



Microbiology Lab – BIOLOGY (BIOL) 2117L
COURSE SYLLABUS
Summer Semester 2020

COURSE INFORMATION

Credit Hours/Minutes: 3/2250
Class Location: Health Sciences Annex (HSA)
Class Meets: Monday 8:05 – 12:55
Course Reference Number (CRN): 60226

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Erica M. Harrison
Email Address: [Erica Harrison eharrison@southeasterntech.edu](mailto:eharrison@southeasterntech.edu)
Campus/Office Location: Vidalia/HSA 901
Office Hours: M-F 8 am – 6 pm; see Wiley Conferences below
Phone: (912) 538-3188
Fax: (912) 538-3156
Tutoring Hours (if applicable): By appointment only; see Wiley Conferences below

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

Microbiology; 2nd Edition; Wessner, Dupont, Charles, Neufeld: Copyright 2017. Wiley.
Looseleaf text with WileyPLUS access card: ISBN# 9781119498551
WileyPLUS access card only: 9781119497417

WileyPLUS access is required. However, please note that a hard copy of the text *is not* required. Access to WileyPLUS gives students access to an etext.

REQUIRED SUPPLIES & SOFTWARE

Reliable internet access, personal computer or laptop with webcam, WileyPLUS access, 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

To be successful in this class, students should study a minimum of 2 hours per credit hour each week (minimum of 6 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. Failure to comply with these suggestions will make it impossible to understand and follow the lecture assignments or weekly meetings and will result in a student being unsuccessful in this course.

Students are responsible for the policies and procedures in the STC Catalog and Handbook. Additionally, during exams, students are expected to maintain a high level of academic integrity. Respondus lockdown browser and Monitor will be utilized for hour exams. This platform sends testing analytics (including any variations in student activity) to the instructor. **Students found at fault with the system, their cellphone, or any other personal communication device (including smart watches) will be flagged, considered cheating and given a zero for the exam.**

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

When it comes to contacting your instructor, email should always be the first point of contact. Students are to use their *school email* to contact instructors. No form of personal emails or social media should be used to contact an instructor.

ATTENDANCE GUIDELINES

It is the student's responsibility to be academically engaged each week doing course related 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" (Failing 0-59) in a course.

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. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Students will have at least one week to complete tests and assignments. All assignments are due by 11:45 pm on Sunday of each week. Except for week 10 when the term will end on Thursday, July 30th. **Testing does not follow this same schedule.** See lesson plan at the end of the syllabus for more information. Exceptions to the due dates of assignments due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

SPECIAL NEEDS

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, to coordinate reasonable accommodations.

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 advise me and make appropriate arrangements with [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (July 8th) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

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 speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. All grades, including grades 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/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 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 Lab exams.

Exams have a variety of measures to which students must adhere. The testing will require Respondus Lockdown browser and Monitor. As mentioned above, this gives a detailed report of student activity during exams. A "Trial Run" assignment will be given prior to the first exam so that students can download the proper add-ins and ensure the system works on their computer or laptop.

During exams students are expected to maintain academic integrity. No notes, aid of classmates, or cell phones are to be used. Students found to have variations in their examination report, or evidence of cheating, will be written up for academic misconduct (see measure below and in your student handbook for more information).

Exam windows will open on Wednesdays at 12 am of each week and be due no later than 11:45 pm the same day. Exams are timed but the testing window closes at 11:45 pm no matter what time you begin your exam. Example: waiting until 11:30 pm on the day an exam is due will only allow 15 minutes to test.

Any student that has an issue with an exam (internet, browser issues, etc.) must notify the instructor immediately so that reopening/retesting options can be evaluated. Waiting until after the testing window has closed will result in the grade received as is.

WILEY CONFERENCES

Wiley Conferences are a virtual meeting software within WileyPLUS (like an embedded Zoom feature). These meetings are mobile compatible and be utilized throughout the duration of this course. Students go to the “Conferences” menu from their WileyPLUS home page and click “Join.” Students can also schedule these meetings for themselves and classmates should the need arise.

Weekly meetings:

Students will have synchronous learning time each week. This is will be accomplished using the WileyPLUS Conferences features. Conference time will tentatively be held on Wednesday mornings from 9 – 10 am. This time will be extended accordingly to a maximum meeting time of 8 am – 1 pm. This meeting time will be to deliver a lecture and detailed review of the material from the following week and serve as an explanation of course concepts for the week to come.

Virtual Office Hours:

Students in need of tutoring, or those wishing to discuss grades must schedule an individual Wiley Conferences. These are by appointment during my work hours (Monday – Friday 8 am-6 pm) excluding online lecture times.

ASSIGNMENTS

Learning Modules:

In addition to the regular virtual meetings, students must complete each chapter module assigned and any extra practice available to them. This could be in the form of Adaptive Practice assignments (not graded but invaluable for student improvement of course concepts), Explore and the Resources tab found in each section of the text. While module completion is not required for assignments to unlock, it is imperative that students complete this material.

WileyPLUS Assignments

Students are required to complete online assignments through WileyPLUS. These include Application and Images in Action Assignments.

Application Assignments are open-ended questions where students take course concepts and explain them in their own words. These are monitored closely for plagiarism so don't think you can copy directly from the text or your classmates. The purpose is critical thought and establishing understanding no matter how simply it is explained. Cheating only hurts you later.

Images in Action take image excerpts from the text and set up case study type questions. A scenario is set and students respond with an educated description based on the material in that chapter. Again, the purpose of these is your own learning. Responses are to be entirely your own words and are scrutinized for plagiarism.

Research Assignment Paper:

Students will be given access to a film relating to class concepts. Discussion will follow. For this assignment, students are to write a research paper on a topic from the film (NOT a summary of the film—summaries will not be accepted for credit). At least two sources (reputable, peer-reviewed sources) must be used and cited in proper American Psychological Association (APA) 6th edition format (one source can be the film and that citation will be provided). The paper should be a minimum of 500 words to a maximum of 3 pages, double-spaced. All aspects of APA format should be followed for this paper. This should be easy as extensive

instructions *and a template* will be provided. Failure to use the template or follow proper APA format will result in a loss of points. This paper should be submitted as a Microsoft Word upload on WileyPLUS. No other file format will be accepted for this assignment as they are submitted for a plagiarism review. Additionally, no emailed or "shared" documents to the instructor will be accepted.

Plagiarism will be written up and submitted as academic misconduct. Please see below, and refer to the STC Catalog and Student Handbook, on the procedures for Academic Dishonesty and Academic Misconduct.

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

Lab examinations:

There will be no makeup opportunity for Lab exams (this includes the lab final exam). There are only two regular exams and the final. Students should make all efforts to take these early (or notify the instructor in advance of any schedule conflicts) well in advance of the two scheduled lab exams.

Lab assignments:

Online WileyPLUS assignments will be accepted late, but not for full credit. If submitted after the due date, these will incur a 10% deduction per day late.

No late assignments will be accepted after July 19th. This also means no late credit.

The Research Assignment will not be accepted late. No exceptions.

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

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or

belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes. The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

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

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

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%
WileyPLUS Application and Images in Action Assignments	10%
Research Assignment	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 displayed in advance of the semester in any location is for planning purposes only.

Microbiology Lab – BIOL 2117L

Summer Semester 2020 Lesson Plan

Subject to change at instructor's discretion. Last updated 05/11/2020.

Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
Week 1: 5/26-5/31	Introduction to course, syllabus review, outline, regulation, etc. Chapter 1 Chapter 2 Chapter 3	Sign in and view instructional video in Blackboard Join Introductions Conference in WileyPLUS Introductory Assignment: Microscope Review, Lab Safety, Metrics Ch 1: The Microbial World Ch 2: Bacteria Ch 3: Eukaryal Organisms	Read chapters and advance through Modules before completing course work and Learning Objectives (LOs). Assignments due 05/31: Ch 1 Application Ch 1 Images in Action Ch 2 Application Ch 2 Images in Action Ch 3 Application Ch 3 Images in Action	CC 1-2 GC a-c
Week 2: 06/01-06/07	Chapter 4 Chapter 5 Chapter 6	Ch 4: Archaea Ch 5: Viruses Ch 6: Cultivating Microorganisms	Assignments due 06/07: Ch 4 Application Ch 4 Images in Action Ch 5 Application Ch 5 Images in Action Ch 6 Application Ch 6 Images in Action	CC 1-2 GC a-c
Week 3: 06/08-06/14	Chapter 7 Chapter 8 Chapter 9	Ch 7: DNA Replication and Gene Expression Ch 8: Viral Replication Strategies Ch 9: Bacterial Genetic Analysis and Manipulation	Assignments due 06/14: Ch 7 Application Ch 7 Images in Action Ch 8 Application Ch 8 Images in Action Ch 9 Application Ch 9 Images in Action	CC 1-3 GC a-c
Week 4: 06/15-06/21	Lab Exam 1 Chapter 10 Chapter 11 Chapter 12	Exam 1: Ch 1-9 Ch 10: Microbial Genomics Ch 11: Regulation of Gene Expression Ch 12: Microbial Biotechnology	Exam available 12am–11:45pm 06/17 ONLY Assignments due 06/21: Ch 10 Application Ch 10 Images in Action Ch 11 Application Ch 11 Images in Action Ch 12 Application Ch 12 Images in Action	CC 1-3 GC a-c
Week 5: 06/22-06/28	Chapter 13 Chapter 14 Chapter 15	Ch 13: Metabolism Ch 14: Biogeochemical Cycles Ch 15: Microbial Ecosystems	Assignments due 06/28: Ch 13 Application Ch 13 Images in Action Ch 14 Application Ch 14 Images in Action	CC 4-5 GC a-c

Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
			Ch 15 Application Ch 15 Images in Action	
Week 6: 06/29-07/05	Chapter 16 Chapter 17 Chapter 18	Ch 16: Microbiology of Food and Water Ch 17: Microbial Symbionts Ch 18: Intro to Infectious Disease	Assignments due 07/05: Ch 16 Application Ch 16 Images in Action Ch 17 Application Ch 17 Images in Action Ch 18 Application Ch 18 Images in Action	CC 4-5 GC a-c
07/06		Independence Day Holiday	Weekly Conference will still be held but not required.	
Week 7: 07/07-07/12	Lab Exam 2 Chapter 19 Chapter 20 Chapter 21	Exam 2: Ch 10-18 Ch 19: Innate Host Defenses Ch 20: Adaptive Immunity Ch 21: Bacterial Pathogenesis	Exam available 12am–11:45pm 07/08 ONLY Assignments due 07/12: Ch 19 Application Ch 19 Images in Action Ch 20 Application Ch 20 Images in Action Ch 21 Application Ch 21 Images in Action	CC 1-2,4-5 GC a-c
Week 8: 07/13-07/19	Chapter 22 Chapter 23 Chapter 24	Ch 22: Viral Pathogenesis Ch 23: Eukaryal Pathogenesis Ch 24: Control of Infectious Disease	Assignments due 07/19: Ch 22 Application Ch 22 Images in Action Ch 23 Application Ch 23 Images in Action Ch 24 Application Ch 24 Images in Action	CC 1-2,4-5 GC a-c
Week 9: 07/20-07/26	Special Conference 07/22	Tentative outline: 8 am – 10 am Final Exam Review 11am – 1 pm APA help session for papers	Times for specific topics will vary based on need. Do not wait until 11 am to join if you only need help with paper.	CC 1-5 GC a-c
Week 10: 07/27-07/30	Ch 1-24	Lab Final Exam	Comprehensive Final If you wait until the last minute, you <i>must</i> start before 10:05 pm to have the full allotted time. Students waiting until later will not be given extensions if they run out of test time.	CC 1-5 GC a-c

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.

Research Assignment Evaluation

STUDENT:

RESEARCH ASSIGNMENT PAPER RUBRIC

Students must adhere to rubric to outline presentation

Section/Points Possible	Criteria	Comments	Points Earned
Focus and Sequencing 20	All material clearly related to topic. Strong organization and integration of material within subtopics. Strong transitions linking subtopics, and main topic.		
Support for Opinion 20	Strong peer-reviewed research-based support for opinion.		
Grammar and Mechanics 20	The paper is free of grammatical errors and spelling and punctuation.		
APA Style and Communication 20	No errors in APA style. Scholarly style. Writing is flowing and easy to follow. See checklist below.		
Following Instructions Citation and References 20	Student adhered to prompt and instructions given in class. Met length minimum. All references and citations are correctly written and present.		
Total Points:			

MAJOR Errors:

- APA Reference Errors (ABC order, 1:1 reference/citation)
- APA Punctuation Errors
- APA in-text citation errors (incorrect author, year, *et al.* usage)
- Title page (header, spacing, content, etc.)
- APA page numbering
- APA verb problems (verb-subject-article agreement)
- Pronoun errors (which, that, who, whom)
- Formatting errors (line, letter, word-spacing, pagination, indentations)
- Use of abbreviations or numerals to begin paragraphs
- Undefined abbreviations
- Unprofessional writing tone
- Lack of empirical evidence for points made
- Other:

Minor Errors:

- Wrong font, font size, font color
- Inappropriate use of secondary sources
- Excessive abbreviations
- Occasional problems with hanging indent
- Using ampersand in text
- Other: