



BIOLOGY 2420 (4:3:4)

Microbiology



SPRING 2018
SOUTH PLAINS COLLEGE
Sandra Carter

Biology 2420 Microbiology Spring 2018

Sandra Carter DVM

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Office Hours:

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

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:

Textbook: D. Anderson, et al. *Nester's Microbiology: A Human Perspective, 8th edition.*

Lab Manual: Lammert, John. *Techniques in Microbiology. A Student Handbook.*

Notes: Available on Blackboard

Lab Supplies: SILVER Sharpie permanent marker

Calculator

**Safety goggles/glasses

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 The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.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and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of “X” or “F” as determined by the instructor.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

Our class meets on Tuesday and Thursday from 4 pm- 6:55 pm. We will meet for lecture and lab during this time period. I will record attendance at the start of each lecture and each lab meeting. Attendance in both lecture and lab is essential for your ability to learn the material presented in this course; therefore, attendance is **MANDATORY**. You may be administratively dropped from the class with an X or an F if you exceed a total of 4 absences (lecture and lab attendance are recorded separately).

I expect you to be prepared for each class meeting by having read the relevant text and lab material. There is a tremendous amount of information pertaining to microbiology that will be covered in the course; however, due to the rapid pace of the course, we will not have time to cover all the information in lecture and lab. Therefore, it is crucial for you to read the chapters in the text!!! I have prepared outlines of the Power Point slides to serve as the framework for the “notes” you take in class- they are **not** complete! They will assist you in following along in lecture and in studying the textbook.

If absence from the class is unavoidable due to illness, funeral, official school function, etc. it is your responsibility to obtain the notes and information we covered in class from a classmate. You will also need to notify the instructor immediately so that any missed class or lab assignments can be completed within 5 days of the absence.

Please arrive to class on time. Two tardies will equal one absence. You may be administratively dropped from the class with an X or an F if you exceed 4 absences total (lecture and lab attendance are recorded separately).

The last day to drop classes with a “W” is Thursday, April 26, 2018. 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” or “F”.

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 Spring 2018 semester calendar, Spring registration schedule and drop/withdrawal policy and procedures, refer to the Spring 2018 Class Schedule, which is available from the Admissions and Records office or online at www.southplainscollege.edu.

For additional information about SPC policies regarding class attendance, drops and withdrawals, academic probation and suspension, academic integrity, student conduct, student records, etc. please refer to the SPC 2017-18 General Catalog, which is available from the Admissions and Records office or online at www.southplainscollege.edu.

Grading Policy:

There will be 5 lecture exams including the non-comprehensive final exam during the semester. Each exam will be valued at 100 pts. Thus the lecture portion of this class will be worth 500 pts.

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 portion of the class will be worth 250 pts. There will be two lab exams, each valued at 100 pts and the “unknown” bacteria assigned to you will be valued at 50 pts.

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, where 2/3 of your grade (500 pts) is based on the lecture and 1/3 of your grade (250 pts) is based on the lab 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

It is your responsibility to keep track of grades earned in the course.

Missed Exam Policy:

All exams should be taken on the scheduled day and class time. However, if you miss a scheduled exam because of extenuating circumstances (illness, death in the family, official school business, etc) you may be able to take a make-up exam. 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 scheduled exam about such emergencies. Students may make-up only one exam during the semester, and the make-up exam must be taken within 5 days of the scheduled exam. ***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.*** Make-up exams are often different from the regularly scheduled exams and tend to be more difficult.

A grade of zero for the missed exam will be recorded if these conditions are not met. Any other missed exams during the semester will receive a grade of zero.

Lab Safety:

Information and instructions regarding safe laboratory procedures and potentially hazardous chemicals will be made available. ***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.

Disability:

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 Center 806-716-2577, Reese Center Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611, or the Health and Wellness main number at 806-716-2529.

Cell phones:

All cell phones must be turned off so that they do not ring during lecture, and put away so that they are not in view during lecture. ***Cell phones will not be allowed in lab, except for the Media Preparation Lab and lab exams.***

Academic Dishonesty:

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 2017-18 General Catalog at www.southplainscollege.edu. Refer to "Academic Integrity" for definitions of cheating in the SPC 2017-18 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”.

Academic dishonesty will be subject to the maximum penalties allowed by College policy.

Conduct Policy:

Students are expected to maintain a professional demeanor while in lecture and 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”.

*Spring 2018 Tentative Lecture Schedule

DATE	TOPIC	8th ed TEXT Reading Assignment
1/16, 1/18	History of Microbiology	(1) pp 1-7
1/23, 1/25	Introduction to Microbes Taxonomy	(1) pp 10-16 (3) pp 57-59 (10) pp 255-268
1/30, 2/1	Bacterial morphology Bact. DNA & replication	(3) pp 58-77 (7) pp 176-190
2/6, 2/8	Bacterial growth Exam 1 2/8/18	(4) pp 92-104
2/13, 2/15	Viruses-morphology and taxonomy Immune System-Innate	(13) pp 330-335, 343-347 (13) pp 355-357 (14) pp 361-382
2/20, 2/22	Adaptive Immunity Acquired Immunity	(15) pp 385-411 (18) pp 456-463
2/27, 3/1	Host-microbe interactions Epidemiology	(16) pp 414-431 (19) pp 477-496
3/6, 3/8	Infectious Dzs-Skin Exam 2 3/8/18	(22) pp 572-580
3/12-3/16	SPRING BREAK	
3/20, 3/22	Wound infections Infectious diseases- Respiratory system	(23) pp 601-612 (21) pp 531-541, 543-548, 550-561
3/27, 3/29	Infectious diseases- Respiratory system (cont.) Exam 3 3/29/18	(21) pp 531-541, 543-548, 550-561
4/3, 4/5	Infectious diseases- Digestive system	(24) pp 625-635, 639-644, 649-657
4/10, 4/12	Food-borne illnesses	(24) pp 644-649 (31) pp 809-812

4/17, 4/19	Infectious diseases- Urogenital tract/ STD's Exam 4 4/19/18	(27) pp 727-731, 737-750
4/24, 4/26	Infectious diseases- Nervous system Zoonotic diseases Arthropod-borne diseases	(26) pp 694-698 (21) pp 562-563 (26) pp 712-715 (22) pp 580-585
5/1, 5/3	Bioterrorism Agents Emerging diseases	(26) pp 705-707 (25) pp 676-679 (19) p 496 (16) p 414 (21) p 546 (26) pp 702-703, 721-722 (27) pp 750-758 (25) p 685
5/8	Final Exam 5/8/18 4-6 pm	

*NOTE: This "tentative" schedule that may be changed as deemed necessary by the instructor!

*Spring 2018 Tentative Lab Schedule

1/16	Lab 1-Lab check-in, Safety Rules
1/18	Lab 2-Microscope Use
1/23	Lab 3 Media problems, Bacteria collection
1/25	Lab 4- Media preparation
1/30	Lab 5-Stains- negative, flagellar
2/1	Lab 6-Smear preparation, simple stain
2/6	Lab 7- Quadrant streak plate inoculation; DNA extraction
2/8	Lab 8- Gram stain
2/13	Lab 9- Media inoculation/ Review
2/15	Lab Exam 1
2/20	Lab 10- Capsule stain, motility; media inoculation
2/22	Lab 11- Media preparation
2/27	Lab 12- Spore stain, Acid-fast stain; media inoculation
3/1	Lab 13- Media preparation/ Review
3/6	Lab 14-Set up antibiotic sensitivity test; unknown inoculations
	Lab Exam 2
3/8	Lab 15- Read antibiotic sensitivity test; unknown- optimal T ⁰ test, Gram stain
3/12-3/16	SPRING BREAK
3/20	Media Preparation
3/22-4/24	Identification of "Unknown" bacteria Additional lab- cream cheese production
4/26	Unknown bacteria- genus and species name due , lab check-out

*NOTE: This "tentative" schedule may be changed by the instructor based on how we progress through these activities during the semester!!