

Reese Campus

**Course Syllabus**

COURSE: SCIT1313\_151: Workplace Microbiology (3-hour credit)  
 SEMESTER: SUMMER 2023 (June-August 2023)  
 CLASS TIMES: Online (Lecture: 3, LAB: 1)  
 INSTRUCTOR: Kristie Cole, M.Ed, BAS, CST  
 OFFICE: RC 529  
 OFFICE HOURS: By appointment only  
 OFFICE PHONE: 806-716-4643  
 E-MAIL: [kcole@southplainscollege.edu](mailto:kcole@southplainscollege.edu)  
 PROGRAM FACEBOOK: <https://www.facebook.com/SPCSurgicalTechnology>

Blackboard is an e-Education platform designed to enable educational innovations everywhere by connecting people and technology. This educational tool will be used in this course throughout the semester

### GENERAL COURSE INFORMATION

*\*It is the responsibility of each student to be familiar with the content and requirements listed in the course syllabus. \**

**COURSE DESCRIPTION**

The Workplace Microbiology course is the study of the identification and growth of microorganisms as pathogenic or nonpathogenic agents, including epidemiology. Includes the detection of microbes and control of infectious agents in the workplace, emphasizing sanitation and asepsis.

**BLACKBOARD**

Blackboard is an e-Education platform designed to enable educational innovations everywhere by connecting people and technology. This educational tool will be used in this course throughout the semester.

The student should only access his or her own Blackboard account. Granting permission to another or accessing another student's Blackboard account is prohibited and against the Academic Integrity code.

If you have questions or need help with Blackboard:

[kcole@southplainscollege.edu](mailto:kcole@southplainscollege.edu)

806-716-4643

**STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of a course of study in workplace microbiology, the student shall be able to:

- Identify basic microbial morphology and describe basic microbial physiology
- Interpret host-parasite relationships and interactions, and the requirements of successful parasitism;
- Describe and apply knowledge of personal and environmental disinfection and decontamination procedures by proper use of chemical disinfection and sterilization procedures;
- Describe the fundamentals of the infectious processes and specific and non-specific defense mechanisms against disease;
- Understand the methods of transmission of infectious diseases and recognize the control procedure of these diseases with special emphasis on protection to the embalmer, the funeral director and the public;
- Differentiate between the indigenous microorganisms and pathogens and/or opportunists causing disease commonly associated with the human host

## COURSE OBJECTIVES / COURSE OUTCOMES

- Compare and distinguish the basic groups of microbes, including prokaryotic microbes (Archaea, Bacteria), and Viruses, and eukaryotic microbes.
- Understand the processes needed for one bacterium to become two, and understand the mechanisms involved.
- Compare and contrast major pathways of catabolism, specify the relative energy yield from each pathway, list the key products of each pathway, and describe biochemical pathways used for microbial taxonomy.
- Compare and contrast major pathways of biosynthesis and list the key products of each pathway.
- Draw a typical microbial growth curve, and predict the effect of different environmental conditions on the curve.
- Compare and contrast eukaryotic and prokaryotic genomes, and gene expression in each group.
- Compare and contrast the acquisition of novel genetic information in microbes via mutations and genetic exchange, specifically conjugation, transformation and transduction,
- Specify the role of microbes in global C, N, S, and P cycles, and list examples of microbes that contribute to key metabolic aspects of these cycles.
- List different types of symbiotic interactions between microbes and other organisms, including commensalism, mutualism, and parasitism, and provide examples of each.
- Summarize common features of microbial pathogens, with emphasis on bacterial and viral pathogens.
- Summarize mechanisms of animal defenses to infection, including primary defenses, innate immunity, and acquired immunity.
- Compare and contrast beneficial and harmful uses of organisms, including applications in biotechnology and bioterrorism.
- Have a solid grasp of the scope of the microbial world and its role in shaping this planet and all its inhabitants

## EVALUATION METHODS

Computer-based exams, written exams, written assignments, quizzes, and other projects as assigned.

### Formative assessments include:

- Discussions
- Quizzes \*over the chapter instructor has just completed
- Unit exams \*comprehensive of information learned in the course so far.
- Classroom activities

### Summative assessment will be:

- a comprehensive final exam

The student upon successful completion of this course will be able to read and understand medical literature and communicate with other medical professionals with at least 75% proficiency.

1. Lecture will be one mode of instruction.
2. Questions and classroom discussion(s) will be used in cooperative learning experiences. Participation is expected.
3. Power Point presentations will be used. Other types of technology will be used when appropriate. Each lecture will be posted as a PowerPoint on portal for individuals who missed class or need to review the lecture.

4. Reading assignments from the text and from external sources including the internet may be required. Summaries of pertinent articles are usually required.
5. Learning will be enhanced by "hands on" laboratory experiments selected to reinforce concepts presented in the lectures.
6. Unknowns will be given in the laboratory requiring the student to apply existing knowledge, to seek additional information if required and to make decisions on their own.
7. Laboratory experiments will be recorded and turned in for grading. This is designed to reinforce the need to record and report data carefully

## ACADEMIC INTEGRITY

### ACADEMIC INTEGRITY

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.

**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 the office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of coursework. This applies to quizzes of whatever length, as well as final examinations, to daily reports and to term papers.

Any assignment **0 or F** will be given on any assignment or test that cheating was utilized. Offender maybe liable for being dropped from the course at the discretion of the instructor.

**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 themes, reports or other writings of a fellow student, is guilty of plagiarism.

A **0 or F** will be given on any assignment or test that cheating or plagiarism was utilized. Offender maybe liable for being dropped from the course at the discretion of the instructor.

## LOGGING INTO THE COURSE

Under no circumstances are you allowed to give your User ID and/or password to anyone. If someone, besides you, is logging into this course, I will drop you immediately with an 'F', regardless of the reason. If you are taking this course along with a roommate, spouse, or significant other, you need to let me know immediately. Failure to do so could result in your being dropped from this course with an 'F'.

## COMPUTER USAGE

As computer technology in the field of health occupations continues to become more popular, computers will be used in this course for several assignments. All students have access to computers and printers on the South Plains College campus. Students will be expected to utilize computers to access assignments and classroom resources. All registered students are supplied with a working email account from South Plains College. In order to take exams, students must have their user name and password.

**ALL STUDENTS ARE EXPECTED TO KNOW THEIR SPC STUDENT USER NAME AND PASSWORD.**

## COMPUTER LAB USAGE

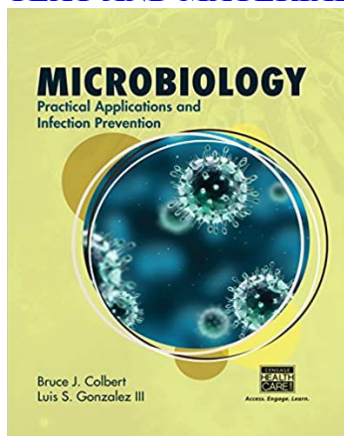
The computer lab(s) on any campus may be used by students during scheduled open hours or as assigned by an instructor. Printer paper will not be provided for students to print materials, but students may seek assistance from faculty or staff to request lab paper from the college if needed. Lack of computer lab paper is not an excuse for not having homework assignments, skills lab sheets, or any other required documents. Students should come prepared for class.

## SCANS and FOUNDATION SKILLS

Refer also to Course Objectives. Scans and Foundation Skills attached

## SPECIFIC COURSE INFORMATION

### TEXT AND MATERIALS



Microbiology: Practical Applications and Infection Prevention  
Educator Guide with MindTap

### METHODS OF TEACHING

- Lecture
- PowerPoint Presentation
- Question and Discussion
- Review
- Quizzes
- Examinations

### ADDITIONAL CLASSROOM ITEMS

Students should come to class prepared with pens, pencils, and a spiral notebook for taking notes or completed quizzes or assignments in class. Students should be prepared to take notes over lecture material if they choose.

### ATTENDANCE POLICY (\*READ CAREFULLY)

#### **Class Attendance**

Most of the education that is acquired through distance learning is a result of the interaction among the participants in the course, that is, the instructor and the students combined. Therefore, the instructor requests that each participant log-in at least 3 times a week. The instructor will take part in the discussion topics as appropriate. The discussion room will also function as office hours for the instructor, and will provide the opportunity to clarify issues and topics. Students may feel free to contact the instructor by email at any time. It is imperative that students log in

throughout the week as the instructor may post announcements, additional clarifications and/or requirements. Students are responsible for ascertaining any changes that are made to the syllabus, week guidance, or course requirements. **Failure to complete two or more weeks assignments, exams, and/or discussion post will result in immediate removal from the class by the instructor with “F” being recorded for the grade.**

([http://catalog.southplainscollege.edu/content.php?catoid=47&navoid=1229#Class\\_Attendance](http://catalog.southplainscollege.edu/content.php?catoid=47&navoid=1229#Class_Attendance))

### COURSE SYLLABUS STATEMENT

The following statement should be included in all course syllabi for face-to-face and hybrid instruction options: 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](mailto: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](mailto: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.

### ASSIGNMENT POLICY

Each chapter (19 chapters) will have an assignment (19 assignments) that will be posted on Blackboard on/or before the week that chapter is due by. These assignments are due on/or by 11:59pm of the due date each week. These assignments will be done via Blackboard and will not be timed, but will be a portion of your course grade. Late work or incomplete work is not accepted and a grade of zero will be recorded.

**\*Once you have logged onto Blackboard and started an assignment, the assignment will need to be completed and submitted before logging out of Blackboard. You may not start an assignment, save it, or work on it later. Once started it needs to be completed for the maximum grade.**

Chapter course content, exercises (course content and exercises done in the book are NOT graded but are HIGHLY recommended that they are completed) and assignments (which are graded) should be read prior to completing the chapter exams.

### GRADING POLICY

A minimum of 75% on all exams and assignments is required to receive a passing grade for that exam or assignment. Students must earn an overall grade of 75% or better for each course section to pass that section.

Grades in this course will be determined using the following criteria:

The course grade will be determined by a combination of major exams, chapter homework, quizzes, and a comprehensive final exam. Exam dates will be announced. The following guidelines will be followed regarding coursework:

1. The student is expected to complete the exam at the scheduled time.
2. Make-up exams will **NOT** be given.
3. Late assignments will not be accepted.

Assessment Tools	%
MindTap – Chapter Assignments (9)	20%
Chapter Exams (6)	30%
Comprehensive Didactic Final Exam	20%
Lab Assignments/ Discussions	20%
Lab Final Project	10%

Percentage Score	Grade
90-100	A
80-89	B
75-79	C
0-74	F

### CHAPTER EXAMS

**-Please update your computer before starting exams. You might want to log out of blackboard and log back in before starting your exam. You only get 1 attempt per exam!**

**-Please make sure your computer is plugged into a power source or fully charged while taking your exams. If your computer battery dies during an exam your exam will be submitted at that point!**

Each Chapter (19 chapters) will have a chapter exam (19 exams) given via Blackboard. The chapter exams ARE timed and will be a portion of your course grade. You will be given 2 minutes per question. There will also be an exam for the syllabus that will be calculated into your chapter exam grade.

## COMPREHENSIVE FINAL EXAM

**-Please update your computer before starting exams. You might want to log out of blackboard and log back in before starting your exam. You only get 1 attempt per exam!**

**-Please make sure your computer is plugged into a power source or fully charged while taking your final exam. If your computer battery dies during an exam your exam will be submitted at that point!**

The comprehensive final exam WILL BE timed, given via Blackboard, and will be a portion of your course grade. You will be given 2 minutes per question. The final exam must be completed within the time frame specified by the instructor.

## COMMUNICATION POLICY

- Electronic communication between instructor and students in this course will utilize the South Plains College “My SPC” email system. Students are encouraged to check SPC email on a regular basis. Students will also have access to assignments, web-links, handouts, and other vital material which will be delivered via the classroom website. Any student having difficulty accessing the classroom website or their email should immediately contact their instructor for direction. The instructor will work with any student to ensure the student has access to a computer on campus and can obtain the needed class content that is located on the course website.

- **Instructor will not communicate using private email accounts.**

- **I will return e-mails within 24 hours. If you need immediate assistance, please call me 806-716-4643. If leaving a message please give your name, student ID #, and a good phone # to return your call.**

## SPECIAL REQUIREMENTS

Students are not required to purchase their own computer, but must have access to one that meets these specifications. There are computer labs available for student use on our Levelland, Lubbock Center, and Reese Center campuses.

**To be able to participate in this online course, a student needs to have the following:**

- Typing skills
- Basic word processing skills
- Know basic functionality of a computer and how to do basic troubleshooting
- Know how to connect to the Internet
- Know basics of how the Internet works and how to search and conduct research using the Internet
- Know how to compose, reply, and forward e-mail messages
- Know how to attach and open documents in an e-mail message
- Have basic file management skills
- Know how to save and delete documents

## DROPPING A CLASS

Students should submit a [Student Initiated Drop Form](#) online.

Students will not be required to obtain an instructor signature to drop, however, we do encourage students to communicate with instructors or advisors prior to dropping a course when they are able. There will be no charge for drops for the fall or spring semesters.

## WITHDRAWING FROM ALL CLASSES

If students wish to withdraw from all courses, they should initiate that process with the Advising Office. They can schedule an appointment with an advisor by visiting <http://www.southplainscollege.edu/admission-aid/advising/spcadvisors.php> or by calling 806-716-2366.

## DROPPING A CLASS SCHEDULE CHANGE (after late registration and before census date)

To make a schedule change after late registration and before the census date, students should submit a

## Schedule Change Form.

After late registration, adding a class requires instructor approval. If a student is requesting to be added to one of your courses and you approve, please email [registrar@southplainscollege.edu](mailto:registrar@southplainscollege.edu) with your approval. This can take the place of signature on the Schedule Change Form that we have required in the past.

## ASSIGNMENT POLICY

All assignments must be completed by the assigned due date. **Late and/or incomplete work will not be accepted and a grade of zero will be recorded.** Assignments, quizzes, exams, and skills that are missed due to an unexcused absence may not be made up. See the instructor for more specific information.

## COMPUTER LAB USAGE

The computer lab(s) on campus may be used by students during scheduled open hours or as assigned by an instructor. Printer paper will not be provided by SPC EMS department for students to print materials but students may seek assistance from faculty to request lab paper from the college if needed. Lack of computer **lab paper is not an excuse for not having homework assignments, skills lab sheets, or any other required documents. Students should come prepared for class.**

**ALL STUDENTS ARE EXPECTED TO KNOW THEIR SPC STUDENT USER NAME AND PASSWORD.**

## COMMUNICATION POLICY

- Electronic communication between instructor and students in this course will utilize the South Plains College “My SPC” and email systems. I will utilize text messaging and you may communicate with me this way also. The instructor will not initiate communication using private email accounts. Students are encouraged to check SPC email on a regular basis each week of class. Students will also have access to assignments, web-links, handouts, and other vital material which will be delivered via the classroom website. Any student having difficulty accessing the classroom website or their email should immediately contact their instructor for direction. The instructor will work with any student to ensure the student has access to a computer on campus and can obtain the needed class content that is located on the course website.

## STUDENT CONDUCT

Rules and regulations relating to the students at South Plains College are made with the view of protecting the best interests of the individual, the general welfare of the entire student body and the educational objectives of the college. As in any segment of society, a college community must be guided by standards that are stringent enough to prevent disorder, yet moderate enough to provide an atmosphere conducive to intellectual and personal development.

A high standard of conduct is expected of all students. When a student enrolls at South Plains College, it is assumed that the student accepts the obligations of performance and behavior imposed by the college relevant to its lawful missions, processes and functions. Obedience to the law, respect for properly constituted authority, personal honor, integrity and common sense guide the actions of each member of the college community both in and out of the classroom.

Students are subject to federal, state and local laws, as well as South Plains College rules and regulations. A student is not entitled to greater immunities or privileges before the law than those enjoyed by other citizens. Students are subject to such reasonable disciplinary action as the administration of the college may consider appropriate, including suspension and expulsion in appropriate cases for breach of federal, state or local laws, or college rules and regulations. This principle extends to conduct off-campus which is likely to have adverse effects on the college or on the educational process which identifies the offender as an unfit associate for fellow students.

Any student who fails to perform according to expected standards may be asked to withdraw.

Rules and regulations regarding student conduct appear in the current Student Guide.

## CAMPUS CARRY

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy,



license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php> Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

## **ACCOMMODATIONS**

### **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.

### **DISABILITIES 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 Center 806-716-2577, Reese Center (also covers ATC) 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.

#### **4.1.1.3 Non-Discrimination Statement**

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. Phone number 806-716-2360.

#### **4.1.1.4 Title IX Pregnancy Accommodations Statement**

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 or email [cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

#### **4.1.1.5 - Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

## FOUNDATION SKILLS

### **BASIC SKILLS—Reads, Writes, Performs Arithmetic and Mathematical Operations, Listens and Speaks**

F-1 Reading—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.

F-2 Writing—communicates thoughts, ideas, information and messages in writing and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.

F-3 Arithmetic—performs basic computations; uses basic numerical concepts such as whole numbers, etc.

F-4 Mathematics—approaches practical problems by choosing appropriately from a variety of mathematical techniques.

F-5 Listening—receives, attends to, interprets, and responds to verbal messages and other cues.

F-6 Speaking—organizes ideas and communicates orally.

### **THINKING SKILLS—Thinks Creatively, Makes Decisions, Solves Problems, Visualizes and Knows How to Learn and Reason**

F-7 Creative Thinking—generates new ideas.

F-8 Decision-Making—specifies goals and constraints, generates alternatives, considers risks, evaluates and chooses best alternative.

F-9 Problem Solving—recognizes problems, devises and implements plan of action.

F-10 Seeing Things in the Mind’s Eye—organizes and processes symbols, pictures, graphs, objects, and other information.

F-11 Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills.

F-12 Reasoning—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

### **PERSONAL QUALITIES—Displays Responsibility, Self-Esteem, Sociability, Self-Management, Integrity and Honesty**

F-13 Responsibility—exerts a high level of effort and perseveres towards goal attainment.

F-14 Self-Esteem—believes in own self-worth and maintains a positive view of self.

F-15 Sociability—demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.

F-16 Self-Management—assesses self accurately, sets personal goals, monitors progress and exhibits self-control.

F-17 Integrity/Honesty—chooses ethical courses of action.

## SCANS COMPETENCIES

C-1 **TIME** - Selects goal - relevant activities, ranks them, allocates time, prepares and follows schedules.

C-2 **MONEY** - Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.

C-3 **MATERIALS AND FACILITIES** - Acquires, stores, allocates, and uses materials or space efficiently.

C-4 **HUMAN RESOURCES** - Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

### **INFORMATION - Acquires and Uses Information**

C-5 Acquires and evaluates information.

C-6 Organizes and maintains information.

C-7 Interprets and communicates information.

C-8 Uses computers to process information.

### **INTERPERSONAL—Works With Others**

C-9 Participates as a member of a team and contributes to group effort.

C-10 Teaches others new skills.

C-11 Serves Clients/Customers—works to satisfy customer's expectations.

C-12 Exercises Leadership—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

C-13 Negotiates—works toward agreements involving exchanges of resources; resolves divergent interests.

C-14 Works With Diversity—works well with men and women from diverse backgrounds.

### **SYSTEMS—Understands Complex Interrelationships**

C-15 Understands Systems—knows how social, organizational, and technological systems work and operates effectively with them.

C-16 Monitors and Corrects Performance—distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions.

C-17 Improves or Designs Systems—suggests modifications to existing systems and develops new or alternative systems to improve performance.

### **TECHNOLOGY—Works with a Variety of Technologies**

C-18 Selects Technology—chooses procedures, tools, or equipment, including computers and related technologies.

C-19 Applies Technology to Task—understands overall intent and proper procedures for setup and operation of equipment.

C-20 Maintains and Troubleshoots Equipment—prevents, identifies, or solves problems with equipment, including computers and other technologies.

## COURSE OUTLINE

Course Outline is subject to change by the instructor

### Lecture Topics – Lecture/PowerPoint/Exam

<p>WEEK 1 Monday: 6/5 Coursework Opens Sunday: 6/11 Coursework DUE by 11:59 pm</p>	<p><b>Introduction and signing of syllabus forms</b> <b>Lecture, PowerPoint, homework and Exam</b></p> <p><i>Introduction and Signing of syllabus forms</i> <i>Lecture, PowerPoint Presentations, question/answer</i></p> <p><b>Chapter 1</b> <b>Lab Assignment – DUE week 2</b> <b>Chapter 1 Exam</b> <b>DUE- Sunday – 11:59 pm</b></p> <p><i>Outline:</i></p> <ul style="list-style-type: none"> <li>I. Microbiology</li> <li>II. Classification of Microorganisms <ul style="list-style-type: none"> <li>A. Algae</li> <li>B. Bacteria</li> <li>C. Fungi</li> <li>D. Protozoa</li> <li>E. Viruses</li> </ul> </li> <li>III. Cellular Anatomy and Physiology <ul style="list-style-type: none"> <li>A. Cell Categories</li> <li>B. Eukaryotic</li> <li>C. Prokaryotic</li> <li>D. Pathogen</li> <li>E. Normal Flora</li> </ul> </li> <li>IV. Immune System <ul style="list-style-type: none"> <li>A. Protective Barriers</li> <li>B. Circulatory and Bloodstream Response</li> </ul> </li> <li>V. Infection <ul style="list-style-type: none"> <li>A. Portals of Entrances</li> <li>B. Transmissions of disease</li> <li>C. Accompanied by fever and inflammation</li> </ul> </li> </ul> <p><b>Chapter 1 Exam</b> DUE SUNDAY @ 11:59 pm: EXAM DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 2 Monday: 6/12 Coursework Opens Sunday: 6/18 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework, LAB</b></p> <p><b>Chapter 2</b> <b>Chapter 1 Lab Assignment Due</b></p> <p><i>Outline:</i></p> <ul style="list-style-type: none"> <li>I. Microbiology <ul style="list-style-type: none"> <li>A. Types of Microbes</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>II. History of Microbiology</li> <li>III. Medical Microbiology <ul style="list-style-type: none"> <li>A. Health Care-Associated infections</li> <li>B. Fields and Application of Microbiology</li> <li>C. Bacteriology</li> <li>D. Specimen Collection</li> <li>E. Culturing Bacteria</li> <li>F. Infection</li> <li>G. Identification</li> <li>H. Susceptibility testing</li> <li>I. Bacterial disease</li> <li>J. Antibiotic Therapy</li> </ul> </li> </ul> <p>DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 3 Monday: 6/19 Coursework Opens Sunday: 6/25 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework and Exam Chapter 3</b></p> <p><i>Outline:</i></p> <ul style="list-style-type: none"> <li>I. Virology <ul style="list-style-type: none"> <li>A. Cause disease</li> <li>B. Natural Active Immunity</li> <li>C. Artificial Immunity</li> <li>D. Viral Identification</li> </ul> </li> <li>II. Parasitology <ul style="list-style-type: none"> <li>A. Stages of development</li> <li>B. Protozoa</li> <li>C. Malaria</li> <li>D. Helminths</li> <li>E. Ectoparasites</li> </ul> </li> <li>III. Mycology <ul style="list-style-type: none"> <li>A. Characteristics</li> <li>B. Yeasts</li> </ul> </li> <li>IV. Prions</li> </ul> <p><b>CHAPTER 2&amp;3 EXAM</b></p> <p>DUE SUNDAY @ 11:59 pm: EXAM DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 4 Monday: 6/26 Coursework Opens Sunday: 7/2 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework and Chapter 4</b></p> <p><i>Outline</i></p> <ul style="list-style-type: none"> <li>I. Infection Prevention</li> <li>II. Policies</li> <li>III. Chain of Infection</li> <li>IV. Basic Classification</li> <li>V. Issues to consider – Killing Organism</li> <li>VI. Methods – Disinfect and Sterilize</li> <li>VII. Various – Liquid and Compounds</li> </ul>

	<p>VIII. Gas Sterilization IX. Radiation</p> <p>DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 5 Monday: 7/3 Coursework Opens Sunday: 7/9 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework and Exam</b> <b>Chapter 5</b></p> <p>Outline</p> <ul style="list-style-type: none"> <li>Portals of Entry</li> <li>II. Routes of Transmission <ul style="list-style-type: none"> <li>A. Contact</li> <li>B. Common Vehicle</li> <li>C. Airborne</li> <li>D. Vector</li> </ul> </li> <li>III. Hand Hygiene <ul style="list-style-type: none"> <li>A. Simple</li> <li>B. Basics of Hand Washing</li> </ul> </li> <li>IV. Fundamental Principles of Infection Prevention and Control <ul style="list-style-type: none"> <li>A. Standard Precautions</li> <li>B. Transmission-Based Precautions</li> </ul> </li> <li>V. Occupational Safety and Health Administration (OSHA) Regulations <ul style="list-style-type: none"> <li>A. Environment Safe for employees</li> <li>Bloodborne Pathogen</li> </ul> </li> </ul> <p><b>Chapter 4&amp;5 Exam</b> DUE SUNDAY @ 11:59 pm: EXAM DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 6 Monday: 7/10 Coursework Opens Sunday: 7/16 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework</b> <b>Chapter 6</b></p> <p>Outline</p> <ul style="list-style-type: none"> <li>• Infectious Waste Disposal</li> <li>• Applying and Removing Nonsterile Disposable Gloves</li> <li>• Applying and Removing Sterile Gloves <ul style="list-style-type: none"> <li>-Open method</li> <li>-The absence of microorganisms</li> <li>-Hand hygiene for surgical asepsis</li> <li>-Sterile principles</li> </ul> </li> <li>• Specimen Collection</li> <li>• Wound Culture</li> <li>• Urine Specimens</li> <li>• Throat Culture</li> <li>• Nasal Specimens</li> </ul>

<p>WEEK 7  Monday: 7/17 Coursework Opens  Sunday: 7/23 Coursework DUE by 11:59 pm</p>	<p>DUE SUNDAY @ 11:59 pm: MINDTAP</p> <p><b>Lecture, PowerPoint, homework and Exam Chapter 7</b></p> <p>Outline:</p> <ul style="list-style-type: none"> <li>I. General Disease Terminology <ul style="list-style-type: none"> <li>A. Signs and Symptoms</li> </ul> </li> <li>II. Immunization <ul style="list-style-type: none"> <li>A. CDC – Centers for Disease Control and Prevention</li> <li>B. Immunity</li> </ul> </li> <li>III. Monitoring</li> <li>IV. Microbial Resistance Mechanisms <ul style="list-style-type: none"> <li>A. Superbacteria</li> <li>B. Resistance</li> </ul> </li> <li>V. Antibacterial Drug Classification <ul style="list-style-type: none"> <li>A. Bacteriostatic vs. Bactericidal</li> <li>B. Spectrum of activity</li> <li>C. Mechanism of action</li> </ul> </li> <li>VI. Antibacterial Agents <ul style="list-style-type: none"> <li>A. Beta Lactams</li> <li>B. Quinolones</li> <li>C. Aminoglycosides</li> <li>D. Glycopeptides</li> <li>E. Macrolides</li> <li>F. Tetracyclines</li> <li>G. Folate inhibitors</li> <li>H. Oxazolidinones</li> <li>I. Quinipristin</li> <li>J. Daptomycin</li> <li>K. Clindamycin</li> <li>L. Metronidazole</li> </ul> </li> <li>VII. Antituberculosis Agents <ul style="list-style-type: none"> <li>A. Tuberculosis</li> <li>B. Multidrug-resistant tuberculosis</li> <li>C. TB Treatment</li> </ul> </li> <li>VIII. Antivirals <ul style="list-style-type: none"> <li>A. Role of Antivirals</li> <li>B. Prevention of Viral</li> <li>C. Recent Antiviral Drugs</li> <li>D. Herpes Virus infections</li> <li>E. Antivirals for influenza Virus</li> <li>F. Antivirals for RSV</li> <li>G. Antivirals for HCV</li> <li>H. Antivirals for HIV</li> <li>I. Antitrovirals: suppress the virus</li> </ul> </li> <li>IX. Antifungal <ul style="list-style-type: none"> <li>A. Fungi</li> <li>B. Antifungal</li> <li>C. Antibiotics</li> </ul> </li> </ul>
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	<p>D. Nystatin E. Azoles F. Amphotericin B</p> <p><b>Chapter 6&amp;7 EXAM</b> DUE SUNDAY @ 11:59 pm: EXAM DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 8 Monday: 7/24 Coursework Opens Sunday: 7/30 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework and Exam</b> <b>Chapter 8</b></p> <p>Outline</p> <ul style="list-style-type: none"> <li>I. Infectious Disease of the Head and Neck <ul style="list-style-type: none"> <li>A. Meningitis</li> <li>B. Encephalitis</li> <li>C. Otitis Media</li> <li>D. Parotitis</li> </ul> </li> <li>II. Infections of the Eye <ul style="list-style-type: none"> <li>A. Conjunctivitis</li> <li>B. Keratitis</li> </ul> </li> <li>III. Cardiovascular Infectious <ul style="list-style-type: none"> <li>A. Endocarditis</li> <li>B. Catheter-related bloodstream infections.</li> </ul> </li> <li>IV. Infectious Diseases of the Skin and Soft Tissues <ul style="list-style-type: none"> <li>A. Cellulitis</li> <li>B. Erysipelas</li> <li>C. Diagnosis</li> <li>D. Necrotizing skin and soft tissue infections</li> </ul> </li> <li>V. Intra-Abdominal Infections <ul style="list-style-type: none"> <li>A. Appendicitis</li> <li>B. Acute cholecystitis</li> <li>C. Diverticulitis</li> <li>D. Clostridium difficile colitis</li> <li>E. Infectious diarrhea</li> <li>F. Genitourinary tract infections</li> </ul> </li> <li>VI. Bone and Joint Infections <ul style="list-style-type: none"> <li>A. Osteomyelitis</li> <li>B. Septic arthritis</li> </ul> </li> </ul> <p><b>Chapter 8 EXAM</b> DUE SUNDAY @ 11:59 pm: EXAM DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 9 Monday: 7/31 Coursework Opens Sunday: 8/6 Coursework DUE by 11:59 pm</p>	<p><b>Lecture, PowerPoint, homework and Exam</b> <b>Chapter 9</b></p> <p>Outline</p> <ul style="list-style-type: none"> <li>I. Upper Respiratory Airway Infections <ul style="list-style-type: none"> <li>A. Sinusitis</li> <li>B. Pharyngitis</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>C. Epiglottitis</li> <li>D. Croup</li> </ul> <p>II. Infectious Diseases of the Lower Respiratory Systems</p> <ul style="list-style-type: none"> <li>A. Acute bronchitis and bronchiolitis</li> <li>B. Pneumonia</li> <li>C. Tuberculosis</li> <li>D. Bioterrorism</li> <li>E. Avian Influenza</li> </ul> <p><b>Chapter 9 Exam</b>  DUE SUNDAY @ 11:59 pm: EXAM  DUE SUNDAY @ 11:59 pm: MINDTAP</p>
<p>WEEK 10  Monday: 8/7 Coursework Opens  Tuesday: 8/8  Coursework DUE by 11:59 pm</p>	<p><b>Exam</b>  <i>Lab Final Project Due</i>  Comprehensive FINAL</p> <p><b>DUE Tuesday @ 11:59 pm: EXAM</b></p>



SCIT1313: Workplace Microbiology

By signing and initialing below I affirm that I have received a copy or shown the online location of the following documents and, furthermore acknowledge that I am solely responsible for the content of each.

\_\_\_\_ Syllabus SCIT1313

\_\_\_\_ South Plains College Grievance Policy

\_\_\_\_ South Plains College GRADE AND ACADEMIC DISCIPLINE APPEALS

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date