



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

Microbiology for Non-Science Majors

BIOL 2420.B050

Sondra Dubowsky

NOTE: This is a 16-week course.

NOTE: This is a Blended/Hybrid course.

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Course Description:

This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It introduces historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health.

Course Notes and Instructor Recommendations:

All lecture exams will be taken in Brightspace.

Instructor Information:

Instructor Name: Sondra Dubowsky

MCC E-mail: sdubowsky@mclennan.edu

Office Phone Number: 254-299-8190 (**do not call this phone call my CELL PHONE**)

Office Location: Science Building Room 244

Office/Teacher Conference Hours: 5:00-6:00 Wednesday in my office, 7:00 - 9:00 Tuesday, Thursday, Friday, Saturday, and Sunday by phone, text, or email, or by appointment.

Cell Phone Number: 620-365-9557 (text messaging and calls any time 7 days a week and holidays – **always leave a message telling me WHEN I can call you back if I am unavailable.**)

Required Text & Software:

Textbook Title: *Microbiology Fundamentals: A Clinical Approach*

Author: Marjorie Kelly Cowan and Heidi Smith

Edition: 4th (2022)

Publisher: McGraw Hill

ISBN: 9781260786057

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Class Requirements:

Each student will need to have USB drive (or equivalent) that must be used to save all work turned in. This way you have a copy if for some reason the assignment is lost. Uploading to Brightspace or turning in a paper is not always successful and you need a backup copy. You are expected to bring your USB drive, a pencil, and an eraser to each class session. All work turned

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into the instructor while in class must be in pencil and all work completed outside of class must be typed.

Methods of Teaching and Learning:

Lectures will include discussions, concepts, physiological function, homework assignments, oral, and writing assignments. Laboratory will include anatomical identification of models, diagrams, and cadaver photos.

1. **Critical Thinking Skills:** Creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. Assessed via class discussions, laboratory exercises, lecture quizzes and/or examinations.
2. **Communication Skills:** Effective development, interpretation and expression of ideas through written, oral, and visual communication. Assessed via class/lab exercises or presentations, either individually or in small groups, using oral, written, and visual components.
3. **Empirical and Quantitative Skills:** Manipulation and analysis of numerical data or observable facts resulting in informed conclusions. Assessed via lecture quizzes and/or examinations, laboratory exercises, and written homework assignments.
4. **Teamwork:** Ability to consider different points of view and to work effectively with others to support a shared purpose or goal. Assessed via group discussions, group laboratory activities, or group presentations.

Learning Outcomes:

1. Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms.
2. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
3. Distinguish between mechanisms of physical and chemical agents to control microbial populations.
4. Explain the unique characteristics of bacterial metabolism and bacterial genetics.
5. Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
6. Compare characteristics and replication of acellular infectious agents (viruses and prions)

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with characteristics and reproduction of cellular infectious agents (prokaryotes and eukaryotes).

7. Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.
8. Explain transmission and virulence mechanisms of cellular and acellular infectious agents.
9. Use and comply with laboratory safety rules, procedures, and universal precautions.
10. Demonstrate proficient use of a compound microscope.
11. Describe and prepare widely used stains and wet mounts and discuss their significance in identification of microorganisms.
12. Perform basic microbiology procedures using aseptic techniques for transfer, isolation and observation of commonly encountered, clinically significant bacteria.
13. Use different types of bacterial culture media to grow, isolate, and identify microorganisms
14. Perform basic bacterial identification procedures using biochemical tests.
15. Estimate the number of microorganisms in a sample using methods such as direct counts, viable plate counts, or spectrophotometric methods.
16. Demonstrate basic identification protocols based on microscopy morphology of some common fungi and parasites.

Course Outline or Schedule:

Lecture: Lecture exam schedule is subject to change.

Section 1: Introduction to Chemistry,

Section 1: Cells

Section 1 Bacteria in General

Lecture Exam 1

Section 2: Immunology

Section 2: Testing

Section 2: Hypersensitivities

Section 2: Autoimmune Diseases

Lecture Exam 2

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Section 3: Pathogenic Bacteria

Lecture Exam 3

Section 4: Chemotherapy

Section 4: *Rickettsia*

Section 4: *Chlamydia*

Section 4: Viruses

Lecture Exam 4

Section 5: Fungi

Section 5: Protozoans

Section 5: Trematodes, Cestodes, and Nematodes

Lecture Exam 5 Final

Lab: Lab exam schedule is subject to change.

Section 1: Week 1: Introduction and Safety

Week 2: Microscopy

Week 3: Colonial Morphology

Section 2: Week 4: Gram and Acid-Fast Staining

Week 5: Our Environment

Week 6: Blood Agar and Natural Flora

Section 3: Week 7: Research Papers and Covid Testing

Week 8: Video

Week 9: Efficiency of Sterilization

Section 4: Week 10: Streak for Isolation

Week 11: Blood Cells Morphology with Mono, Malaria, and Histoplasma

Week 12: API Strips and Fungi

Section 5: Week 13: Eukaryotic Parasites

Week 14: Worms

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Week 15: Finish Up

Course Grading Information:

Grades will be made up of lecture quizzes and exams, lab exams, the final exam, assignments, and discussions. Since this is a pre health care class all spelling of anatomical or physiological words will be graded. Grades are based on point totals. At any given time if you add up the total points earned and divide by the total possible points you have your percent grade in the class.

- 5 Lecture Essay Questions (10 pts each)
- 5 Lecture Quizzes (10 each)
- 5 Lecture Exams - Final Exam will be Exam 5 (approximately 120 pts each)
- 15 Discussion Boards (5 pts each)
- 3 Writing Assignments (30 points)
- 1 Lab Notebook (50 points)

1. Grading Scale in Percentages

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

2. Discussion Boards

There will be discussions throughout the semester. These discussions will constitute your attendance in this course. **IF YOU DO NOT COMPLETE THE DISCUSSION BY THE DUE DATE, YOU WILL NOT RECEIVE CREDIT – NO EXCEPTIONS.** It will also count as an absence. If you miss **4 or more** discussions (or exams) you will have missed 25% of your attendance and as keeping with MCC policy, **you will be dropped from the class** with a “W”.

The discussions will be posted on the Discussion Board in Brightspace. You will to post your own original comments and then comment on at least three other threads created by your classmates.

Each entry **MUST** be a minimum of 25 words in length or it will not be accepted as part of your 4 total entries. You need to develop your answer and use proper grammar.

If you have one post you will receive 1 point, if you have two posts you will receive 2 points, if you have three posts you will receive 3 points, and if you have 4 posts you will receive all 5 points.

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3. Lecture Quizzes

These quizzes, found on Brightspace, are designed to test your knowledge of this section of lecture material. You can take the quiz as many times as you like the highest score is recorded. You should take the quiz as many times as possible. If you take it 5 times a day for 3 weeks you should be ready for the exam. You can also take these quizzes throughout the semester so due dates have no meaning for lecture quizzes. Once the quiz is graded, the correct answers are provided. Start them the first day of the learning unit.

4. Lecture Exams

Lecture exams will be taken on Brightspace. The instructor must be contact before a missed exam if they want to take it late. No exam can be taken late without pre-approval. There will be 5 lecture exams. The questions are pulled from the database and are the same for the quizzes and the exams. So, you will have seen some of these questions before. You must finish the exam once you have started. Exams can only be taken one time and no exam grades will be dropped. Once the exam is graded, the correct answers are provided. The instructor will grade the fill-in-the-blanks by hand. So, students are encouraged to wait until a numerical score is posted before questioning the grade. **An exam not completed will count as an absence.**

Late Work, Attendance, and Make Up Work Policies:

If for any reason you feel that you will be unable to complete the work by the assigned deadline **you must contact the instructor prior to missing the exam, or you will receive a zero** for that particular assessment. When contacting the instructor, you need to explain why you need an extension and give a time when the assessment will be completed. Extensions will be given for all assignments including exams. **An exam not completed will count as an absence.**

Feel free to text or call the instructor anytime by cell phone. The instructor will be available 7 days a week and on holidays.

Communicating with the Professor

You **CAN** communicate with the professor 1 of 3 ways:

Professor's Cell Phone – call (620-365-9557)

Professor's Cell Phone – text (620-365-9557)

From your MCC email account – email me at sdubowsky@mclennan.edu

You **CANNOT** communicate with the professor these ways:

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Professor's Office Phone

Brightspace Messaging

From your personal email account – we are not allowed to respond to personal emails

Student Behavioral Expectations or Conduct Policy:

Each student is expected to behave in a civil and respectful manner toward the instructor and other students. If a student fails to act in an appropriate manner, the student may be asked to leave the class.

Cell phones must be on vibrate or silent while in class. If you need to answer a call quietly leave the class to do so. Text messaging will not be tolerated if it interferes with the learning environment. No children, friends, family members, or anyone else not enrolled in the course is allowed to attend. You are expected to follow all laboratory safety rules as presented to you in class. You may eat or drink only in the lecture classroom not a lab classroom.

Academic Integrity:

Any student caught **plagiarizing or cheating will receive a 0 for that assignment with the possibility of withdrawal** from the course. Each incidence of cheating will be reported to the Discipline Coordinator as soon as possible, and further action may be taken by the Discipline Coordinator.

Cheating includes but is not limited to using your homework, notes, books, the internet, or any other source while taking a quiz or exam. Copying answers from another student's paper or turning in work that is not your own is another form of cheating. Plagiarizing is copying written information from a source not your own. Cheating only hurts you in the long run. Helping someone else cheat hurts both of you. If you are having trouble or feel panic coming on, contact the instructor.

Attendance Policy:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly, and the student will only receive funding for those courses attended as of the course census date.

Before the 60% point of the semester, a student who is absent for 25% or more of a face-to-face or blended course or who misses 25% or more of assigned work for an online course will be withdrawn from the course with a grade of W. A student may also request to be withdrawn with a grade of W before the 60% point of the semester. After the 60% point of the semester, the

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student may request to be withdrawn if the student is passing or be assigned the final grade earned at the end of the semester after grades have been updated to reflect missing work.

According to the MCC policy on attendance: **“Absence from 25 percent of scheduled meetings will be taken as evidence that a student does not intend to complete the course, and the student will be withdrawn from the course with a grade of W.”** Your attendance will be measured completion of your discussions and exams by their deadlines. If you fail to meet the deadline you will not get credit and it will count as an absence. If you miss more than 4 discussion boards or exams this will result in a withdrawal from the course.

Lab Attendance will be kept by use of a sign-in roll sheet that will be passed out at least once during each class meeting. It is your responsibility to sign in each class period. If you don't sign in there will be no record of your attendance. Each student is responsible for signing the roll sheet. Do not sign in for another student.

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)
(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

Updated 07/18/2023



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu 2542998122 Room
319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the acting Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center at (254) 299-8210. The MCC Student Counseling Center is a

confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>. Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (<https://www.mclennan.edu/academic-support-and-tutoring/>).

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing crew@mclennan.edu or a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Both are located in the Completion Center located on the second floor of the Student Services Center (SSC) which is open Monday-Friday from 8 a.m.-5 p.m.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to https://mclennan.co1.qualtrics.com/jfe/form/SV_07byXd7eB8iTqJg. Both the Completion Center and Paulanne's Pantry are located on the second floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to

<https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html>

to find out more about the emergency grant. The application can be found at

https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teachingandlearning/FacultyandStaffCommons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are

expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/studentemail.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](#)
- [Email Setup for Androids](#)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.