**Biology 333: General Microbiology Sections 1 and 2**
**Fall 2022 Course Syllabus**

**Course and Instructor Information**

Meeting times: Lecture: T, Th 11:00-12:15 CBB 165
Lab: Section 01L1, Wednesday 9:00-11:50
Section 01L2, Wednesday 2:00-4:50
Final Exam: Monday, Dec. 19, 2:45-4:45

Professor: Dr. Matt Rogge
Office: CBB 345
Email: mrogge@uwsp.edu

Office hours: W 1:00 pm-1:50 pm, F 9:00 am-9:50 am
Other times by appointment

**Course Description**

This course is designed based on American Society for Microbiology's "Recommended Curriculum Guidelines for Undergraduate Microbiology Education" (ASM, 2012). This ensures that all students in the course receive an education in topics consistent with microbiology curricula used nationwide. The Guidelines provide a framework of microbiological concepts that are central to a complete undergraduate microbiology education. These concepts include **evolution, cell structure and function, metabolic pathways, information flow and genetics, microbial systems, and the impacts of microorganism**s. Furthermore, development of scientific and reasoning skills and microbiological laboratory skills are recommended for an undergraduate microbiology course. These concepts and skills are aligned with those recommended for a general biology education. Although the course is not structured such that those topics are followed in sequence, the topics covered in the course are directly related to those overarching concepts.

**What you should acquire from this class**

*Students will understand that…*

- The microscopic world includes organisms from many taxonomic groups.
- Microbes are involved in complex environmental interactions that can be both beneficial and detrimental.
- The study of microbes requires careful observation and precise techniques.
- The study of microscopic organisms involves the analysis of physiological, morphological, and genetic traits.
- Cells, organelles, and all major metabolic pathways found in higher level species evolved from early prokaryotic cells.

**Learning outcomes**

*Knowledge*:

*Students will…*

- Distinguish features associated with prokaryotic and eukaryotic cells.
- Describe metabolic pathways used by microbes that allow them to live in diverse habitats, and how the metabolic activities contribute to a functional ecosystem.
- Recognize how microbial genetics affects physical traits of microbes and are used to classify and identify microbes.
- Recognize beneficial and detrimental interactions that microbes have with humans and other organisms in an environment.

*Skills*:

*Students will…*

- Exhibit proper microbiological lab safety.
- Demonstrate the ability to use aseptic technique in the handling and culture of microbes.

- Execute commonly used laboratory practices for the culture and identification of microbes.
- Perform standard practices to analyze the growth of microbes and treatments, both physical and chemical, that inhibit microbial growth.
- Relate laboratory techniques with experimentation to better understand the biology of microorganisms and their impacts.

*Dispositions*:

*Students will…*

- Identify the advantages and disadvantages of microbes to health and well-being of humans and other organisms.
- Recognize the ubiquitous occurrence of microbes in the environment and the necessary functions they perform in an ecosystem.
- Realize the effects of overuse and misuse antimicrobial agents and the potential negative impacts.

**Prerequisites**

This course has prerequisites of an **introductory biology course** and a **general chemistry** course. This class will build on many of the topics covered in those courses, and I expect that you come in **prepared** to build onto those ideas rather than having to cover that material again. You will be provided with chapters and sections in the textbook that should be used to **refresh** your memory of those concepts. Those review sections **are not** covered during lecture.

**Required materials**

Textbook: Willey, et al. 2020. Prescott's Microbiology, 11th Edition. McGraw-Hill, New York, New York. Available from text rental.

Laboratory manual: A ***required*** lab manual is available for purchase at the University Bookstore.

**Grading and Assignments – Minimum Total Points: 570; Maximum Total Points: 680**

IT IS EXPECTED THAT EVERY STUDENT PERFORMS EACH GRADED ACTIVITY **INDEPENDENTLY**. NONE OF THE ACTIVITIES ARE TO BE COMPLETED IN GROUPS OF ANY SIZE. CHEATING, COPYING, AND OTHER FORMS OF PLAGIARISM WILL NOT BE TOLERATED.

## ***Required Assignments*** (570 points)

Pre-lab Quizzes

For each weekly in-person lab, you are expected to read the material for that lab before you arrive at lab. This is to ensure that you are prepared for the ideas presented and activities performed that day. Prior to attending lab, you are required to complete a short quiz about that day's material. The quiz will be administered through Canvas and will consist of five multiple choice questions with each worth 1 point (5 points per quiz). There are a total of 12 quizzes (no quiz Weeks 1, 12, or 15). These quizzes cannot be taken late, and there are no makeup points for a missed quiz.

**Pre-Lab Quiz Total Point Value: 60 points**

Lab Quizzes

There will be four lab quizzes. Each of the first three quizzes is worth 15 points, and the final quiz is worth 45 points. The final quiz will be cumulative (10-15 points on the final lab activities and the remaining points on cumulative concepts) and will include questions related to important microbiological lab techniques and calculations used throughout the semester.

These quizzes will cover information and techniques demonstrated and used during **lab activities** or presented in **the lab manual and PowerPoint introductions**. The format of the quizzes will be any combination of

multiple choice, short answer, matching, labeling, and fill in the blank. Lab quizzes **will rarely cover specific results** from lab activities (do not spend time studying/memorizing specific results – focus on how the results were collected and measured, how the results were interpreted, why the results occurred the way they did, how different types of media work to provide those results, etc.). Most quiz question/problems will be related to the **application** of the techniques covered, e.g., how cultures are interpreted or why media or culture conditions support or inhibit the growth. In other words, focus on **why** the tests are done, **how** they work, and **what** they demonstrate. Techniques used to analyze results (calculations, graphing, etc.) may also be covered by lab quizzes. Lecture material will **not** be covered on lab quizzes. No makeups are allowed if you miss lab quiz without a documented excuse.

**Lab Quizzes Total Point Value: 90 points**

Lab Professionalism

Many lab activities are performed in groups. To ensure you are being a productive member of the group and involved in the preparation and analysis of experiments, you will be assigned points for your participation and professionalism in lab. There are 13 in-person lab activities, and each lab is worth 3 points. If you are active within your group, you will get the points. If you are not actively participating in group work, you will receive 0 points for that day. Missing a lab for ***any*** reason will result in receiving 0 points that day. Furthermore, it is imperative that laboratory safety protocols are followed **rigorously**. If you are observed consistently ignoring laboratory safety guidelines, professionalism points will be deducted. Furthermore, if you are frequently not paying attention, late for class, talking during instructions, or exhibiting other unprofessional behavior, points will be deducted.

**Lab Professionalism Total Point Value: 40 points**

Practical Lab Exercises

Part of working in a microbiology lab includes the performance of some basic lab skills. Three of these skills include staining bacterial cells, performing isolation streaks, performing serial dilution plate counts, and transferring small volumes of liquid using micropipettors. You will learn how to perform these skills during the semester and use them multiple times throughout the end of the semester. By the end of the semester, you should have developed an ability to perform these skills on your own without help from other students or the instructor. To evaluate your ability to perform these skills, you will be provided with the materials necessary to perform each technique, and you will have to perform those activities for a grade.

Bacterial staining – 20 pts
Isolation streak – 15 points
Serial dilution plate count – 25 points
Small volume transfer using a micropipettor – 10 points

**Practical Lab Exercise Total Point Value: 70 points**

Required Lecture Exams

There will be four exams. The first three exams are 70 points each and cover the material since the previous exam. The final is worth 100 points, with 30 points covering the chapters covered since the third exam and 70 points covering **cumulative** material from the whole semester. The lecture exams cover lecture material but realize that some topics are covered in both lecture and lab. Topics covered only in lab will not be covered on lecture exams. The format of the exams will be any combination of multiple choice, short answer, matching, labeling, ordering processes, and fill in the blank. No makeups are allowed if you miss the exam without a documented excuse. No lecture exams are dropped, but the **score of the final exam can replace your lowest midterm exam** (assuming the final exam grade is higher than a midterm exam grade). An equivalent percentage of points will be used as the replacement. For example, if get a 90% on the final and 56/70 (80%) on a midterm, the midterm grade will be changed to 63/70 (a 90%).

**Lecture Exams Total Point Value: 310 points**

## ***Optional Assignments*** (up to 110 points)

Online Lecture Quizzes

There will be four optional lecture quizzes worth a total of 80 points (20 points each). The first quiz will cover the information from the first couple weeks of class, and the remaining quizzes will cover the new material since the previous exam. These quizzes only cover lecture material, and the format will be any combination of multiple choice, true/false, ordering steps of a process, and matching. Lecture quizzes will be provided through Canvas and will be available to take for two days. Once you begin the quiz, you have **30 minutes** to complete the quiz. You may take the quiz up to 5 times during the two-day window, and your final score will be the **average** of all attempts. No makeups are allowed if you fail to take the quiz within the 2-day window. These lecture quizzes are **optional**. If you do not take the quiz, you will not receive a grade, and the points for the quiz will not contribute to calculation of your final grade. **Once you begin the quiz, the grade will count even if you do not answer any questions. Do not start a quiz unless you intend on completing it.** You do not have to complete all four quizzes (you can choose to do none, one, two, three, or all four).

**Optional Lecture Quizzes Total Point Value: 80 points**

Enrichment Point Activities

Throughout the semester, you can perform extra credit (NOT bonus) assignments. These assignments are optional for each student. These exercises are not graded but are checked for completeness. By putting forth the effort to do the assignment and following **all** provided guidelines, you will receive the full point value. Further information regarding these assignments will be distributed as due dates approach. Completing all assignments can increase your final grade by 1-3 percentage points.

- Pre-exam (10 pts) – Due by the 4th lecture period; this assignment can be submitted late, but **no points will be awarded** for a late submission. **A hardcopy must be submitted for grading**.
- Pre-exam review (15 pts) – Due by the last lecture period (upload to Canvas) – Cannot be submitted for points if a hard copy of the Pre-exam was not submitted. Late submissions will **NOT** be graded. Further details of this assignment will be provided at a later date. **This assignment is to be submitted by upload to Canvas either in .docx or PDF format**.
- Lab check-out (5 pts) – Last day of lab; cleanup of incubators and drawers

**Enrichment Point Total value: up to 30 points**

**TOTAL CLASS POINTS: 570 TO 680 POINTS** (depending on the number of optional assignments completed). Grades will be calculated by dividing the total points received by the total points possible and multiplied by 100 (a simple percentage). The following scale will be used to assign a final letter grade based on your percentage (assuming no enrichment assignments are completed).

| Percentage | Letter |
|---|---|
| 92.50 to 100% | A |
| 89.50 to 92.49% | A- |
| 86.50 to 89.49% | B+ |
| 82.50 to 86.49% | B |
| 79.50 to 82.49% | B- |
| 76.50 to 79.49% | C+ |

| Percentage | Letter |
|---|---|
| 72.50 to 76.49% | C |
| 69.50 to 72.49% | C- |
| 66.50 to 69.49% | D+ |
| 60.0 to 66.49% | D |
| ≤ 59.99% | F |

ROUNDING: Percentages with a decimal value of 0.50 or higher will be rounded **up** to the next whole percentage (e.g., 89.50% → 90%). Percentages with a decimal value less than 0.50 will be rounded **down** to the next whole percentage (e.g., 89.499% → 89%). NO EXCEPTIONS.

**Future Letters of Recommendation and References**

In the future, you may need a former professor to write a letter of recommendation or be a reference for your employment application, application for graduate school, awards and scholarships, or other future endeavors. If you decide that you want to ask me to be a reference for you, you need to consider what you have provided for

me to write or talk about. Were you an average, above average, or excellent student? Were you engaged in class and excited about the material? Do I only know you based on a grade you received, or am I familiar with you outside of class and your goals for your life and career? Have you separated yourself from other students I have had in terms of interest, motivation, or academic success? **In other words, what am I going to be able to say about you to convince someone else that you are better than other applicants?** Furthermore, have you exhibited any negative characteristics that I might mention in my letter? The information I give reflects my *entire* impression of you based on what I have observed, and I will not give false or misleading information. Serving as a reference in no way guarantees that the reference will be a *positive* one. You need to consider these things for *any* person you hope to be a reference.

If you do ask me to be a reference or write a letter, I require the request to be in writing and an in-person meeting scheduled to discuss the position(s) for which you are applying. Before I give a recommendation, I require a current CV and/or transcript, copies of or links to forms I need to fill out, and all necessary contact information (names, addresses, phone numbers) required for me to submit the recommendation. Finally, I require these materials be delivered a minimum of **two weeks** before a recommendation is due. More time is greatly appreciated. If any of these criteria are not met, I will not have time, nor will I be well enough informed to write a letter.

**Use of electronics during class**

Please turn off/mute/set to vibrate any electronic devices that could interrupt class (lab or lecture) before class begins. If it is a personal emergency, feel free to excuse yourself from the class and communicate outside of the classroom. **IT IS STRONGLY RECOMMENDED THAT PERSONAL ELECTRONICS NOT BE USE DURING LAB.**

**Graduate credit**

Students taking the course for graduate credit will be assigned additional work and should discuss this work with the instructor as soon as possible.

**How to be successful in this class**

- **Complete** all activities, pay attention, and be an **active** learner.
- Develop good note-taking skills. Do not try to write down everything that is said or that appears on the PowerPoint slides. Sort through the information and make note of the **important ideas and concepts** being discussed. Reading and processing the information is the first step in learning the information.
- Learn to take notes with abbreviations so that you can spend enough time listening in addition to writing. Leave space in your notes so that you can go back and fill in more details later.
- Be **engaged** in the class. Write information in *your own words.* Ask questions when you are unable to explain something completely.
- Do not study *for exams*. Studying that way promotes memorization, not understanding. Instead, **study for learning and understanding**, and do it often. You need to develop critical thinking skills to succeed in a science-based course and career. No boss is going to walk into your workspace and ask you to define a list of terms. They will expect you to **understand and apply** the information, not define it.
- Training your mind (studying and learning) is like training your body (sports, musical instruments, gaming, etc). The more you practice, the better you get. Practice (study) **early and often**.
- Begin studying for exams **at least two weeks** before the exam.
- Begin studying your notes in terms of "**big picture**" ideas. Find the bigger concepts and make sure you have a basic understanding of those ideas. Once those bigger concepts are understood, add additional details relating to those ideas. By doing this, you construct "compartments" in your mind to store the details rather than simply trying to absorb all the details and hoping that they arrange themselves into a coherent idea. Ultimately, the difference between an A, B, or C is the **level of detail** that you know, but you should begin by focusing on the bigger picture.

- Study frequently. **Repetition** is the key to learning any topic. Studying for 40 hours over the span of two weeks will be much more beneficial than studying for 40 hours the weekend before the exam. Learn to study **efficiently**.
- Do not try to memorize definitions. You will need to know what words mean to understand and answer questions, but I will never ask you to define a word.
- When you do not understand something, LOOK IN THE TEXTBOOK! The book can give more detailed explanations and images that may help you better understand the material. Alternatively, use the internet and watch the supplemental videos provided in Canvas. You have a wealth of information at your fingertips, use it!
- When your notes do not make sense and the book does not help, schedule an appointment with me. I am here to help you learn. I do not expect you to be a microbiologist *before* taking the class. I understand that much of this material is new to you and everyone else, and one or two lectures on a topic is not enough for you to fully grasp the concepts. Do not be too stubborn or independent to ask for help or you will risk falling behind.
- After you have studied and know some or most of the material, interact with other students in the class and actively **discuss** the information. **Explain mechanisms**, **theories**, **concepts**, etc. to other students. The other students can help you fill in areas where you are deficient. You will find that explaining these things to someone else is one of the best ways to ensure you **know** and **understand** the information. Then have another student explain a different idea or concept and help them identify areas in which they are deficient.
- The level of detail that you will be required to know is the **level of detail that I cover in lectures**. The book has much more detailed information, which may help you better understand the material I cover, but I will not ask about the details I do not cover.
- **Pay attention to the details**. That does not mean to study and know every single detail covered, but when you are answering questions, use **appropriate** terms. Describe things **accurately**. The more **clearly** and **accurately** you describe things and answer questions, the more confident I am that you know and understand the material. In other words, you will get **better grades** by having better **attention to detail**.
- When answering short-answer questions on exams, be sure you answer them **clearly** and **completely**. You should not expect me to interpret vague answers in your favor (because I will not). Your ability to explain something clearly is related to your knowledge of the subject. If your answers are not clear or direct, my interpretation is that you do not understand that topic very well.
- If I ask you to **explain** or **describe** something, the answer should not be a one or two-word answer. A good explanation will incorporate answers to the following questions:
  - "**What** is happening?"
  - "**Why** is it happening?"
  - "**How** it is happening?"
- Watch the following YouTube videos. The first is 1hr lecture by a psychology professor discussing how to study. The second is a 6 minute summary of the first video.
  - https://www.youtube.com/watch?v=IlU-zDU6aQ0
  - https://www.youtube.com/watch?v=23Xqu0jXlfs

# GENERAL COURSE POLICIES

**Attendance**

I expect students to attend all lectures and labs. Attendance will be taken in lecture for Covid contract-tracing reasons, but attendance in lecture is not graded. Attendance will also be taken in lab for Covid contract-tracing and in relation to the **Lab Professionalism Points** (see above). Makeup exams or assignments will only be administered in the event of illness, emergency, university-sponsored event, etc., which will require documentation (an **excused** absence) before a makeup date is agreed upon. If you are aware ahead of time of a conflict with an exam period or other assignment, a meeting with the instructor is required to discuss the situation **at least 1 week before the absence**, and rescheduling may occur at the instructor's discretion.

It is the student's responsibility to get any missed lecture or lab material from another classmate. I am not able to re-teach the material to individual students, and full PowerPoint slides will not be given to students that miss lecture or lab material for any reason. To be exposed to all content provided in each session, each student must be present during the scheduled lecture and lab periods. Because of the nature of microbial cultures and media availability, most in-person labs will not be able to be made up if a lab is missed. An alternative lab assignment through Connect or some other online resource may be possible, however, so be sure to ask about makeup lab activities if you are missing class due to Covid-related quarantine or isolation.

Attending class will likely be the single most important factor in determining your performance and grade in the course, so plan to attend every class. The relationship between attendance and achievement in education has been extensively documented in peer-reviewed research.

Please refer to the "Absences due to Military Service" and "Religious Beliefs Accommodation" below. Additionally, below are attendance guidelines as outlined by the UWSP registrar:

Attend all your classes regularly. We do not have a system of permitted "cuts." If you decide to drop a class, please do so using accesSPoint or visit the Enrollment Services Center. Changes in class enrollment will impact your tuition and fee balance, financial aid award and veterans educational benefit.

During the first eight days of the regular 16-week term, your instructor will take attendance. If you are not in attendance, you may be dropped from the class. You are responsible for dropping any of your enrolled classes.

- If you must be absent during the term, tell your instructor prior to the class you will miss. If you cannot reach your instructor(s) in an emergency, contact the Dean of Students Office at 715-346-2611 or DOS@uwsp.edu .

- If you are dropped from a class due to non-attendance, you may only be reinstated to the class section using the class add process. Reinstatement to the same section or course is not guaranteed. Your instructors will explain their specific attendance policies to be followed at the beginning of each course.

- If you take part in an off-campus trip by an authorized university group such as an athletic team, musical or dramatic organization, or a class, make appropriate arrangements in advance with the instructor of each class you will miss. If you are absent from classes because of emergencies, off-campus trips, illness, or the like, your instructors will give you a reasonable amount of help in making up the work you have missed.

- If you enroll in a course and cannot begin attending until after classes have already started, you must first get permission from the department offering the course. Otherwise, you may be required to drop the course.

- If you do not make satisfactory arrangements with your instructors regarding excessive absences, you may be dismissed. If you are dismissed from a class, you will receive an F in that course. If you are dismissed from the University, you will receive an F in all enrolled courses.

**Late Work**

Any late assignments will be assessed a minimum **10% penalty per day** that the assignment is late (weekends included) unless otherwise stated. This penalty will be assessed based on the number of points you earned. For example, if you turned in an assignment two days late and received a score of 8/10, the 40% deduction will be applied to the 8 points you earned (40% of 8 is 3.2 points, so the grade will be 4.8/10, rounded up to 5).

**Emergency Procedures**

- In the event of a medical emergency call 9-1-1 or use campus phone found across from CBB 130 if in lecture. If in lab, use the campus phone outside the west door of CBB 366. Offer assistance if trained and willing to do so. Guide emergency responders to victim.
- In the event of a tornado warning, proceed to the lowest level interior room without window exposure, such as the hallway outside CBB 135 if in lecture. If in lab, exit the lab doors, proceed down the hallway to the left, take left, and go to the east stairwell. Proceed down the stairs to the first floor and assemble in the bathrooms or hallways away from windows. See **Error! Hyperlink reference not valid.** for floor plans showing severe weather shelters on campus. Avoid wide-span structures (gyms, pools or large classrooms).
- In the event of a fire alarm, evacuate the building in a calm manner. Exit CBB 366 to the left, proceed down the hallway, take left, and go to the east stairwell. Proceed down the stairs to the first floor and turn left down the hallway and exit the building at the east end of the building (towards Stanley Street and St. Michael's Hospital). Gather with classmates at least 200 yards from the building. Notify instructor or emergency response personnel of any missing individuals.
- Active Shooter – RUN. HIDE. FIGHT. If trapped, hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders. See UW-Stevens Point Emergency Procedures at **Error! Hyperlink reference not valid.** for details on all emergency response at UW-Stevens Point.

**Absences due to Military Service**

As stated in the UWSP Catalog, you will not be penalized for class absence due to unavoidable or legitimate required military obligations, or medical appointments at a VA facility, **not to exceed two (2) weeks** unless special permission is granted by the instructor. You are responsible for notifying faculty members of such circumstances as far in advance as possible and for providing documentation to the Office of the Dean of Students to verify the reason for the absence. The faculty member is responsible to provide reasonable accommodations or opportunities to make up exams or other course assignments that have an impact on the course grade. For absences due to being deployed for active duty, please refer to the Military Call-Up Instructions for Students.

**Inclusivity Statement**

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups.

If you have experienced a bias incident (an act of conduct, speech, or expression to which a bias motive is evident as a contributing factor regardless of whether the act is criminal) at UWSP, you have the right to report it using this link. You may also contact the Dean of Students office directly at dos@uwsp.edu.

**Religious Beliefs Accommodation**

It is UW System policy (UWS 22) to reasonably accommodate your sincerely held religious beliefs with respect to all examinations and other academic requirements.

You will be permitted to make up an exam or other academic requirement at another time or by an alternative method, without any prejudicial effect, if:

- There is a scheduling conflict between your sincerely held religious beliefs and taking the exam or meeting the academic requirements; and

- You have notified your instructor within the first three weeks of the beginning of classes (first week of summer or interim courses) of the specific days or dates that you will request relief from an examination or academic requirement.
- Your instructor will accept the sincerity of your religious beliefs at face value and keep your request confidential.
- Your instructor will schedule a make-up exam or requirement before or after the regularly scheduled exam or requirement.
- You may file any complaints regarding compliance with this policy in the Equity and Affirmative Action Office.

**Equal Access for Students with Disabilities**
UW-Stevens Point will modify academic program requirements as necessary to ensure that they do not discriminate against qualified applicants or students with disabilities. The modifications should not affect the substance of educational programs or compromise academic standards; nor should they intrude upon academic freedom. Examinations or other procedures used for evaluating students' academic achievements may be adapted. The results of such evaluation must demonstrate the student's achievement in the academic activity, rather than describe his/her disability.

*If modifications are required due to a disability, please inform the instructor and contact the Disability and Assistive Technology Center to complete an Accommodations Request form. Phone: 346-3365 or Room 609 Albertson Hall.*

**Help Resources**

| Tutoring | Advising | Safety and General Support | Health |
|---|---|---|---|
| Tutoring and Learning Center helps with Study Skills, Writing, Technology, Math, & Science. 018 Albertson Hall, ext 3568 | Academic and Career Advising Center,<br>320 Albertson Hall<br>Ext. 3226 | Dean of Students Office,<br>212 Old Main,<br>ext. 2611 | Counseling Center, Delzell Hall, ext. 3553.<br>Health Care,<br>Delzell Hall, ext. 4646 |

Click here to flag a policy or practice that disproportionately affects marginalized students

**UWSP Service Desk (1st Floor, Albertson Hall)**

The Office of Information Technology (IT) provides a Service Desk to assist students with connecting to the Campus Network, virus and spyware removal, file recovery, equipment loan, and computer repair. You can contact the Service Desk via email at techhelp@uwsp.edu or at (715) 346-4357 (HELP) or visit this link for more information.

**Care Team**
The University of Wisconsin-Stevens Point is committed to the safety and success of all students. The Office of the Dean of Students supports the campus community by reaching out and providing resources in areas where a student may be struggling or experiencing barriers to their success. Faculty and staff are asked to be proactive, supportive, and involved in facilitating the success of our students through early detection, reporting, and intervention. As your instructor, I may contact the Office of the Dean of Students if I sense you are in need of additional support which individually I may not be able to provide. You may also share a concern if you or

another member of our campus community needs support, is distressed, or exhibits concerning behavior that is interfering with the academic or personal success or the safety of others, by reporting here.

**Academic Honesty**

Academic Integrity is an expectation of each UW-Stevens Point student. Campus community members are responsible for fostering and upholding an environment in which student learning is fair, just, and honest. Through your studies as a student, **it is essential to exhibit the highest level of personal honesty and respect for the intellectual property of others**. **Academic misconduct is unacceptable**. It compromises and disrespects the integrity of our university and those who study here. To maintain academic integrity, a student must only claim work which is the authentic work solely of their own, providing correct citations and credit to others as needed. **Cheating, fabrication, plagiarism, unauthorized collaboration, and/or helping others commit these acts are examples of academic misconduct, which can result in disciplinary action**. Failure to understand what constitutes academic misconduct does not exempt responsibility from engaging in it.

*UWSP 14.03 Academic misconduct subject to disciplinary action.*

(1) Academic misconduct is an act in which a student:

(a) Seeks to claim credit for the work or efforts of another without authorization or citation;
(b) Uses unauthorized materials or fabricated data in any academic exercise;
(c) Forges or falsifies academic documents or records;
(d) Intentionally impedes or damages the academic work of others;
(e) Engages in conduct aimed at making false representation of a student's academic performance; or
f) Assists other students in any of these acts.

(2) Examples of academic misconduct include, but are not limited to:

- Cheating on an examination
- Collaborating with others in work to be presented, contrary to the stated rules of the course
- Submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another
- Submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas
- Stealing examinations or course materials
- Submitting, if contrary to the rules of a course, work previously presented in another course
- Tampering with the laboratory experiment or computer program of another student
- Knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Students suspected of academic misconduct will be asked to meet with the instructor to discuss the concerns. If academic misconduct is evident, procedures for determining disciplinary sanctions will be followed as outlined in the University System Administrative Code, Chapter 14.

# Other Campus Policies

**FERPA**

The Family Educational Rights and Privacy Act (FERPA) provides students with a right to protect, review, and correct their student records. Staff of the university with a clear *educational need to know* may also have to access to certain student records. Exceptions to the law include parental notification in cases of alcohol or drug use, and in case of a health or safety concern. FERPA also permits a school to disclose personally identifiable information from a student's education records, without consent, to another school in which the student seeks or intends to enroll.

**Title IX**

UW-Stevens Point is committed to fostering a safe, productive learning environment. Title IX and institutional policy prohibit discrimination on the basis of sex, which includes harassment, domestic and dating violence, sexual assault, and stalking. In the event that you choose to disclose information about having survived sexual violence, including harassment, rape, sexual assault, dating violence, domestic violence, or stalking, and specify that this violence occurred while a student at UWSP, federal and state laws mandate that I, as your instructor, notify the Title IX Coordinator/Office of the Dean of Students.

Please see the Title IX page for more information for guidance on making confidential reports of misconduct or interpersonal violence, as well as campus and community resources available to students.

**Clery Act**

The US Department of Education requires universities to disclose and publish campus crime statistics, security information, and fire safety information annually. Statistics for the three previous calendar years and policy statements are released on or before October 1st in our Annual Security Report. Another requirement of the Clery Act, is that the campus community must be given timely warnings of ongoing safety threats and immediate/emergency notifications. For more information about when and how these notices will be sent out, please see our Jeanne Clery Act page.

**Drug Free Schools and Communities Act**

The Drug Free Schools and Communities Act (DFSCA) requires institutions of higher education to establish policies that address unlawful possession, use, or distribution of alcohol and illicit drugs. The DFSCA also requires the establishment of a drug and alcohol prevention program. The Center for Prevention lists information about alcohol and drugs, their effects, and the legal consequences if found in possession of these substances. Center for Prevention – DFSCA

**Copyright infringement**

This is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act. Each year students violate these laws and campus policies, putting themselves at risk of federal prosecution. For more information about what to expect if you are caught, or to take preventive measures to keep your computing device clean, visit our copyright page.

**TENTATIVE LECTURE SCHEDULE**

| Week | Date | Topic | Chapter(s) |
|---|---|---|---|
| 1 | Sept. 6 | Syllabus and Introduction to Microbiology | 1 |
| | Sept. 8 | Introduction to Microbiology / Cellular Structure of Bacteria | 1, 3 |
| 2 | Sept. 13 | Cellular Structure of Bacteria and Archaea | 3, 4 |
| | Sept. 15 | Viruses and Prions | 6 |
| | | **OPTIONAL PRE-EXAM DUE** | |
| 3 | Sept. 20 | Virus and Prion Structure and Replication / Bacterial Growth and Replication | 6, 7 |
| | Sept. 22 | **Optional Lecture Quiz 1** | Online |
| | | Antimicrobial Therapy and Resistance | 9 |
| 4 | Sept. 27 | Antimicrobial Therapy and Resistance / Bacterial Catabolism | 9, 11 |
| | Sept. 29 | Bacterial Catabolism | 11 |
| 5 | Oct. 4 | **EXAM 1** | |
| | Oct. 6 | Bacterial Anabolism / Bacterial Genetics | 12, 13 |
| 6 | Oct. 11 | Bacterial Genetics | 13 |
| | Oct. 13 | Bacterial Genetics | 13 |
| 7 | Oct. 18 | **Optional Lecture Quiz 2** | Online |
| | | Regulation of Bacterial Processes | 14 |
| | Oct. 20 | Regulation of Bacterial Processes / Mechanisms of Genetic Variation | 14, 16 |
| 8 | Oct. 25 | Bacterial Genetics: Mechanisms of Genetic Variation | 16 |
| | Oct. 27 | Microbial DNA Technologies | 17 |
| 9 | Nov. 1 | **EXAM 2** | |
| | Nov. 3 | Microbial Genomics | 18 |
| 10 | Nov. 8 | Microbial Diversity | 19-25 |
| | Nov. 10 | Microbial Diversity | 19-25 |
| 11 | Nov. 15 | Microbial Diversity / Viral Diversity | 19-25, 26 |
| | | **Optional Lecture Quiz 3** | Online |
| | Nov. 17 | Viral Diversity | 26 |
| 12 | Nov. 22 | Microbial Ecology | 27-31 |
| | Nov. 24 | **THANKSGIVING BREAK – NO LECTURE** | |
| 13 | Nov. 29 | Microbial Ecology / Innate Immunity | 27-31, 32 |
| | Dec. 1 | Innate / Adaptive Immunity | 32, 33 |
| 14 | Dec. 6 | **EXAM 3** | |
| | Dec. 8 | The Human-Microbe Ecosystem | 34 |
| 15 | Dec. 13 | The Human-Microbe Ecosystem / Infection and Pathogenicity | 34, 35 |
| | Dec. 15 | **Optional Lecture Quiz 4** | Online |
| | | Infection and Pathogenicity / Epidemiology | 35, 36 |
| | | **OPTIONAL PRE-EXAM REFLECTION DUE** | |
| 16 | Dec. 19 | **FINAL EXAM Monday, Dec 19, 2:45-4:45 pm** | |

**TENTATIVE LAB SCHEDULE**

| Week | Date | Topic | Page |
|---|---|---|---|
| 1 | Sept 6-10 | Intro to Lab and Lab Safety Orientation | 1 |
| 2 | Sept 12-16 | Contamination and The Scientific Method | 10 |
| 3 | Sept 19-23 | Review Results from Contamination/Scientific Method<br>Metric Units, Concentrations, and Culture Media | 18 |
| 4 | Sept 26-30 | **Lab Quiz 1 for Weeks 1-3** | |
| | | Aseptic Technique and Inoculation | 28 |
| 5 | Oct 3-7 | Review Results from Aseptic Technique/Inoculation<br>Microscopes, Measurement, and Simple Staining | 37 |
| 6 | Oct 10-14 | Cell Morphology and Gram Staining | 46 |
| 7 | Oct 17-21 | **Lab Quiz 2 for Weeks 4-6** | |
| | | Capsule, Endospore, and Acid-Fast Staining | 52 |
| 8 | Oct 24-28 | Environmental Factors Impact Microbial Replication<br>***Begin Staining PLE (20 pts)*** | |
| 9 | Oct 31-Nov 4 | Review Results from Environmental Factors<br>Micropipette Use and Quantifying Microbial Growth | 59<br>64 |
| 10 | Nov 7-11 | Review Results from Quantification of Microbial Growth<br>Chemical and Antibiotic Control of Microbial Growth<br>***Staining PLE Due*** | 78 |
| 11 | Nov 14-18 | **Lab Quiz 3 for Weeks 7-10**<br>Review Results from Chemical Control<br>Bacterial Transformation | 85 |
| 12 | Nov 21-25 | Thanksgiving Week – No Labs | |
| 13 | Nov 28-Dec 2 | Review Results of Bacterial Transformation<br>Selective and Differential Media and Biochemical Identification | 91 |
| 14 | Dec 5-9 | Review Results of Selective and Differential Media<br>Water and/or Food Microbiology<br>***Isolation Streak PLE (15 pts)***<br>***Serial Dilution Plate Count PLE (25 pts)*** | 96/101 |
| 15 | Dec 12-16 | Review Water/Food Microbiology Results<br>**Lab Quiz 4 for Weeks 11-14 and Cumulative Information**<br>***Micropipetting PLE (10 pts)***<br>Lab Cleanup<br>Genetic ID of Bacteria (Online Activity; Complete Quiz in Canvas) | 105 |