



**Microbiology Lab – BIOLOGY (BIOL) 2117L
ON CAMPUS (CA) COURSE SYLLABUS
Course with 60% Face to Face & 40% Online
Summer Semester 2023**

COURSE INFORMATION

Credit Hours/Minutes: 1/2250

Class Location: Vidalia Campus/Health Sciences Annex (HSA) – Building C: Room 902

Class Meets: Monday 12:30 noon – 4:00 PM, **this is a course taught on campus (CA), with 60% Face-to-Face (FTF) in class & 40% Online (OL)**

Course Reference Number (CRN): 60093

Preferred Method of contact: Email Sherry Sturgis (ssurgis@southeasterntech.edu)

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Sherry C. Sturgis

Professional Bio: I received my B.S. and M.S. in Biology from Georgia Southern University, with an emphasis in Ecology. I am an Ecologist, Conservationist, and Environmental/Nature Educator. I have taught many courses in Science, especially Biology in the field of higher education. I love all aspects of Biology, especially Anatomy & Physiology, Microbiology, & Forensic Science. Email Address: ssurgis@southeasterntech.edu

Campus/Office Location: Vidalia Campus/Health Sciences Annex (HAS) – Building C: Room 901

Office Hours: by appointment

Email Address: Email Sherry Sturgis (ssurgis@southeasterntech.edu)

Office Phone: (912)538-3188

Cell: (912)531-4543, please text me first, and do not use this number unless you really need to reach me. I do not mind you contacting me by cell phone, just don't abuse the privilege.

Tutoring Hours: By appointment, I will be glad to set up a tutoring session during office hours.

This course requires students to complete a portion of the required contact hours by attending classes on campus while completing the remaining portion online as shown on the Lesson Plan. The course is taught in an on campus (CA) format. On campus (CA) classes require students to complete 60% FTF in class & 40% OL of the required contact hours traditionally by attending classes on campus while completing the remaining portion online at the student's convenience with respect to the instructor's requirements.

SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php) (<http://www.southeasterntech.edu/student-affairs/catalog-handbook.php>).

REQUIRED TEXT

1. Burton's Microbiology for the Health Sciences; Tenth Edition 1-2842-4253-6, Engelkirk and Burton: Copyright 2011.
2. Introductory to Microbiology 2117 Lab Workbook – First Edition (available in bookstore only)

REQUIRED SUPPLIES & SOFTWARE

3-hole binder, clear front report-cover (make sure it is sturdy and can hold 100 pages or more), colored pencils, ink pens, highlighter, and any other supplies deemed necessary by instructor.
Ink pens, highlighters, and any other supplies deemed necessary by the instructor.

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet so students are advised to not rely on these devices to take an online course.

Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

Selected laboratory exercises paralleling the topics in BIOL 2117. The laboratory exercises for this course include microbial diversity, microbial cell biology, microbial genetics, interactions and impact of microorganisms and humans, and microorganisms and human disease.

MAJOR COURSE COMPETENCIES

1. Laboratory Safety
2. Microscope Use
3. Aseptic Technique
4. Microbial Growth
5. Microbial Diversity
6. Microbial Cell Biology
7. Microbial Genetics
8. Interactions and Impact of Microorganisms and Humans

PREREQUISITE(S)

BIOL 2113 and BIOL 2113L OR BIOL 1111 and BIOL 1111L

COREQUISITE(S)

BIOL 2117L

COURSE OUTLINE

Laboratory Safety

1. Discuss and apply laboratory exercises encompassing the appropriate practice of laboratory precautions and laboratory safety.

Microscope Use

1. Discuss and use laboratory exercises encompassing proper care and use of the microscope.

Aseptic Technique

1. Discuss and use laboratory exercises encompassing the practice and utilization of aseptic technique. For example: Evaluate sterility testing procedures.

Microbial Growth

1. Discuss and use laboratory exercises encompassing control of microbial growth. Examples include: estimating the number of microbes in a culture medium by both direct and indirect methods, using appropriate microbiological media and test systems, cultivating specific microorganisms in various

media.

Microbial Diversity

2. Perform and apply laboratory exercises encompassing microbial diversity. For example: Use staining techniques to classify specific organisms.

Microbial Cell Biology

1. Perform and apply laboratory exercises encompassing microbial cell biology. Examples include: identifying common gram negative and gram positive bacteria, executing various staining techniques in order to study the morphology of microorganisms.

Microbial Genetics

1. Perform and apply laboratory exercises encompassing microbial genetics.

Interactions and Impact of Microorganisms and Humans

1. Perform and apply laboratory exercises encompassing interactions and impact of microorganisms and humans. Examples include: determining antibiotic sensitivity, determining the impact of various disinfectants and antiseptics on microorganisms, and performing tests for detecting microbial infections.

GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS

In order for students to be successful in this class, students should study a minimum of 2 hours per credit hour each week (minimum of 8 hours). Before arriving for class, students should read assigned chapters taking special note of bold-faced vocabulary terms and any study questions within the chapter. All assignments and work must be completed by due dates in the schedule. Failure to comply with these suggestions will make it impossible to understand and follow the lecture material and will result in a student being unsuccessful in this course. Students should read and study the chapter material daily and keep up to be successful in the course.

Students are responsible for the policies and procedures in the STC Catalog and Handbook. Additionally, during exams, students are to place all notebooks, bags, and other belongings on the floor or on the counters located in the back and sides of the classroom. During examinations students are to be seated with one empty chair between each student. No talking is permitted once the exams are handed out. Students are not allowed to leave the room during an exam (with their cell phone). Students need to go to the bathroom prior to the exam. The instructor will make an exception for emergencies. **Students found with their cell phone, or any other personal communication device (including smart watches) will be considered cheating and given a zero for the exam. This includes taking out a phone or similar device after the student has completed the exam but while others in the classroom are still testing.**

Students are expected to always exhibit professional behavior. Each student is to show respect and concern for fellow students and for the instructor. Insubordination will not be tolerated, and disciplinary measures will be enacted.

As students taking this course are striving to become healthcare professionals, they will be expected to follow certain healthcare program rules. This includes but is not limited to: proper dress (when in lab setting or other activities in class), no perfumes or strong fragrances, cleanliness (hands, clothes, hair), and effective communication skills.

Per STC policy no cell phones are allowed in hallways or in classrooms. If your phone must be with you it must be turned off and in a bag. In cases of emergency when a student needs his or her phone, he or she is expected to 1) notify the instructor before class begins and 2) leave the phone on silent (NO VIBRATE) while they are in the class (this excludes examination guidelines for phones). No personal calls are to be taken during class, regardless of the situation. This should be handled before or after class.

No eating or drinking is permitted in the lab or lecture classroom. Water is allowed if it is in a spill-proof container and must be kept under the desk or on the sides of the classroom.

TRADITIONAL ATTENDANCE GUIDELINES

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an "F" in a course.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: [Emily Jarrell \(ejarrell@southeasterntech.edu\)](mailto:ejarrell@southeasterntech.edu), 478-289-2259, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

SPECIFIC ABSENCES

Provisions for instructional time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Emily Jarrell \(ejarrell@southeasterntech.edu\)](mailto:ejarrell@southeasterntech.edu), 478-289-2259, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery MAY NOT be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which the student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

Remember - Informing your instructor that you will not return to his or her course does not satisfy the approved withdrawal procedure outlined above.

EVALUATION PROCEDURES

In order to sit for the final exam in this course a student must maintain a Lecture Exam and Lab Exam average of 70.0 or above prior to the date of the scheduled final exam. Exam averages of 69.9 will not be rounded up. If a student has below a 70.0 average, the student will be given a letter grade based on the exam average. There will be no drop grade for lecture or lab exams. **All lecture exams will take place in seat.**

MAKEUP GUIDELINES (EXAMS, QUIZZES, HOMEWORK, PROJECTS, ETC.)

Students will be allowed to make-up one examination (one lecture and one lab), **EXCLUDING** the final examination, due to an extenuating circumstance. This should be discussed with the instructor. Please submit official copy of medical, court documentation/jury duty, or any other formal written documents supporting the reason for missing a test. **Any other exam missed will result in an automatic grade of zero.** All make-up exams will be conducted face to face (FTF) on the scheduled date. Students have one week from the missed exam date to make-up the exam. The make-up date must be approved by the instructor. If this time period is not met, students may take a missed exam at the end of the semester, although this exam will not be the same exam as given to the class. It will consist of 20 short-answer questions only.

Lab Examinations: Students will be allowed to make up one lecture examination (excluding the final exam), due to a documented, excused absence approved by the instructor. Any subsequently missed lecture exam will result in an automatic zero.

Lab Assignments/Lab Notebooks & Discussion Boards (DB): Late assignments will be accepted but not for full credit. Assignments submitted after the due date will incur a 15% deduction per week late.

ASSIGNMENTS

Lab Notebook:

A laboratory notebook will be created by each student using a clear front report cover/binder with dividers (see required supplies page 1 of syllabus). This lab notebook will include all completed lab worksheets taken from lab workbook, handouts or assignments completed in lab, and all microscopic slide observations. Lab notebooks are due at the **end of each lab session** and all completed lab work should be submitted bound in a clear front report cover/binder. **All assignments completed in the lab must be turned in on the day assigned.** Lab reports will remain in the lab in a locked cabinet until the next lab session. Lab notebooks will be not be taken home for any reason.

The first page of the notebook (or in the front sleeve of the clear front lab report cover) will include (in typewritten format): Student's full name, course name, course number, semester, and year in the above-mentioned order.

Notebooks are checked weekly and points will be deducted for any missing assignment.

Dental Hygiene Skill Evaluations (see Lab syllabus and Lesson Plan for details)

Attendance is mandatory for the following laboratory sessions: **June 12, June 20, and July 10**. Three skill evaluations will be completed: Midmark M-11, Statim, and Ultrasonic Cleaner. Students must achieve 100% on each skill evaluation. Students will be allowed two attempts to reach 100% competency. If 100% competency level is not achieved on the first attempt, a remediation plan will be assigned. The remediation plan must be completed prior to the second/final attempt of the skill. The remediation plan will be based on feedback from the instructor and student. The remediation plan will contain the skill deficiencies and the instructions for completion of the remediation.

The student will begin with a 30-point deduction if a second/final attempt is necessary. The following list of attempts illustrates the grade that will be issued for the first and second/final attempts.

First Attempt = 100 is the grade for 100% competency

Second/Final Attempt = 70 is the grade for 100% competency

If a student fails to achieve 100% on the skill evaluation at the end of the second/final attempt, the student will be assigned a grade of "0" (zero) for the skill evaluation. The student will also be assigned an "F" for the final course grade, and the student will not be allowed to proceed in the dental hygiene program. [PLEASE DOWNLOAD FORMS FROM M. DRIVE TO TAKE WITH YOU ON SKILL EVALUATION DAYS.](#)

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

PROCEDURE FOR ACADEMIC MISCONDUCT

The procedure for dealing with academic misconduct and dishonesty is as follows:

1. First Offense

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the

incident into Banner for tracking purposes.

2. Second Offense

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

3. Third Offense

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION

As set forth in the student catalog, Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, veteran status, or citizenship status (except in those special circumstances permitted or mandated by law). The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia Office 108 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 st Street, Vidalia Office 138B Phone : 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu

ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College's website.

ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall

possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

GRADING POLICY

Assessment/Assignment	Percentage
Lab Exams	50%
Lab Workbook & Discussion Boards (DB) (3)	10%
Lab Assignments (#1-#5)	10%
Final Exam	30%

GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

DISCLAIMER STATEMENT

Instructor reserves the right to change the syllabus and/or lesson plan as necessary. The official copy of the syllabus is located on the STC M-Drive and will be discussed on the first day of class. The syllabus with chapter assignments, dates, tests, & competency (comp) are displayed in advance of the semester in any location is for planning purposes only.

Microbiology Lab – BIOL 2117L

Summer Semester 2023 Lesson Plan

Subject to change at instructor's discretion. Any updates will be distributed in class.

Date	Chapter (Ch)	Content/Lessons	Assignments (Asgmts.), Homework & Exams Due Dates	Comp Area
Tue 05/15	Lab 1 Chapters 1-4	<p>In Class Activity Introduction to lab, syllabus review & lab safety. Introduction to Microbes</p> <ul style="list-style-type: none"> • Microbial Biodiversity • Petri dish inoculation • Bacterial Shapes • Robert Koch's Postulates <p><u>Include in clear front lab report:</u> 1st page: Name, Course, CRN #, semester, & year 2nd page: Lab safety handout (signed) 3rd page: Group Presentation Topic, list members/contact 4th Completed lab workbook assignments Ch 1-5.</p> <p>Online Activity -You must respond to the question in the discussion board (DB). These are posted by the instructor regarding the topics of study. You have 3 to compete throughout the semester. The DB topics are as follows; DB 1-Why is a Microbiologist important in the world in which we live? Explain DB 2-Define zoonotic disease, explain & discuss using an example DB 3-How can we eliminate cross contamination? Explain & discuss using an example</p>	<p>Lab Workbook asgmts. are completed at home. These asgmts. are submitted in clear front lab report at the end of each day. If time permits at the end of lab, you may use the time to work on these assignments or your lab book in general.</p> <p>Chapters 1-4 Workbook asgmts. due 5/22</p> <p>Submit all completed work in clear front lab report. Lab reports do not go home! Reminder: bring laptops & <u>charger</u> to all class meetings.</p>	CC 1-5 GC 1-3
5/22	Lab 2 Chapters 5-8	<ul style="list-style-type: none"> • Intro to Gram Stain/Slide prep/observation • Intro to agar • Microbial Biodiversity More In-depth (Bacteria, Protista, Fungi & Lichens) • Mini Outdoor Lab- Collection of microbes & pond water collection & observation • How does temperature and salinity affect microbial growth? <p><u>Print</u> "Control of microbial growth: M drive, <u>Bring</u> microbial agents for next lab.</p>	<p>Lab Workbook Chapters 5-8 due 6/5</p> <p>Note: <i>Students are encouraged to work ahead & complete workbook assignments for upcoming chapters to submit in lab report.</i></p>	CC 1-5 GC 1-3
5/29		Memorial Day Holiday	No Class	

Date	Chapter (Ch)	Content/Lessons	Assignments (Asgmts.), Homework & Exams Due Dates	Comp Area
06/05	Lab 3 Chapters 9-11	<ul style="list-style-type: none"> Microbial Diversity Continues Intro to Dichotomous keys (animal/plant virus) Pioneers in Microbiology Activity Inhibiting microbial growth Superbugs Microbial Ecology Indigenous Microbiota of the human body Epidemiology & Zoonoses Lab Asgmt. #1: Control of Microbial Growth 	Lab Exam 1: Chapters 1-7 Lab Workbook Ch 9-11 due 7/10 Place all Lab Asgmts (#1-#5) in lab report. Discussion Board (DB) 1 due	CC 1-5 GC 1-3
06/12	Lab 4 Chapters 12-13	Dental Hygiene report to Dr. J. Gramiak: Skill Evaluations. See Lecture Syllabus for details.	Lab Workbook Chapters 12-13 due 7/10 <u>Print</u> from M Drive & complete: Lab Asgmt. #2: Immunology due 7/11	CC 1-8 GC 1,3
06/19	n/a	Holiday-No Class	No Class	n/a
Tuesday 06/20	Lab 5 Chapters 14-15	Dental Hygiene report to Dr. J. Gramiak: Skill Evaluations. See Lecture Syllabus for details.	Lab Workbook Chapters 16-18 due 7/10 <u>Print</u> from M Drive & complete: Lab Asgmt.#3: Pinworms due 7/10 Discussion Board (DB) 2 due	
06/26	Lab 6 Chapters 14-15	Dental Hygiene students review any missed material in past lab and lab activities <ul style="list-style-type: none"> Handwashing procedures Personal protective equipment (PPE) Infection Control Contamination 	Lab Workbook Chapters 14-15 due 7/10 <u>Print</u> from M Drive & complete: Lab Asgmt. #4: Parasite Lifecycle due 7/10	CC 1-8 GC 1,3
07/03-06		Summer Break, Fourth of July Holiday	No class	
07/10	Lab 7 Chapters 19-21	Dental Hygiene report to Dr. J. Gramiak: Skill Evaluations. See Lecture Syllabus for details.	Lab Exam 2: Chapters 8-14 Lab Workbook Chapters 19-21 due 7/17 <u>Print</u> from M Drive & bring to lab. Lab Asgmt.#5: Handwashing asgmt. Will complete in lab class	CC 1-8 GC 1-3
07/17	Lab 8 Chapters 19-21	<u>Print</u> Handwashing Lab Experiment for today. <ul style="list-style-type: none"> Tuberculosis Handwashing Continues Pathogen Diversity Introduction to Immunology Infectious disease (bacterial, viral & fungal) parasites 	Discussion Board (DB) 3 due	CC 1-8 GC 1-3

Date	Chapter (Ch)	Content/Lessons	Assignments (Asgmts.), Homework & Exams Due Dates	Comp Area
07/24 Last Day of Class	Lab 9 Ch 1-21	Review Hand experiment/record findings. Asgmt #5 <ul style="list-style-type: none"> • Antibiotic Resistance Activity • Blood Borne Pathogen video • If Saliva were Red video • Observation of parasites <p>Make up exam day – see syllabus for details</p>	Lab Exam 3: Chapters 15-21 <i>Note: All Workbook asgmts. & all Lab asgmts. #1-#5 should be in lab report. Points deducted for late submission after today.</i>	CC 1-8 GC 1-3
07/26-27 Final Exams		Lab Final – COMPREHENSIVE (ALL CHAPTERS)	Comprehensive Final	CC 1-8 GC 1-3

COMPETENCY AREAS:

1. Laboratory Safety
2. Microscope Use
3. Aseptic Technique
4. Microbial Growth
5. Microbial Diversity
6. Microbial Cell Diversity
7. Microbial Genetics
8. Interactions and Impact of Microorganisms and Humans

GENERAL CORE EDUCATIONAL COMPETENCIES:

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.

Discussion Board (DB) Grading Rubric

# of DB POSTS	# of DB REPLIES	Grade	Deadlines, Point Deductions, Original Posts, Response Requirements etc.
1	1	100	<p>Students who post their initial discussion board response to the discussion board topic and reply to at least one other student's post will be given a 100 on the assignment IF:</p> <ul style="list-style-type: none"> Initial post and response turned in by the due date on Lesson Plan. Students must have thorough and thoughtful replies to another student's post. Response must contain 4-5 sentences. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." All responses must contain 4-5 sentences pertaining to the DB topic. No credit will be given for 4 sentences or comments such as: <i>Thank you for your post. You did a great job describing the process. I learned a lot from your descriptions. Great job, keep up the good work.</i> These 4 sentences do not pertain to DB topic. They are merely comments. Replying to your own post is NOT considered a reply. No credit given for copying/pasting your original post & submitting as a response. Do not copy answers from Instructor's PowerPoint, websites, etc. This is plagiarism. No credit will be given for taking someone else's work and passing off as your own.
1	0	70	<p>Any student that does not respond to at least one other student's post will not receive a grade above 70. The grade of 70 will be the highest grade that the student will be able to receive on the discussion response and complies with instructions below:</p> <ul style="list-style-type: none"> Initial post and response turned in by the due date on Lesson Plan. No credit given for copying/pasting your original post & submitting as a response. Students must have thorough/thoughtful replies to another student's post discussing the DB topic. Response must contain 4-5 sentences with criteria listed above. No credit will be given for general comments on another student's post such as: <i>Yes/No. I agree/disagree. Thank you for your post. You did a great job describing the process. I learned a lot from your descriptions. Great job, keep up the good work. You were right about your statements. I enjoy learning about the different kinds of muscles and what they do is really interesting! This section has been one of my favorites so far! You gave a great descriptive answer to the discussion question, great job.</i> These sentences do not pertain to the discussion board topic. They are comments on another student's work and do not include sentences regarding the discussion board topic.
0	1	50	<p>Students who do not post their own answer, but only respond to one other student's post will not receive a grade above 50. The grade of 50 will be the highest grade that the student will be able to receive on the DB response and complies with instructions below:</p> <ul style="list-style-type: none"> Initial post and response turned in by the due date on Lesson Plan. Students must have thorough/thoughtful replies to another student's post as stated above. Response must contain 4-5 sentences with criteria as stipulated above. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree" or include comments as listed above.
0	0	0	<ul style="list-style-type: none"> Students will receive a 0 on the discussion question if the student does not post an answer or response to one other students' post by the due date on Lesson Plan.

Learning Objectives (LO) Grading Rubric

Category and Points Earned	Criteria and Examples
<p>Meets Expectations FULL CREDIT (100%)</p>	<p>The student provides:</p> <ol style="list-style-type: none"> 1. <u>Complete</u> and <u>thorough</u> discussion with <u>sufficient details</u> that support mastery of the material. 2. Answer that focuses on the <u>related</u> question. 3. Answer that deals <u>fully</u> with the <u>entire</u> question (some questions come in two parts, such as <u>list</u> and <u>describe...</u>). 4. Factually correct material. 5. Clear and readable answer with very few/no problems with spelling, punctuation or grammar. <p>Note: Do not copy answers from Instructor's PowerPoint, websites, etc. This is plagiarism. No credit will be given for taking someone else's work and passing off as your own.</p> <p>EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</p> <p>STUDENT'S ANSWER:</p> <p><i>"External respiration is a pulmonary gas exchange. It is the diffusion of O2 from air in the alveoli of the lungs to the blood pulmonary capillaries and diffusion of CO2 in the opposite direction. It converts deoxygenated blood coming from the right side of the heart into oxygenated blood that returns to the left side. It occurs only in the lungs.</i></p> <p><i>Internal respiration is systemic gas exchange. It is the exchange of O2 and CO2 between systemic capillaries and tissue cells. It converts oxygenated blood into deoxygenated blood. It occurs in tissues throughout the body.</i></p> <p><i>Alveolar capillary membrane plays a role in the rate of external and internal respiration. It allows the gas exchange between blood and alveolar air depending on factors like partial pressure difference of the gases, surface area available for gas exchange, diffusion distance, and molecular weight and solubility."</i></p> <p>→ GRADING: The student dealt <u>fully</u> with the entire question by providing a clear and thorough <u>contrast</u> of internal and external respiration and completely <u>explained the role</u> of the alveolar-capillary membrane. The student used original work that is factually correct material. The student's answer was organized in such a way to make it clear and readable. The student's answer has few/no spelling, punctuation & grammar problems. This student receives full credit for this LO essay.</p>
<p>Below Expectations HALF CREDIT (50%)</p>	<p>The student provides:</p> <ol style="list-style-type: none"> 1. <u>Incomplete</u> discussion with <u>insufficient or missing details</u> that support mastery of the material. 2. Answer that focuses on an <u>unrelated</u> question or issue. 3. Answer that only <u>partially</u> deals with the question. 4. Some factually incorrect material. 5. Unclear answer with several problems with spelling, punctuation or grammar. <p>EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</p> <p>STUDENT'S ANSWER:</p> <p><i>"Internal (tissue) respiration is the exchange of gases. It supplies cellular respiration and makes ATP. External (pulmonary) respiration is the exchange of gases between alveoli and blood. The alveolar capillary membrane (ACM) is composed of alveolar epithelial cells that share a basement membrane, and at times fuse with microvascular endothelial cells. The alveolar epithelium is composed of alveolar epithelial type 1 (T1) and type 2 (T2) cells."</i></p> <p>→ GRADING: The student mostly <u>defined</u> the terms and did not <u>contrast</u> them. The student described/defined alveolar-capillary membrane (<u>ACM</u>), <u>but</u> the discussion does not fully deal with what the LO essay asked, which was to <u>explain the "role"</u> of the ACM. Also, the ACM information was copied & pasted from an online source. This student receives half credit for this LO essay.</p>
<p>Did Not Meet Expectations NO CREDIT (0%)</p>	<p>The student provides:</p> <ol style="list-style-type: none"> 1. <u>No answer.</u> 2. <u>Incomplete</u> discussion with <u>no relevant details.</u> 3. Answer that <u>does not</u> focus on the <u>related</u> question. 4. Answer that <u>does not</u> deal with the question. 5. <u>Incorrect</u> material. 6. Unclear answer with frequent/many problems with spelling, punctuation or grammar. 7. Copied answer from Instructor's PowerPoint, websites, etc. (This is plagiarism). <p>EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</p> <p>STUDENT'S ANSWER:</p> <p><i>"external resperrtions moves gas from blood.internal resperrations is when gas exchanges place of the blood and tissues"</i></p> <p>→ GRADING: The LO essay asks for a <u>contrast</u> of internal and external respiration <u>AND</u> to <u>explain</u> the role of the alveolar-capillary membrane. The student did not thoroughly contrast internal and external respiration. The student merely attempted to <u>define</u> the terms. The student did not correctly deal with the LO question. The student used factually incorrect material and did not explain the role of the alveolar-capillary membrane at all. The student's answer has frequent spelling, punctuation and grammar problems. This student receives no credit (0 points) for this LO essay.</p>

