

Course Syllabus
Biology 235: Microbiology
Biology 235L: Microbiology Lab
Fall Semester 2015, Moravian College

Professor's Contact information:

Dr. Kara Mosovsky
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Office: 311 Collier Hall of Science
Office hours: Mon/Wed 3:30-4:30pm, Thurs/Fri
2-3pm, also by appointment if need be
Office Phone: (610) 861-1428

Class information:

Lecture meets: MWF 7:50am-8:40am, 200 CHoS
Lab meets: MW 1:15pm-3:15pm, 303 CHoS
Dates: August 31st - December 18th, 2015
Credit hours: 1

Course Catalog Description: Nature and activities of microorganisms as seen through their morphology, physiology, genetics, biochemistry, and ecology. Special attention on the microbe as an infectious agent through investigation of host-microbe interaction, action of antibiotics, and immunological responses of host organisms to infection. Prerequisites: Biology 103-104, 112 or 119, and Chemistry 108 or 113-114. This course is for Biology majors distinct from BIOL 297, Microbiology for Health Sciences taken by Nursing Majors.

Major Course Goals

1. Demonstrate an understanding of the terminology and principles of basic chemistry, cell structure and function, bioenergetics, cell reproduction and genetics, microbial taxonomy, and Darwinian evolution of microbes
2. Demonstrate technical laboratory skills, such as microscopy, aseptic techniques, culturing and isolation, and media and material preparation and sterilization
3. Demonstrate cognitive laboratory skills, such as collection and analysis of data, identification of microbes, and communication of results
4. Integrate themes of immunology, epidemiology, and virology into the understanding of general microbiology
5. Practice reading and understanding primary, peer-reviewed research articles and create summaries for a general public audience

Course Textbooks

Recommended Lecture Textbook: Prescott's Microbiology, 9th edition. Authors: Willey, Sherwood, Woolverton, published by McGraw-Hill

Required Lab Manual: Microbiology Laboratory Theory and Application, 4th edition. Authors: Leboffe and Pierce, published by Morton Publishing

Blackboard Course Website:

After you have enrolled in our blackboard course, login to Blackboard <https://blackboard.moravian.edu> to access our course shell. This site will contain updates and announcements, lectures slides, homework assignments, student grades, etc. for this course. I will communicate with the class through blackboard, so please check the announcements page frequently.

Grades

I do not *give* grades for this class, YOU EARN THEM. Your grade will be determined from the total number of points you earn throughout the semester. Below is a list of anticipated assignments and evaluations for this semester:

Types of Evaluation	Total Points
Exams (4 @ 100 pts)	400
Final Exam (partially cumulative)	130
Mid-term and Final Lab Practical (@ 50 pts each)	100
Unknown Organism Write-Up	60
Post-lab questions	30
Homework Assignments	20
Infectious Disease Project	60
Connect Quizzes (13 @ 10 pts each, drop 3)	100
Connect LearnSmart Modules (11 total)	100
	1000

Standard Grading Scale

A letter grade will be assigned based on the following final percentage of points earned:

(100 - 93.3%)	= A (Outstanding)
(93.2-90.0%)	= A-
(89.9-86.7%)	= B+
(86.6-83.3%)	= B (Above Average)
(83.2-80.0%)	= B-
(79.9-76.7%)	= C+
(76.6-73.3%)	= C (Satisfactory)
(73.2-70.0%)	= C-
(69.9- 66.7%)	= D+
(66.6-63.3%)	= D (Below Average)
(63.2-60.0%)	= D-
(59.9%)	= F (Failing)

Students are responsible for keeping track of their grades. If you need to dispute a grade on an assignment or evaluation, you will have exactly 1 week in which to do so (from when the grade is listed on blackboard). Only a final course grade ending in 0.50 - 0.99% will be rounded-up to the next whole number, though the instructor reserves the right to use judgment to further round-up a student's border-line grade.

Exams

There will be three regular exams and one partially-cumulative final exam. Exams will cover material from the lectures indicated on the syllabus. The format will be a mixture of all question types (multiple choice, true/false, free response, etc.). If you miss an exam for any reason, it is YOUR responsibility to coordinate with the instructor and take the exam ASAP. You may start with a 5% grade deduction for that exam. **There will be NO make-up exam for the partially-cumulative final exam!**

Journal Article Summaries

After practicing how to “dissect” a journal article in class, there will be two additional assignments to read a designated article and summarize its findings in a format that could be easily understood by an average non-science adult. Being able to read and understand a technical peer-reviewed article is an important skill for anyone, but being able to convey the substance of the paper in non-technical lingo and every-day words will solidify *your* comprehension of the article and is good practice for any technical career you pursue. There will be a 3 pt. grade deduction (for the assignment) for *each* day an assignment is turned in late.

Blackboard Quizzes

There will be 5 Blackboard quizzes throughout the semester. Each quiz will cover lectures since the last exam or quiz up through the most current lecture. Quizzes must be completed BEFORE lecture begins on the day they are listed on the schedule. Quizzes MUST be taken individually. You may use class notes or the textbook during the quizzes, but time is extremely limited, so you should take the quizzes only after you have adequately studied. You will be allowed only one submission for each quiz. There will be **no make-ups for missed quizzes**. Emergencies, computer problems, or other unforeseeable events cannot be individually accommodated by extending deadlines. For these reasons, **your lowest quiz grade will be dropped** at the end of the semester.

Lab Practicals

Lab practicals will test your knowledge and application of the techniques and theory used in the laboratory component of our class. The format is mostly multiple choice with some free response and a demonstration of correct lab techniques. **There will be NO make-up lab practicals, so make sure you can attend on the dates they are scheduled.**

Unknown Organism Write-Up

Students will work individually to separate a mixed culture of bacteria and ultimately identify both species. Students will be required to write-up the results and analysis of all experiments related to identifying their microorganism. More information and a specific grading rubric will be handed out at the start of the unknown experiments. There will be a 5 pt. grade deduction for each day the write-up is turned in late.

Post-lab Questions

These questions will be assigned at the end of one class and will be due 1 week later before the start of lab. These questions will help you think critically about the experimental observations and results of your lab. While you may collaborate with classmates, the final assignment that you hand in must only represent YOUR original work. I will deduct 1 pt. for each day the assignment is turned in late. You may always turn-in assignments ahead of time (in class, email, etc.)

Pre-lab Quizzes

There will be 5 random pre-lab quizzes throughout the semester. These may or may not be announced beforehand. Their purpose is to ensure that students come prepared to lab having already read through the lab exercises that will be performed that day and ready to basically get started. **Missed pre-lab quizzes cannot be made up, but your lowest quiz grade will be dropped at the end of the semester.**

Tips for Success in this Course

- 1) Come to class ready to engage, learn, and participate
- 2) Study notes, slides, lab manual, and handouts covered in lecture and lab; read the book to reinforce difficult concepts; know the material well enough to teach it to someone else
- 3) Take good notes during lecture AND lab
- 4) Understand that there is a steep learning curve at the beginning of this course
- 5) Be ready to put in a lot of effort for this course! Understand that you will likely spend about 8-12 hours outside of class studying and preparing for this class each week
- 6) Seek help EARLY if you are struggling
- 7) Ask questions immediately, as they arise---there are no stupid questions
- 8) Familiarity does not equal mastery
- 9) Attendance and participation pay off! There is usually a direct correlation between your attendance and your final grade

Other course policies:

Attendance: You are expected to attend every lecture and lab. I will make a note of absences each day. If you miss a class, you are still responsible for the material that we covered in class as well as any assignments due or assigned that day. It is the YOUR responsibility to contact a labmate, stop by the instructors office hours, or come early to lecture/lab to find out what you missed ASAP—please do not email the instructor “what did I miss today” as there is usually too much to write in an email. It is always much easier to tell you “what you missed” face-to-face.

Missed labs are not easy or convenient to make-up and usually leave your lab partner with extra work! If you know you will miss a lecture or lab ahead of time, please tell the instructor so that alternative plans can be arranged, if possible.

Plagiarism: Using someone else's words, ideas, or images and calling them your own, is academic fraud! You may NEVER use material (words, ideas, images) created by someone else and hand it in as your own work — even if they give you their permission. All work for this class must be YOUR ORIGINAL work. **If you are caught plagiarizing, you may fail the assignment and/or the course, at the discretion of the instructor and department chair. In addition you will receive academic sanctions that will affect your grade and non-academic sanctions as a violation of the academic honesty policy in the student handbook. For more information on Moravian's academic honesty policy, please visit the student handbook at:** <http://www.moravian.edu/studentLife/handbook/academic/academic2.html>

Biosafety: All students are expected to follow the safety precautions as outlined for each lab session. Students are required to sign a laboratory safety agreement before participating in lab.

Be Responsible for your Success - It is YOUR responsibility to make sure that you are consistently checking Blackboard for announcements, working through the chapter readings in a timely manner, and completing other assignments on time. Ultimately, it is YOU who will determine your own success in this course. The tools will be provided for you to learn the required material, but it will take a major time commitment on your part.

Cheating: There is a zero tolerance policy on cheating in my course. You may not copy or use any other student's work (or answers) as your own. Students that cheat will receive zero points for that assignment, and may receive a failing grade for the entire course (at the instructor's discretion), irrespective of previously earned points. Furthermore, acts of cheating will be reported to the appropriate personnel in your department. **DO YOUR OWN WORK!**

Cell phones/cameras: Please keep cell phones muted and out of sight during lecture. If you need to use your phone, please quickly step out of the classroom to do so (I won't mind). You may not use any video or camera equipment in the laboratory--that includes camera phones. This is to prevent transfer of potentially infectious organisms from your hands to phones that will leave the room and later touch your face!

Food/drink: NO FOOD OR DRINK CONSUMPTION IN THE LABORATORY! Err on the side of caution and assume all lab surfaces **may** be contaminated, as this is a microbiology lab. Please keep all food and drink outside the classroom or safely tucked away.

Disabilities Policy

Students who wish to request accommodations in this class for a disability should contact Laurie Roth, Assistant Director of Academic and Disability Support, located in the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

Need a Tutor?

The Academic Support Center houses Disability Support and Greyhound Tutoring on the first floor of Monocacy Hall and can be reached at [610-861-1401](tel:610-861-1401).

Greyhound Tutoring provides course-specific tutors to Moravian students, free of charge. If you would like to work with a Greyhound Tutor to boost your academic success, please request a tutor through <http://bit.ly/NeedTutorMC> (case-sensitive). Plan ahead! It takes 2-3 business days to connect you with a tutor.

Please email Dana Wilson (wilsond@moravian.edu), Tutor Coordinator, for more information about tutoring. Please email Laurie Roth (rothl@moravian.edu), Director of Academic and Disability Support, for more information about disability support.

****Your instructor reserves the right to modify the syllabus, course policies, schedule, and/or assignments and point values at any time during the semester and will notify students of any changes that take place.**