BIOLOGY 2420: MICROBIOLOGY
DR. TORI HALL, PH.D.
COURSE SYLLABUS FALL 2026 (ONL)

CONTACT INFORMATION: Tori Hall, Ph.D. thall@southplainscollege.edu Office: **S140**
My email gets flooded daily. This is one of the reasons **I do not communicate with students through my email and will not respond to student emails**. If you want a response to your message, you must reach out to me within course messages. **Please expect a response to your message on the next business day.**

Office Hours:
M: 8:30 AM - 9:30 AM
T: 9:00 AM - 12:00 PM, 1:00 PM - 3:00 PM
W: 8:30 AM - 9:30 AM
R: None
F: 9:00 AM - 10: 00 AM

PREREQUIREMENTS FOR MICROBIOLOGY: TSI compliant in Reading, Writing and Math.

A. REQUIRED TEXTS:

1. **TEXTBOOK:** Microbiology Openstax Textbook. ISBN: **9781938168147**
   - Available **free** online (I do not recommend buying this book… the online version is the same and is more than adequate for this course)
   - HOW TO ACCESS THE TEXTBOOK:
     A. Go to: https://openstax.org
     B. Click on "Subjects" icon
     C. Click on "Science"
     D. Click on "Microbiology" – our book is the only microbiology textbook available.
     E. I highly recommend that you download the PDF format of this book in order to have access to the page numbers of the book.
2. **STUDENT NOTE PACKET**: Microbiology (BIOL 2420) Student Note Packet, Dr. Tori Hall. This is available for free on Blackboard under Course Resources.
3. **EXTERNAL WEBCAM**: An external webcam is required for all major exams (lecture and lab). You can check one out from the SPC library, potentially from your local library, or purchase your own (typical cost is $20-$30. This is the one I recommend for this course: https://a.co/d/oa6JX85C). **This is a requirement and failure to use one will result in an automatic zero for every exam.**
4. **BASIC CALCULATOR**
5. **A RELIABLE COMPUTER**: Please see Section E for further information.
6. **ONLINE RESOURCES**: Posted as appropriate by Dr. Hall.
7. **McGraw-Hill CONNECT – Virtual Labs are required for this course** (included with Inclusive Access/Texbook and was already paid for with your tuition fees.)
8. **OTHER:** A reliable internet connection and microphone for use with Blackboard, Zoom, Honorlock, Etc. **Mobile devices should not be used for quizzes or exams and are incompatible with the proctoring software.**

TEXBOOK STATEMENT This course is part of your TexBook program, which means you don't need to purchase a textbook or access code for this course. TexBook is the required content (either an eBook or online Courseware) for your course, and is provided for you via the Bibliu platform from Day 1 of class.

- Cost of TexBook: this required content is provided as part of a Program called 'Inclusive Access', which means that content is provided for you at the lowest price available from the publisher. The cost for this is included in your tuition.
- How to access your digital content via Bibliu: you can access your material via the Bibliu link inside your Blackboard Course, or directly via the Bibliu app. If you have issues with this, please contact your professor, the Bookstore Manager or Bibliu Support (see below).
- The Bibliu platform: you can use the Bibliu platform to enhance your learning experience, with features including: highlighting, notes and reading text aloud. For more details and support on how to use Bibliu, please visit the BibliU support pages, or contact Bibliu support via the email: support@bibliu.com
- Opting out: you can Opt-Out of the TexBook Program, up until the Opt-Out deadline, via the banner displayed when you open the Bibliu platform. Remember that Opt-Out deadlines vary by term, and if you choose to Opt-Out you will lose access to this low price option, and will need to purchase the content through a different method. If you opt-Out, the fee will be refunded to your account.
  Useful contacts:

Bibliu Support: email support@bibliu.com
Bookstore Manager: Christian Bruno - christian.bruno@bibliu.com

B. McGRAW - HILL CONNECT:
All online **virtual lab assessments** will be completed via simulations through McGraw-Hill Connect. Information on how to register for this course through McGraw-Hill Connect can be found on Blackboard. A missed assignment will result in a zero on that assignment, *no exceptions*.

C. COURSE DESCRIPTION:
This is a general microbiology course that covers the morphology and physiology of microorganisms with particular emphasis on the microbial relationship to disease, pathogenicity, and the immune response. This course is designed for students entering the allied health profession such as: nursing, respiratory therapy, dental hygiene, etc… This course satisfies the requirements for an Associate in Arts and Associate in Science degree as well as requirements for transfer students working toward a Bachelor of Arts degree, Bachelor of Science degree, or certification in allied health fields.

Please note: This course is designed for allied health professionals and will not provide credit for Biology majors, Pre-Med, Pre-Dentistry, or Pre-Vet. **This course is not a core science curriculum course. If you are not sure, please contact the instructor.**

D. COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES: Upon successful completion of this course, students will:

Lecture:
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) 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.

Lab:
1. Use and comply with laboratory safety rules, procedures, and universal precautions.
2. Demonstrate proficient use of a compound light microscope.
3. Describe and prepare widely used stains and wet mounts, and discuss their significance in identification of microorganisms.
4. Perform basic microbiology procedures using aseptic techniques for transfer, isolation and observation of commonly encountered, clinically significant bacteria.
5. Use different types of bacterial culture media to grow, isolate, and identify microorganisms.
6. Perform basic bacterial identification procedures using biochemical tests.
7. Estimate the number of microorganisms in a sample using methods such as direct counts, viable plate counts, or spectrophotometric measurements.
8. Demonstrate basic identification protocols based on microscopic morphology of some common fungi and parasites.

E. COMPUTER REQUIREMENTS:
Students are not required to purchase their own computer but must maintain access to a reliable, functioning computer and internet connection to access course materials, submit assignments, and complete proctored examinations. Because this course relies solely on these technologies, students are responsible for ensuring their equipment is operational throughout the semester. The computer must be able to connect to and allow the student to browse the internet through a **CHROME browser**. **E-mail access is required**. If a student's internet connection goes down, or a student's computer crashes or otherwise becomes inoperable for blackboard, it is the responsibility of the student to have their internet connection and/or computer repaired as soon as possible to avoid getting behind in the class. **Computer malfunctions, hardware or software failures, or loss of internet access do not excuse missed deadlines or examinations and do not warrant extensions.** Students are encouraged to plan

ahead and have contingency plans/access to another computer if/when technical issues arise. If the blackboard server goes down, the appropriate time extensions will be determined and announced by the instructor.

F. HOW TO SUCCEED IN THIS COURSE:

Microbiology is a challenging subject. It is information dense, cumulative, and requires you to think conceptually, not just memorize terms. If you're feeling stretched, that is not a sign that you are incapable! It is a sign that you are being challenged at a collegiate level.

However, this is a high-level lab science course and you are responsible for your own learning. I can provide structure, resources, guidance, and clarification, but I cannot study for you, manage your time for you, or practice retrieval for you. Success in this class requires consistent, intentional effort outside of class, on your own.

Let's talk study strategies. First up: **time management expectations** (this is straight from the literature, not my personal opinion).

- **16-week** courses require **12 hours** of study per week outside of class (minimum)
- **8-week** courses require **20 hours** of study per week outside of class (minimum)
- **5-week** courses require **30 hours** of study per week outside of class (minimum)

You should plan to study every day for the entire duration of the course. If you are not scheduling this time deliberately, your retention will suffer. Put study blocks in your calendar like appointments and stand firm in keeping them.

If you are struggling to retain information, here are some tried and true strategies that have been proven to work (with decades of research to support them):

1. **Practice active recall (not re-reading)**. Close your notes and write or say everything you remember about a topic (e.g., gram-positive vs. gram-negative cell walls). Then check for gaps. This is far more effective than highlighting or rereading.
2. **Use spaced repetition.** Study material multiple times over several days rather than cramming. Short, repeated sessions build long-term memory.
3. **Teach the material out loud.** If you cannot explain viral replication or the immune response without looking at your notes, you do not yet understand it deeply enough.
4. **Make concept maps.** Microbiology is highly interconnected. Draw relationships between structures, mechanisms, and outcomes.
5. **Study in advance of confusion.** Do not wait until you are lost. Engage with material before lecture and review within 24 hours afterward, and daily thereafter.

Regarding AI tools... AI can support your studying, but it cannot replace your thinking. **If used correctly**, it can help you generate practice questions, quiz yourself, ask for explanations in a simpler more basic language, create comparison tables, and test your understanding by explaining concepts and asking the AI to critique gaps. **If AI tools are used incorrectly**, AI becomes a shortcut that prevents learning (e.g., copying summaries without processing them). If you use AI, use it to challenge yourself, not to bypass effort. Here is a list of some of the AI tools that I've either personally used, or have had students who have used and said they loved:

1. **NotebookLM** - this is a tool where you upload your material (notes, PDFs, slides, videos) and it can generate summaries, flashcards, quizzes, study guides, concept maps, and audio overviews (in the form of a podcast) where you can listen to the material in a different way.
2. **MindGrasp** - This tool is similar to NotebookLM (minus the podcast component) that can covert lectures, notes, and videos into summaries, flashcards, and practice quizzes.
3. **Humata4** — look into this one. It's constantly changing and evolving to be better with each new iteration.
4. **App.youlearn.ai** — also very similar to NotebookLM.

G. POLICIES, PROCEDURES, AND RULES

COURSE CONTENT:

This course will be conducted according to the policies and procedures of the South Plains College Handbook and General Catalog. Scheduled lectures and/or labs are tentative and could be subject to change by the professor. **Access your student E-mail and Announcements Tab on Blackboard regularly** as this is the primary mode of communication regarding important information and changes regarding class from professor to students**.**

ATTENDANCE POLICY:

- Regular attendance is expected for all students via logging into blackboard daily and submitting assignments in a timely manner.
    - Daily participation and completion of assignments and/or assessments is fundamental to meeting the objectives of this course. Microbiology is a lab intensive course, therefore the completion of the Connect Virtual Labs and regular weekly concept check quizzes (even though they do not count towards the final average) are vital to student success.
- Any online student who **do not log into the course for two consecutive weeks**, who **does not complete an exam** (lecture or lab) for any reason, who **does not complete 4 graded assignments** (at any time, for any reason), AND/OR **cannot meet the minimum course requirements** may be administratively withdrawn from the course, by the instructor, with a grade of an X.
- Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records.
- All electronic devices must be on silent (not vibrate, but actually silenced) or turned off and put away during exam time.
- Earbuds should not be worn at any time during exams.
- No student is allowed to record the lectures, labs, or take photos/videos without permission from the instructor.

EXAM/QUIZ POLICY: All of our exams (lecture exams and lab exams) will be timed and proctored via Honorlock. **Exams must be taken on a chrome browser, with an external camera, and Honorlock must be installed as this is a requirement for each exam taken. IF YOUR TEST MALFUCTIONS DURING THE TESTING TIME, TIME IS OF THE ESSENCE! YOU MUST CONTACT HONORLOCK DIRECTLY (VIA THE LIVE CHAT OPTION ON THE BOTTOM RIGHT OF YOUR SCREEN) NOT DR. HALL. The test timer will not stop during this time, and Dr. Hall cannot help you in this case.** Please see the course schedule for due dates and times of all exams, and for the material covered for each exam/quiz.

- Exam dates (and covered material for each exam) are listed on your Course Schedule. Exams may include:
    - Multiple-choice questions
    - Short answer questions
    - Matching
    - True or False
    - Diagrams to complete
    - Structure identification
- **The Final Exam will be taken according to the SPC Final Exam Schedule (please look at the course schedule for date) and will be comprehensive. It is optional and can grade replace a student's lowest exam grade.**
- Exams/quizzes are subject to change at any time during the course.

Mandatory Proctoring of all Major Exams and Quizzes

- **Online exams and quizzes within this course require online proctoring. Therefore, students will be required to have a webcam (USB or internal) with a microphone when taking an exam and/or quiz. Students understand that this remote recording device is purchased and controlled by the student and that recording from any private residence must be done with the permission of any person residing in the residence. To avoid any concerns in this regard, students should select private spaces for testing. Various academic sites on each SPC campus offer secure private settings for recordings and students with concerns may discuss location of an appropriate space for the recordings with their instructor. Students must ensure that any recordings do not invade any third-party rights and accept all responsibility and liability for violations of any third-party privacy concerns. Setup information will be provided prior to taking the proctored exam via a Practice Honorlock Exam. See exam testing procedures below.**

EXAM/QUIZ TESTING PROCEDURES: The following table lists **conduct requirements for online exams** as well as conduct violations. In general, behave as if you are taking the exam in a classroom with a live proctor:

Testing conduct requirements	Consequence for violation of testing conduct
Microphone turned on and recording	A 50% penalty will be given for an exam taken without the microphone being turned on and recording throughout the entire exam for the first offense, and a zero for every offense after.
Sufficient lighting of the testing area	A 50% penalty will be given for an exam taken without enough lighting for the instructor to assess the testing environment for the first offense, and a zero for every offense after.

Appropriate Dress	A zero will be given to any student who is not appropriately dressed to take their exam. Please ensure you are dressed, and the entire torso/chest, and lower body is covered.
Correct webcam placement	Your computer, both hands, and side profile of your face must be visible throughout the exam. No obstructions should be found in front of the camera. Incorrect placement results in a 50% penalty for the first exam and a zero for every offense after.
Student remains in webcam view during exam	A student who leaves the webcam view during an exam for any reason will receive a zero for that exam. Additionally, if the students full face is not visible during the exam, this will result in a 50% deduction of their score. Take all bathroom breaks, etc. before beginning the exam and make sure to check your camera position.
No unauthorized materials near desk	A student who has any unauthorized materials (books, notes, blank paper, phone, smart watch, earbuds/headphones, another computer, iPad, etc.) near the testing area will receive a zero for that exam
No talking with others during the exam or playing of music or other audio recordings	A student who has any music or audio recordings playing during exams, or who talks with any ADULT for any reason during the exam, will receive a zero for that exam
The exam is taken in an approved proctored environment with external webcam	Any exam taken without an external webcam (only using the built in webcam), or taken in an unapproved (and unsecured) testing environment will receive a zero for that exam
The exam is taken on an approved surface	Any exam taken not at a table or desk will receive a 50% penalty for the first offense, and a zero for every offense after. You may not take your exam sitting in your bed, or this will result in an automatic zero. You must be in a chair at a table.
360° room scan, webcam shows computer monitor	Any exam where a 360* room scan was insufficient (student did not show all 4 walls and the table/desk the exam is taken on) and/or the student did not show the screen of the computer monitor will receive a 50% penalty for the first offense, and a zero for every offense after.

- There is a practice Honorlock exam on blackboard so that you can practice the procedure that will be required during the exams. This is not recorded, so I do not have access to this. It is simply there to help you walk through the steps and alleviate anxiety on the day of the exam before you enter into the actual assessment.
- Should there be subsequent violations of the same nature, that will result in a 0 for every exam after the first violation.
- This suspending of consequences is done as a service to students to prevent unintentional or honest mistakes during subsequent exams. Consequences will be suspended ***ONLY*** on that specific activity as it is meant to be a practice for you to familiarize yourself with the Honorlock exam proctor. **I will provide feedback on any and all violations.**
- **Any student who thinks that a penalty was misapplied can request that the penalty be reviewed according to the Grievance Procedure listed in the syllabus.**
- If you experience any technical difficulties, please reach out to Honorlock immediately. You can also reach out to blackboard for help if the issue is blackboard itself, and not the proctoring software. ***When taking exams, Honorlock's chat function is your best option - talk to them FIRST***. Should issues arise that are out of your control (I.E. Blackboard shuts down indefinitely), I will adjust assignment availability and due dates as appropriate.

MAKE-UP EXAM POLICY: Students will be allowed to make up **1 lecture exam only** and only if it is a documented medical emergency. Student must contact the professor within 24 hours of the scheduled exam, must provide medical documentation and the makeup exam must be taken **within 2 business days of the missed scheduled exam**. If the student does not contact Dr. Hall within 2 business days of the missed scheduled exam, the missed exam grade will revert to a zero.

  - There are no retakes for any exam. Ever.
  - The Make-up Lecture Exam will be a **short answer/essay exam**.
  - There will be **NO make-up exams for missed Lab Exams** and/or the **Final Exam.**

LAB POLICY: Assignments consist of online virtual lab assessments to be completed through McGraw-Hill Connect. Each student is expected to complete all online lab assessments via McGraw-Hill Connect and complete the handouts while watching the supplemental videos provided. **Lab Handouts will be submitted for assignment grades.** There will be no makeups for

missed labs and/or virtual lab assessments on Connect. Missed lab assignments on Connect will result in a zero for that assignment.

LATE ASSIGNMENT POLICY: Any assignments submitted late will result in a **10% deduction** from the overall grade **PER DAY** that the assignment is late. For online courses, if the assignment is completed and submitted AFTER the due date and time, that will result in a 10% penalty off the overall grade (I.E., if the assignment is due at 11:59 PM, and you submit at 12:00 AM or later the next day, you will receive a 10% penalty).

COURSE GRADE POLICY: Participating in and completing both the (voluntary) KWLs and Concept Check Quizzes that accompany each lecture will result in 1 bonus point (per lecture) for the upcoming exam. You must complete both (BEFORE THE EXAM) to receive the bonus point. The 2 lowest assignment grades will be dropped from the calculated final average. Final grades will be tabulated based on the below grading scale. There will be no exceptions and there are no curves in this course. The grade you earn is the grade you receive. There is a document on blackboard (under "course resources") where each student can plug in their respected grades and calculate/estimate their final course average. The breakdown of this course is as follows:

LECTURE (70% OF OVERALL GRADE):	
ALL LECTURE EXAMS	70%
LAB (30% OF OVERALL GRADE):	
LAB EXAM I	10%
LAB EXAM II	10%
LAB ASSESSMENTS/ASSIGNMENTS	10%
	30%
OVERALL TOTAL	100%

Letter Grade	Course Average
A	89.5 - 100%
B	79.5 - 89.4%
C	69.5 - 79.4%
D	59.5 – 69.4
F	0 – 59.4

WITHDRAWAL PROCEDURE:
It is the student's responsibility to withdraw from this course. Otherwise, students will be assigned their earned letter grade at the end of the course. Course averages will be updated twice each week, and guidance will be provided throughout the term to help students decide whether they need to drop the class or not. For more information regarding drops/withdrawals, please visit https://www.southplainscollege.edu/admission-aid/apply/schedulechanges.php.

ACADEMIC INTEGRITY AND DISHONESTY: Students are expected to do their own work on all lab simulations, reflection essays, assignments, quizzes, and examinations. Failure to comply with this policy (as laid out below) will result in an F for the assignment/exam and can result in an F for the entire course if circumstances warrant.

If an assignment is flagged as AI generated, the result will be a 0 for that assignment, and/or possible dismissal from the course. AI usage, when used and submitted as student generated authentic thoughts, is a form of plagiarism and SPC's official stance is AI usage in this way is prohibited.

PLAGIARISM VIOLATIONS include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail-order term paper mill.
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation.
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.
5. Using artificial intelligence (such as ChatGPT) to formulate answers and passing it off as original thought.

CHEATING VIOLATIONS include, but are not limited to, the following:

1. Obtaining an unadministered examination or contents by buying, stealing, selling, soliciting, or through collusion (in whole or in part);
2. The unauthorized transporting or removal, in whole or in part, of the contents of the unadministered test
3. Discovering the content of an examination before it is given.
4. Using an unauthorized source of information (notes, textbooks, phones, text messaging, internet, apps, smartwatches, etc) during an examination, quiz, or homework assignment.

5. Entering an office or building to obtain unfair advantage.
6. Taking an examination for another student.
7. Bribing another person to obtain an unadministered test or information about an unadministered test.
8. Collaborating with or seeking aid from another person during a test.
9. Altering grade records.
10. Copying another's work during an examination or on a homework assignment.
11. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's.
12. Taking pictures of a test, test answers, or someone else's paper.

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension. Each student is expected to abide by absolute honesty. Infractions will result in penalties subject to an assignment of a grade of "F" for the course or expulsion from the college. Students should also regard civility online as a requirement to remain on the roll in class.

Cheating
Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office are examples of cheating.

Complete honesty is required of the student in the presentation of any and all phases of course work. This applies to quizzes of whatever length, as well as to final examinations, to daily reports and to term papers.

Plagiarism
Offering the work of another as one's own, without proper acknowledgment, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from the themes, reports or other writings of fellow student, is guilty of plagiarism.

OFFICIAL SPC STATEMENTS:
South Plains College policies concerning Disabilities, Non-discrimination, Title IX Pregnancy and Parenting Accommodations, CARE (Campus Assessment, Response, and Evaluation), Intellectual Exchange, Campus Concealed Carry, COVID-19, and AI (Artificial Intelligence) can be found here: Syllabus Statements.

Please note this syllabus is subject to change at any time.

FALL 2026: BIOL 2420 SCHEDULE (152)

WEEK 1: Intro/History of Microbiology, Biochemistry - Lab safety, Making Media
WEEK 2: Cell Theories/Prokaryotes/Eukaryotes – Microscopy
WEEK 3: Labor Day - Lecture Exam 1 -
WEEK 4: Microbial Growth/Host-Microbe Interactions – Negative stain, fungal/bacterial collection, Smear prep, simple stain, quad streak plate
WEEK 5: Innate/Adaptive Immunity - Concept mapping
WEEK 6: Acquired Immunity, Lecture Exam 2 –Gram Stain, Lab exam Review
WEEK 7: *S. aureus, S. pyogenes* – Lab Exam
WEEK 8: *S. pneumonia, Diphtheria, Tuberculosis* – Antibiotic testing, acid-fast stain, pasteurization/plate counts
WEEK 9: Pertussis, Lecture Exam 3 – Spore stain
WEEK 10: STIs, Intro to Viruses, Ebola – Capsule stain, bacterial motility, flagella arrangements
WEEK 11: COVID-19, Influenza – Effects of oxygen, temperature, and UV light on microbial growth

WEEK 12: Hepatitis – Biochemical testing on microbes
WEEK 13: Lecture Exam 4, HIV/Aids, Anthrax - Unknown Bacteria determination
WEEK 14: Smallpox, Botulism – Lab Exam 2
WEEK 15: The Plague, Lecture Exam 5 – Protists lab
WEEK 16: Final Exam

FALL 2026: BIOL 2420 SCHEDULE (181)

WEEK 1: Intro/History of Microbiology, Biochemistry, Cell Theories/Prokaryotes/Eukaryotes – Lab safety, Making Media Microscopy
WEEK 2: Lecture Exam 1, Microbial Growth, Host-Microbe Interactions, Innate Immunity – Negative stain, fungal/bacterial collection, Smear prep, simple stain, quad streak plate
WEEK 3: Adaptive/Acquired Immunity, Lecture Exam 2 – Concept mapping , Gram Stain, Lab exam Review
WEEK 4: *S. aureus, S. pyogenes, S. pneumonia, Diphtheria, Tuberculosis* – Lab Exam 1, Antibiotic testing, acid-fast stain, pasteurization/plate counts
WEEK 5: Pertussis, Lecture Exam 3, STIs, Intro to Viruses/Ebola – Spore stain, Capsule stain, bacterial motility, flagella arrangements
WEEK 6: COVID-19, Influenza Hepatitis – – Effects of oxygen, temperature, and UV light on microbial growth and Biochemical testing on microbes
WEEK 7: Lecture Exam 4, HIV/Aids, Smallpox, Anthrax, Botulism, The Plague - Unknown Bacteria determination – Lab Exam 2, Protists lab
WEEK 8: Lecture Exam 5, Final Exam