

Biology 2420.006 Microbiology
Hybrid (Flex) Course- Online Lecture, In-person Lab
Spring 2023

The lecture content for Biology 2401.006 (501) will be delivered online using Blackboard while the lab content of this course will be provided “in person” during the weekly lab session at the Plainview Center at 2 pm- 5:20 pm each Tuesday afternoon of the Spring 2023. Despite the hybrid or flex format of the course, the information covered in the course, the course learning objectives, the semester schedule, the grading policy, and my expectations for student performance will be very similar to the traditional face-to-face Biol 2420 courses I have taught previously.

Sandra Carter DVM
Office S146 Levelland MWF/ Office PC 108 Plainview TTh
806-716-2495
E-mail: scarter@southplainscollege.edu

Office Hours:

Levelland	Monday 1:30-2:30 pm; 5 pm-5:30 pm Wednesday 1:30-2:30 pm; 5 pm- 5:30 pm Friday 10:30 am- 12:30 pm
Plainview	Tuesday 1:00 -2:00 pm Thursday 1:00- 4:00 pm

Office hours also available by appointment.

Course Description:

Biol 2420 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 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 the Allied Health profession.

Required Materials:

1. Computer with reliable internet service and access to Blackboard. Students are expected to log in to Blackboard multiple times during the week throughout the course to watch the Screencast lecture videos posted to Blackboard on Tuesday and Thursday and to print off Word documents such as the lecture notes, lab handouts and review sheets.
2. Textbook: D. Anderson, et al. *Nester's Microbiology: A Human Perspective*, 9th edition or 10th edition.
10th edition- NEW- Looseleaf at SPC Bookstore; USED- Looseleaf at SPC Bookstore; NEW or USED- Rent from SPC Bookstore until May 11; NEW, USED or E-BOOK available online.
9th edition- USED, hard-cover, paperback, loose-leaf and digital available online.
3. Lab Manual: Lammert, John. *Techniques in Microbiology. A Student Handbook*.
Available USED at SPC Bookstore as well as online.
4. Lecture notes and lab handouts: Available on Blackboard
5. Lab Supplies: SILVER Sharpie permanent marker, calculator and safety goggles/glasses

Computer Requirements:

Students are not required to purchase their own computer, but must have access to one that meets the specifications for this course. There are computer labs available for student use on our Levelland, Lubbock and Plainview Center Campuses. Students must also have reliable access to the internet to obtain lecture content and lab handouts using Blackboard. E-mail access is required.

For computer or technical issues, contact the Help Desk by emailing helpdesk@southplainscollege.edu or calling 806-716-2600.

Blackboard:

Blackboard is used to manage and deliver lecture content in this course to students.

<http://southplainscollege.blackboard.com/> (Log in with SPC User name and password.)

Blackboard Log In- Blackboard ID and password.

The Blackboard ID will be your first initial (the first initial will be your name that you have registered under at SPC), your last name and the last 4 digits of your Student ID (random number assigned by the college). All letters are lower case and there are no spaces in the ID.

The initial Password will be the Original Campus Connect Pin Number (found on your acceptance letter).

Example: Jane Smith, Student ID number: 123 – 00 - 4567

User ID: jsmith4567

Password: Original Campus Connect Pin Number

In order to access your course on Blackboard, a Web browser is required. Chrome is the preferred browser for using Blackboard. (Do NOT use Internet Explorer).

All technical questions regarding Blackboard should be directed to the SPC Technology Center (their contact information is on the opening page of Blackboard).

Computer or Blackboard Problems:

If a student's internet service is disrupted or a student's becomes inoperable for Blackboard, it is the responsibility of the student to have their internet connection and/or computer repaired as soon as possible in order to avoid falling behind with your study of the course content. While the computer and/or internet connection is repaired, the student should seek an alternate computer. There are computer labs for student use on the Levelland, Lubbock and Plainview campuses.

Class Attendance:**SPC General Class Attendance Policy**

Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting.

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. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially

withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of “X” as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student’s responsibility to be aware of that policy.

It is the student’s responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

Biol 2420 Attendance Policy- Spring 2023 Hybrid Course:

Because this course is a hybrid or flex course, lecture content will be provided online using Blackboard. Lecture material will be made available on Blackboard on Tuesday and Thursday of each week, in a manner that is similar to the class schedule of the traditional face-to-face Biol 2420 course that would meet on Tuesday and Thursday of each week. Students will work at their own pace during the week to obtain and study the lecture material presented each week; however, it is expected that students access the course content on Blackboard, at a minimum, two days per week so that the student does not “fall behind” in their study of the material. I will be monitoring students’ log in to Blackboard throughout the week.

Lab content will be provided during the “face-to-face” lab session conducted on Tuesday of each week during the semester (with the exception of Spring Break week) from 2 pm-5:20 pm at the Plainview Center. Each weekly lab session (3 hrs 20 minutes) is the equivalent of two lab sessions (1 hr 40 minutes) in the traditional face-to-face Microbiology course that meets twice a week. I will take attendance at the beginning of each lab session. I expect you to be prepared for each lab session by having read and studied the information in the lab handouts and lab handbook.

All exams in the course, including lecture and lab exams, will be administered during the face-to-face lab session as dictated by the schedule.

Because we will cover important lab information and take all exams (as dictated by the schedule) during the weekly lab session, attendance at each lab session is **MANDATORY**.

Therefore, a student may be administratively dropped from the course for non-attendance for any of the following reasons:

- 1. Failure to log in to Blackboard for a period of 10 or more consecutive days**
- 2. Failure to complete a scheduled lecture or lab exam**
- 3. Failure to attend two or more weekly lab sessions**

If a student is administratively (i.e. instructor initiated) withdrawn from the class for non-attendance, the grade on transcript will be an “X”. For more information regarding drops/withdrawals, please visit <https://www.southplainscollege.edu/admission-aid/apply/schedulechanges.php>.

NOTE: If you cannot attend a weekly lab session because of COVID illness or quarantine, a funeral, official school function, etc. you are still required to stay up-to-date with course content. Be sure to contact me via email within 24 hours of a missed lab session for instructions on how you can review the information that was covered in the lab session that you missed.

The last day to drop a course during the Spring 2023 semester with a “W” is Thursday, April 27, 2023 (8 am-4 pm). If you drop the class before that date, the grade on your transcript will be a “U” or “W”. If you decide to stop attending class, it is your responsibility to take the proper action to have this course officially dropped

from your schedule immediately, to avoid being administratively dropped (by me for non-attendance) with an “X”.

If you are receiving financial aid, it is your responsibility to visit with your financial aid advisor to determine how dropping this course will affect your present and future financial aid eligibility. For additional information regarding: the semester calendar, registration schedule, and drop/withdrawal policy and procedures, class attendance, drops and withdrawals, academic probation and suspension, academic integrity, student conduct, student records, etc. please refer to the SPC General Catalog 2022-23, which is available online at www.southplainscollege.edu.

Grading Policy:

There will be 5 lecture exams, including the non-comprehensive final exam, given during the semester during a weekly lab session. Each exam will be valued at 100 points. Therefore, the lecture content of the course will be worth 500 points.

Exam 1	100 pts
Exam 2	100 pts
Exam 3	100 pts
Exam 4	100 pts
Exam 5 (Final exam)	<u>100 pts</u>
Total pts lecture	500 pts

The lab content of the course will be worth 250 points. There will be two lab exams, each valued at 100 points, given during a lab session and the “unknown” bacteria identification will be valued at 50 points.

Lab Exam 1	100 pts
Lab Exam 2	100 pts
“Unknown”	<u>50 pts</u>
Total pts lab	250 pts

Therefore, the total number of points available in this course is 750 points, where 2/3 of your grade (500 pts) is based on lecture content and 1/3 of your grade (250 pts) is based on the lab content and activities.

Total pts lecture	500 pts max
Total pts lab	<u>250 pts max</u>
Total pts course	750 pts max

The course letter grade will be determined based on your course average as follows:

Course letter grade	Course Average	Total number of points
A	>89.5%	671-750 pts
B	79.5-89.4	596-670
C	69.5-79.4	521-595
D	59.5-69.4	446-520
F	<59.5	<446

Students can view their grades on Blackboard by clicking on the link for “Course Grades”.

Missed Exam Policy:

All exams should be taken during the lab session on the date listed in the class schedule. If you miss an exam due to extenuating circumstances such as serious illness such as COVID, quarantining due to COVID illness or exposure, death of an immediate family member, or official school business you may be required to provide written proof and the appropriate documentation regarding the absence. The student is responsible for

notifying the instructor within 24 hours of the date of the scheduled exam about such emergencies. The make-up exam must be taken within 7 days after the date the student returns to class on a Tuesday or Thursday. It will be your responsibility to make arrangements to be present for the make-up exam. All decisions regarding make-up exams are at the discretion of the instructor. A grade of zero for the missed exam will be recorded if these conditions are not met. Any other missed exams will receive a grade of zero.

Lab Safety:

Information and instructions regarding safe laboratory procedures and potentially hazardous chemicals will be made available during the lab session. No food or drinks are allowed in the laboratories at any time. Students must adhere to the dress code for lab. Any student whose attire does not meet the dress code standards will not be allowed to participate in lab activities.

Academic Dishonesty- Plagiarism and Cheating:

Cheating in any form is inexcusable and will result in serious consequences. If you are caught cheating, you will be dropped from the class with an "F". Students are expected to abide by the code of "Student Conduct" that can be found in the SPC 2022-23 General Catalog at www.southplainscollege.edu. Refer to "Academic Integrity" for definitions of cheating in the SPC 2022-23 General Catalog. Any student found copying another student's work or answers will be dropped from the class with an "F". Any student willfully allowing another student to copy his/her work will also be dropped from the class with an "F".

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

Student Code of Conduct Policy:

Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Students are expected to maintain a professional demeanor while in lab. It is imperative that you exercise common sense, follow instructions, and avoid horseplay while in the laboratory. Safety within the lab is of the utmost importance. Any student whose behavior in the laboratory appears to threaten the safety of his/her fellow classmates, the instructor and SPC staff, will be administratively dropped from the class by the instructor with an "F".

Cell Phone Policy:

Unless otherwise directed, cell phones are not allowed in the Microbiology lab. Cell phones cannot be used when taking an exam (with the exception of the lab exams) or during the review of a graded exam.

Disability Statement:

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Title IX Pregnancy Accommodations:

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 for assistance.

Non-discrimination Policy:

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336, 806-716-2360.

Diversity Statement:

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

COVID-19 Information:

If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication. Students must communicate with DeEtte Edens, BSN, RN prior to their return date if still

symptomatic at the end of the 5-day isolation. For information and resources about COVID-19, please visit <https://www.southplainscollege.edu/emergency/covid19-faq.php>.

Copyright Notice:

All material presented by the instructor in the course is copyright protected. The material presented by the instructor may not be modified or altered in any way. You have permission to print out one copy of any material presented by the instructor in this course (ex. course syllabus, lecture notes and lab handouts). The one copy must only be used for your personal educational use during this semester. The material may not be altered or modified in any way. The material may not be distributed in any way. You have permission to download the same material to your computer hard drive or other medium in order to print out the material needed. Any material downloaded may not be altered or modified in any way. The downloaded material may not be distributed in any way.

Note: The instructor reserves the right to modify the course syllabus and policies at any time during the semester.

*Spring 2023 Tentative Schedule- Online Lecture Content and In-Person Lab Content

Week and Date

Week 1:	1/17, 1/19	Online Lecture Topic: History of Microbiology 10 th edition Text Reading Assignment: (1) pp 1-5 9 th edition Text Reading Assignment: (1) pp 1-5
	Lab Session 1/17:	Syllabus Discussion Lab 1- Introduction to the laboratory Lab 2- Anatomy of the microscope, bacteria shapes
Week 2:	1/24, 1/26	Online Lecture Topic: Introduction to microbes 10 th edition Text Reading Assignment: (1) 10-17 9 th edition Text Reading Assignment: (1) pp 10-16 (3) pp 57-59 Online Lecture Topic: Taxonomy 10 th edition Text Reading Assignment: (10) pp 255-265; 9 th edition Text Reading Assignment: (10) pp 259-269
	Lab Session 1/24:	Lab 3- Media problems, bacteria collection Lab 4- Media preparation
Week 3:	1/31, 2/2	Online Lecture Topic: Bacterial morphology 10 th edition Text Reading Assignment: (3) pp 45-62 9 th edition Text Reading Assignment: (3) pp 58-77 Online Lecture Topic: Bacterial DNA and replication 10 th edition Text Reading Assignment: (7)- pp 175-189 9 th edition Text Reading Assignment: (7) pp 178-192
	Lab Session 1/31:	Lab 5- Negative stain technique, flagellar stain Lab 6- Smear preparation, simple stain technique
Week 4:	2/7, 2/9	Online Lecture Topic: Bacterial growth 10 th edition Text Reading Assignment: (4) pp 90-103 9 th edition Text Reading Assignment: (4) pp 92-105 Online Lecture Topic: Viruses-morphology and taxonomy 10 th edition Text Reading Assignment: (13) pp 329-335, 341-349 9 th edition Text Reading Assignment: (13) pp 332-338, 344-350
	Lab Session 2/7:	Lab 7- Quadrant streak plate inoculation; DNA extraction Lab 8- Gram stain technique
Week 5:	2/14, 2/16	Online Lecture Topic: Immune System-Innate Defenses 10 th edition Text Reading Assignment: (14) pp 360-381 9 th edition Text Reading Assignment: (14) pp 362-383

	Lab Session 2/14:	Lecture Exam 1 Lab 9- Media inoculation techniques and Review for Lab Exam 1
Week 6:	2/21, 2/23	Online Lecture Topic: Adaptive immunity 10 th edition Text Reading Assignment: (15) pp 385-411 9 th edition Text Reading Assignment: (15) pp 386-412 Online Lecture Topic: Acquired immunity 10 th edition Text Reading Assignment: pp 439-446 9 th edition Text Reading Assignment: (18) pp 456-463
	Lab Session 2/21:	Lab Exam 1 Lab 10- Capsule stain, motility; media inoculation Lab 11- Media preparation
Week 7:	2/28, 3/2	Online Lecture Topic: Host-microbe interactions 10 th edition Text Reading Assignment: (16) pp 415-432 9 th edition Text Reading Assignment: (16) pp 415-432
	Lab Session 2/28:	Lab 12- Spore stain, Acid-fast stain; media inoculation Lab 13- Media preparation and Review for Lab Exam 2
Week 8:	3/7, 3/9	Online Lecture Topic: Epidemiology 10 th edition Text Reading Assignment: (19) pp 481-499 9 th edition Text Reading Assignment: (19) pp 477-496 Online Lecture Topic: Infectious Dzs-Skin 10 th edition Text Reading Assignment: (22) pp 582-591 9 th edition Text Reading Assignment: (22) pp 574-582
	Lab Session 3/7:	Lab Exam 2 Lab 14- Unknown bacteria ID Discussion; Media Preparation
SPRING BREAK: March 13-17, 2023		
Week 9:	3/21, 3/23	Online Lecture Topic: Infectious Dzs-Skin & Wound Infections 10 th edition Text Reading Assignment: (22) pp 582-591 (23) pp 609-619 9 th edition Text Reading Assignment: (22) pp 574-582 (23) pp 601-612
	Lab Session 3/21:	Lecture Exam 2 Lab 15- Unknown inoculations- Optimal temperature test, Quadrant Streak Plate
Week 10:	3/28, 3/30	Online Lecture Topic: Infectious Dzs- Respiratory System 10 th edition Text Reading Assignment: (21) pp 536-551, 555-562 9 th edition Text Reading Assignment: (21) pp 531-547, 550-556
	Lab Session 3/28:	Lab 16- CHO broth inoculations, Media preparation

Lab 17- Oxygen requirement test, Gram Stain

Week 11:	4/4, 4/6	Online Lecture Topic: Infectious Dzs- Digestive System 10 th edition Text Reading Assignment: (24) pp 630-634, 639-640, 647-654, 658-662 9 th edition Text Reading Assignment: (24) pp 623-627, 631-633, 639-646, 650-654
	Lab Session 4/4:	Lecture Exam 3 Lab 18- CHO broths, Nutrient Gelatin inoculation, Media preparation Lab 19- Motility test, Capsule stain, inoculations
Week 12:	4/11, 4/13	Online Lecture Topic: Food-borne illnesses 10 th edition Text Reading Assignment: (24) pp 647-654 (30) pp 819-821 9 th edition Text Reading Assignment: (24) pp 639-646 (30) pp 809-812
	Lab Session 4/11:	Lab 20- Inoculations, Simmons Citrate test Lab 21- Read tests
Week 13:	4/18, 4/20	Online Lecture Topic: Infectious diseases- Urogenital Tract 10 th edition Text Reading Assignment: (27) pp 738-740, 746-748, 763-770 9 th edition Text Reading Assignment: (27) pp 728-730, 736-738, 752-760
	Lab Session 4/18:	Lecture Exam 4 Lab 22- Inoculations, Media preparation Lab 23- Inoculations, read tests
Week 14:	4/25, 4/27	Online Lecture Topic: Arthropod-Borne Diseases 10 th edition Text Reading Assignment: (25) pp 678-682 9 th edition Text Reading Assignment: (25) pp 671-674 Online Lecture Topic: Zoonotic Diseases 10 th edition Text Reading Assignment: (21) pp 572-573 (26) pp 718-720, 726-727 9 th edition Text Reading Assignment: (21) pp 563-564 (26) pp 709-712, 716-717 Online Lecture Topic: Infectious Diseases- Nervous System 10 th edition Text Reading Assignment: (26) pp 703-709 9 th edition Text Reading Assignment: (26) pp 695-700
	Lab Session 4/25:	Lab 24- Inoculations- DNase, Starch Lab 25- Read tests
Week 15:	5/2, 5/4	Online Lecture Topic: Emerging Diseases 10 th edition Text Reading Assignment: (21) pp 569-572 9 th edition Text Reading Assignment:

Online Lecture Topic: Bioterrorism

10th edition Text Reading Assignment: (19) p 500 (26) pp 731-733 (21) pp 563-564 (22) pp 593-594

9th edition Text Reading Assignment: (19) p 496 (26) pp 721-723 (21) pp 557-558 (22) pp 584-585

Lab Session 5/2: Unknown Bacteria ID due
Lab check-out

Week 16: Lab Session 5/9: **Lecture Exam 5**

*NOTE: This “tentative” schedule that may be changed as deemed necessary by the instructor.