



## **Fundamental Clinical Microbiology: BIOL 2144**

College of Science, Mathematics and Engineering  
Spring 2026 | MWF 9:00am – 9:50 am | Bolin 221

### **Contact Information**

Instructor: James Masuoka  
Office: Bolin Hall, Room 224F  
Office hours: TR 9:30-11:00 am; F 1:00-2:00 pm  
Office phone: (940) 397-4181  
E-mail: [james.masuoka@msutexas.edu](mailto:james.masuoka@msutexas.edu)

### **Course Description**

Introduction to the study of medically important bacteria, protozoa, viruses, helminths, and fungi. May not be applied to biology major.

### **Textbook & Instructional Materials**

**Microbiology: with Diseases by Body System** by RW Bauman. 5<sup>th</sup> Edition. Pearson Benjamin Cummings, 2018. ISBN: 978-0-134-47720-6. **Note:** An e-text version of the textbook is included in the Pearson Course Materials link in the course D2L page through the Courseware Access and Affordability Program.

**Microbiology Laboratory Theory & Application: Essentials, 2<sup>nd</sup> Edition** by L Norman-McKay, MJ Leboffe and BE Pierce. Morton Publishing Company, 2022. ISBN: 978-1-64043-400-4. **Note:** This semester, we will be using a print/digital hybrid lab manual. The print version is available in the bookstore. The digital content is accessed through the TopHat link in the course D2L page.

### **Academic Misconduct Policy & Procedures**

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct. [Office of Student Conduct](#)

## **Moffett Library**

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

## **Grading**

All exams and assignments count toward your final grade in the course and so it is important to do the best that you can on everything you turn in. If you find yourself having difficulties, please come to me for help early in the semester so that you give yourself time to improve. Passing requires 60% of the points (unadjusted) for the course, or 560. Fractional percentages will be rounded at the end of the semester.

*Table 1: Points allocated to each assignment*

Assessments	Points
Midterm Exams (3: 90 points each)	270
Final Exam	180
Homeworks	50
Reading Assignments (Mastering)	100
Laboratory	300
Total Points	900

*Table 2: Total points for final grade.*

Grade	Points
A	810
B	720 to 809
C	630 to 719
D	540 to 629
F	Less than 539

## **Homework**

There will be five homework assignments. Each assignment will be worth 10 points. The purpose of these assignments is to reinforce course concepts, to introduce students to the operations of a clinical microbiology laboratory, and to highlight the diversity of science and the scientists within the medical microbiology field. Assignment information will be posted in the course D2L Assessments/Assignments folder.

## **Reading Assignments**

A portion of the lecture score (100 points) relates to the assigned reading. These assignments will be available through Mastering Microbiology accessed through the course D2L page. Assignments are available beginning the first day of class. Assignments will be due the day we begin discussion of that topic. Assignments may be completed after the due date for half credit.

## **Exams**

There will be three midterm exams, each worth 90 points. The final exam will be worth 180 points. Each exam, including the final, will focus on what was covered since the previous exam. However, each exam will also be cumulative in that each section of the course builds on what came before. The final will also be more typically cumulative in that it will cover the entire semester, focusing on material that needs to be reviewed (*i.e.*, most of the class got it wrong the first time around). Misspelled words (esp. organism names) and incorrect taxonomic nomenclature will result in  $\frac{1}{4}$  point deductions for each instance.

## **Laboratory**

Lab constitutes approximately 30% of the BIOL 2144 grade. Specifics for lab exercises, assignments and grading will be provided during the first lab period and in a separate syllabus.

Participation in both lecture and lab is critical to success in this (or any other) class. Although focused on the laboratory part, participation in lectures is also assessed. This includes attendance and participation in lecture discussion and completion of a pre-/post-semester concept inventory survey (10 pts). For the latter, I will be sending a link to the survey during the first week of class and about two weeks before the final exam.

## **Late Work**

Points will be deducted from assignments turned in late.

## **Make Up Work/Tests**

No make-up exams will be given in this course. If you must miss class during a midterm exam period due to unavoidable circumstances, then the cumulative part of the final exam will replace the missed midterm score. Acceptable circumstances include death of an immediate family member, jury duty, call to military service, hospitalization or similar debilitating illness and event attendance required by the university. Routine appointments, medical or otherwise, and vacation travel are not acceptable reasons for absence from an exam.

You must notify the instructor of problems **prior to** the start of the exam and provide the proper documentation as soon as possible. Only **one** midterm exam will be substituted for in this manner. Exams will not be moved for congested midterm or finals schedules.

### **Important Dates**

- Last day for term schedule changes: **January 23, 2026**
- Deadline to file for graduation: **February 16, 2026**
- Last Day to drop with a grade of "W": **April 29, 2026**
- Refer to: [Drops, Withdrawals & Void](#)
- Refer to the course D2L page for exam and assignment due dates

### **Desire-to-Learn (D2L)**

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

### **Attendance**

Students are expected to attend all meetings of the classes in which they are enrolled. Although in general students are graded on intellectual effort and performance rather than attendance, absences may lower the student's grade where class attendance and class participation are deemed essential by the faculty member. In those classes where attendance is considered as part of the grade, the instructor should so inform students of the specifics in writing at the beginning of the semester in a syllabus or separate attendance policy statement. An instructor who has an attendance policy must keep records on a daily basis. The instructor must give the student a verbal or written warning prior to being dropped from the class. Instructor's records will stand as evidence of absences. A student with excessive absences may be dropped from a course by the instructor. Any individual faculty member or college has the authority to establish an attendance policy, providing the policy is in accordance with the General University Policies.

Attendance is not a direct part of your course score. However, continual tardiness – and the resulting class disruption due to coming in late – will be considered and may influence your final points awarded. Cell phone use distracts from attention in class. Therefore, students who persist in using their mobile devices during class, except for designated classroom activities, will be marked as absent.

**If you feel ill:** Stay home and isolate yourself. Inform your instructor of your circumstances.

It is the responsibility of the student to obtain notes or other information covered in class during an absence.

### **Instructor Expectations and Class Policies**

- Students are expected to be prepared for lecture and lab by 1) reading the text, lab manual or handouts prior to coming to class; 2) having paper and pen at hand.
- Students are expected to arrive a few minutes early to mentally prepare. If late arrival is unavoidable, the student should enter the class in a manner that creates as little disruption as possible.
- Student Conduct: Please refer to the [Student Handbook](#) for university policies related to student responsibilities, rights, and activities.
- Analytical and critical thinking skills in both written and oral communication are part of the learning outcomes of this course. Therefore, all writing assignments and classroom discussion responses should be prepared by the student. Developing strong competencies in this area will prepare you for a competitive workplace. Because of this, AI-generated submissions are not permitted and will be treated as plagiarism (Adapted from Texas Tech University statement).
- Students with disabilities: It is the responsibility of the student to first contact Disability Support Services and then the instructor to decide what accommodations might be provided for a disability. It will be the responsibility of the student to plan to acquire notes. Any requests for accommodation must be made 2 weeks prior to the first exam.
- The instructor considers this classroom to be a place where you will be treated with respect as a human being. Students will show respect for each other and the instructor. Failure to do so will result in the disrespectful student being asked to leave the classroom or laboratory. Furthermore, guns or other weapons create a coercive environment that is neither safe nor conducive to learning. Therefore, weapons of any kind will not be allowed in my classroom. This includes guns, concealed or otherwise, regardless of licensure. Any student bringing a weapon to class or to lab will be immediately dropped from the course. It is the professor's expectation that ALL students consider the classroom a safe environment.
- **CELL PHONES (and other electronic devices): (READ THIS TWICE, PLEASE)** This class, as well as your other classes, requires your engagement, and typical cell phone use serves to detract from that engagement. While in class, your phone should be on "silent" (NOTE: vibrate is NOT silent).
- **Other electronic devices (laptops, tablets and similar devices):** These may be used only if you are using them as "electronic paper". That is, if you are writing on them with a stylus or some type. The ability to take good notes is a skill that university students must be able to master.

Further, classroom studies have shown that taking notes by hand increases engagement in the material. Simply transcribing the lecture word-for-word (as you are tempted to do while typing) is not helpful.

- **E-mail:** I will respond to e-mail during regular school hours (8:30 am – 5:00 pm M-F). I will make every effort to respond to e-mail sent during the week within 24 hours. Those sent over the weekend will be attended to on Monday. Always include a subject line in your e-mail messages. It would be particularly helpful to include in the subject line the course number & section (*i.e.*, BIOL 2144). Questions about simple matters of class schedule or those that can otherwise be answered from information in this syllabus will be given low priority.
- The instructor reserves the right to amend these rules as needed throughout the term.

### **Change of Schedule**

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

### **Refund and Repayment Policy**

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. **HOWEVER**, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

### **Services for Students with Disabilities**

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

## **College Policies**

### *Smoking/Tobacco Policy*

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

### *Alcohol and Drug Policy*

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

### *Active Shooter*

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “*Run. Hide. Fight.*” which may be electronically accessed via the University police department’s webpage: [“Run. Hide. Fight.”](#)

## **Grade Appeal Process**

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University [MSU Catalog](#)

**\*Notice:** Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

### Tentative Course Schedule:

Week or Module	Topic	eText Sections
Week 1 1/19 to 1/23	Course Introduction Infectious Diseases	4 (4.1-4.3)
Week 2 1/26 to 1/30	Microscopy Eukaryotic Cells Structure and Function	4 (4.1-4.3) 3 (3.1, 3.2, 3.10-3.12)
Week 3 2/2 to 2/6	Eukaryotic and Bacterial Cell Structure and Function	3 (3.1, 3.2, 3.10-3.12)
Week 4 2/9 to 2/13	Culturing Microbes Microbial Growth	6 (6.1-6.3)
Week 5 2/16 to 2/20	<b>Exam 1 (2/16)</b> Microbial Metabolism	5 (5.1-5.3)
Week 6 2/23 to 2/27	Microbial Metabolism Gene Expression	5 (5.1-5.3) 7 (7.1-7.4)
Week 7 3/2 to 3/6	Gene Expression Classification of Microbes	7 (7.1-7.4) 4 (4.4), 11 (11.1-11.2)
Week 8 3/9 to 3/13	No Classes: Spring Break	No reading
Week 9 3/16 to 3/20	Classification of Microbes Viruses	12 (12.1-12.3, 12.6) 13 (13.1-13.3, 13.5)
Week 10 3/23 to 3/27	<b>Exam 2 (3/23)</b> Viruses	13 (13.1-13.3, 13.5)
Week 11 3/30 to 4/3	Innate Immunity	15 (15.1-15.3)
Week 12 4/6 to 4/10	Adaptive Immunity Pathogenesis	16 (16.1-16.5) 14 (14.1-14.8)
Week 13 4/13 to 4/17	Pathogenesis <b>Exam 3 (4/17)</b>	14 (14.1-14.8)
Week 14 4/20 to 4/24	Skin and Wounds* Nervous System	19 (19.1-19.6) 20 (20.1-20.5, 20.7)
Week 15 4/27 to 5/1	Systemic (Cardiovascular) Respiratory	21 (21.1-21.4) 22 (22.1-22.6)
Week 16 5/4 to 5/8	Respiratory, Gastrointestinal, Genitourinary	22 (22.1-22.16) 23 (23.1-23.6) 24 (24.1-24.7)
Finals Week 5/11	Final Exam (8:00-10:00 am)	No reading

\*For body system chapters: refer to the list of assigned diseases and infectious agents