 minutes to complete each quiz. Unit exams constitute 50% of your final course grade. Exams are a combination of 40 multiple choice questions and four short answer questions. You will have 60 minutes to complete the exams. **No outside resources are permitted for the exams.** All quizzes and exams will be administered through Canvas using the Honorlock proctoring software. This is an extension for the Chrome browser and is required to access the quizzes and exams in Canvas. A webcam must be available for the Unit exams. All exams must be completed by the listed deadline. Late exam submissions will not be accepted unless arrangements are made directly with the instructor.

What if I miss an assignment deadline?

Students are responsible for keeping up with the pace of the course. Late assignments and quizzes will be accepted without penalty. It should be noted that exams are locked until all the assignments for the associated Unit are completed. Exams must be taken by the listed deadlines. If you have concerns about completing the work for the course, you should contact your instructor.

How do I contact my professor?

Dr. Rosario will be available to assist students Monday through Friday during office hours. Monday through Wednesday office hours will be held in her physical office, AHS 217. On Thursdays and Fridays office hours will be via Zoom. She is also available outside of those times to meet online using Zoom. Appointments must be made using Microsoft Bookings. Please visit the Bookings page at <http://bit.ly/4dtRbrY>. The preferred method of communication is email (srosario32@valenciacollege.edu). If you need help, do not hesitate to reach out. Dr. Rosario will respond as quickly as possible.

Email etiquette

1. Subject line: Include the course name and a specific subject heading for your email (example: BSC 1010C- Question about Exam I)
2. Greeting: You should address your professor as Dr. Rosario
3. Tone and style: Use a tone and language appropriate for professional communication. Emails written in incomplete sentences, without punctuation or in text shorthand (*i.e.* RU giving a test 2day? TTFN, ROLF LMAO) will not receive a response.
4. Content: Before sending an email, please review the syllabus, course website and/or textbook. Be thoughtful in your email. Many questions can be saved until the next class period. If you need in-depth help on a specific task or need general study guidance, please come to my office during office hours or make an appointment to meet with me. I am happy to help.
5. Signature: Please sign with your full name, course name and lecture time.
6. Response: Typically, emails will be responded to within 24hrs of receipt. Please avoid sending multiple emails within a single day.

Valencia College is committed to providing each student a quality educational experience. Faculty members have set high standards of instruction for themselves and for you. If you have a problem in a class, your first step is to talk to your instructor. If you are still dissatisfied, you may talk with the academic dean of the division for your class. We will work together to resolve any issues that arise.

Online etiquette

In order to maintain a positive online environment, we all need to follow the guidelines summarized below.

All students are expected to:

- respect the privacy of other students
- express differences of opinion in a polite and rational way
- maintain an environment of constructive criticism when commenting on the work of other students
- avoid bringing up irrelevant topics when involved in group discussions or other collaborative activities

The following list summarizes the kind of behavior that is not acceptable. Each item listed below is grounds for removal from the class.

Students should not:

- Show disrespect for the instructor or for other students in the class
- Send messages or comments that are threatening, harassing, or offensive
- Use inappropriate or offensive language
- Convey a hostile or confrontational tone when communicating or working collaboratively with other students
- USE ALL UPPERCASE IN THEIR MESSAGES -- THIS IS THE EQUIVALENT OF SHOUTING!!!

Students with Disabilities:

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of the semester. The OSD (West Campus SSB 102, ext. 1523) determines accommodations based on appropriate documentation of disabilities.

Academic Integrity:

All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes, but is not limited to, plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a test situation, and misuse of identification with intent to defraud or deceive.

All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression. Students should not have another person/entity do the writing of any substantive portion of an assignment for them, which includes hiring a person or a company to write assignments and using artificial intelligence tools like ChatGPT. Whenever a student uses ideas, wording or organization from another source, the source shall be appropriately acknowledged.

Students shall take special notice that the assignment of course grades is the responsibility of the student's individual professor. When the professor has reason to believe that an act of academic dishonesty has occurred, and before sanctions are imposed, the student shall be given informal notice and an opportunity to be heard by the professor. Any student determined by the professor to have been guilty of engaging in an act of academic dishonesty shall be liable to a range of academic penalties as determined by the professor which will include, but not be limited to, one or more of the following: loss of credit for an assignment, examination or project; a reduction in the course grade; or a grade of "F" in the course. At the option of the professor, the campus president may be furnished with written notification of the occurrence and the action taken. If such written notice is given, a copy shall be provided to the student.

Students guilty of engaging in a gross or flagrant act of academic dishonesty or repeated instances of academic dishonesty shall also be subject to administrative and/or disciplinary penalties which may include warning, probation, suspension and/or expulsion from the college.

Satisfactory Academic Progress:

In order to academically maintain financial aid, students must meet all of the following requirements:

- Complete 67% of all classes attempted, and

- Maintain a Valencia GPA of 2.0 or higher, and
- Maintain an overall GPA of 2.0 or higher, and
- Complete degree within the 150% timeframe

Detailed information about maintaining satisfactory academic progress (SAP) can be found at:

<https://valenciacollege.edu/finaid/satisfactory-progress.php>

Learning Support Services:

Learning Support Services provides students with academic support through distance tutoring, face to face tutoring at the campuses, writing consultations, library services, and resources. Tutoring is offered in most academic disciplines including math, science, foreign languages, English for academic purposes (EAP), computer programming and writing assistance for any course. Assistance with library research can be accessed online through Atlas or the tutoring LibGuide. For more information on how to access tutoring and library research assistance, please visit the college-wide Learning Support Services LibGuide at:

<https://libguides.valenciacollege.edu/distancetutoring>.

West Campus Tutoring Center

In-Person Operating Hours

- Monday to Thursday: 8am to 7pm
- Friday: 8am to 5pm
- Saturday: 10am to 4pm
- Sunday: Closed

Virtual Services will be available through [Distance Tutoring](#)

- Monday – Friday 10:00 am – 9:00 pm
- Saturday - Sunday 11:00 am – 7:00 pm

In-Person Services	Virtual Services
Walk-In Tutoring	Distance Tutoring Online Tutoring 24/7 – Brainfuse
Writing Center Consultations	Online Essay Center
Embedded Tutoring Programs	Embedded Tutoring Programs
Technology Check-out (calculators, iPads and laptops, etc.)	Student tech support
Student printing	
Student tech support	
Laptop cart request	

Brainfuse Online Tutoring:

Brainfuse is our 24/7 online tutoring and learning hub, which is available to all of Valencia’s students. This service is best used as a back-up to Valencia’s Distance Tutoring service, not as a replacement. Brainfuse is accessible through Canvas or by visiting <https://libguides.valenciacollege.edu/c.php?g=1014597&p=7351876>

BayCare Services:

BayCare is a private and confidential counseling service contracted by Valencia College that provides short-term assistance to credit students who need to resolve problems that are affecting their college performance. Examples might include stress, relationship/family issues, alcohol/drug problems, eating disorders, depression, and gender issues. If you are experiencing any of these issues, call 1-800-878-5470 to speak to a professional counselor. For more information, log into Atlas, click on the “Students” tab, and click on “BayCare Health System,” located under “Health and Wellness.”

Campus Safety:

We want to reassure you that our security officers are here around the clock to ensure the safety and security of the campus community. It's important to remain alert and aware of your surroundings, especially during the early morning or evening hours. Remember that you can always call security for an escort if you feel uncomfortable walking alone on campus. White security phones can also be found in many of our buildings; simply pick up the phone and security will answer.

Finally, report any suspicious persons to West Campus Security at 407-582-1000, 407-582-1030 (after-hours number) or by using the yellow emergency call boxes located on light poles in the parking lots and along walkways.

Title IX:

Valencia College strives to be a place free from all forms of discrimination. Title IX, a federal law, and Valencia College Policy protect students from discrimination based upon sex including protections against sexual violence, domestic violence, and stalking. This also includes protections for students who are pregnant or may become pregnant. If you experience sexual violence, domestic violence or stalking and would like assistance there are several options available to you. Valencia collaborates with the Victim Service Center of Central Florida, which is a confidential resource available 24/7. They can be reached by calling 407-497-6701. If you would like assistance on campus, you can go to valenciacollege.edu/eo or contact Valencia College's Title IX Coordinator, Ryan Kane, by emailing rkane8@valenciacollege.edu. If you would like to report to law enforcement, you may visit Campus Security or call 911.

Please note that there are no confidential resources on campus. As your professor, I am required to report any information mentioned in this statement to the appropriate campus resources. This will include your name, and detailed information shared with me. We take privacy very seriously at the College and only those who have a legitimate need to know the information will be provided with this information.

If you have more questions about Title IX or the College's response, please visit <http://valenciacollege.edu/eo>

Weather Emergencies:

In the case of weather emergencies, you can find out about school closings by signing up to update your information for Valencia Alerts.

The course outline and syllabus are subject to change as needed; changes will be announced via Canvas in a timely manner, when necessary. Your continued participation in this course after the drop-add deadline period constitutes an agreement with and an acceptance of the conditions presented in this syllabus.

Valencia College Core Competencies

The faculty of Valencia College has identified four core competencies that define the learning outcomes for a successful Valencia graduate. These competencies are at the heart of the Valencia experience and provide the context for learning and assessment at Valencia College. You will be given opportunities to develop and practice these competencies in this class. The four competencies are:

1. **Think** - think clearly, and creatively, analyze, synthesize, integrate and evaluate in the many domains of human inquiry.
2. **Value** - make reasoned judgments and responsible commitments.
3. **Communicate** - communicate with different audiences using varied means.
4. **Act** - act purposefully, effectively, and responsibly.