



## CLINICAL LABORATORY TECHNOLOGY CLBT 1050 IMMUNOLOGY AND SEROLOGY

### COURSE SYLLABUS: FALL SEMESTER 2020

#### COURSE INFORMATION

Credit Hours/Minutes: 3/3750

Class Location: Room 739 Gillis Building

Class Meets: Monday-Thursday 10am-12:10pm: Course begins September 28th

Course Reference Number (CRN): 20388

#### INSTRUCTOR INFORMATION

Instructor Name: Rebecca James, B.A. MLT (ASCP), MT(AAB)

Email Address: [rjames@southeasterntech.edu](mailto:rjames@southeasterntech.edu)

Program Director: Cynthia Williams, MS, MT (AMT)(HHS)

Vidalia/Office Location: 716 Gillis Building

Office Hours: 7:30-8 am; 1-5 pm

Phone: 912-538-3183

Fax Number: 912-538-3106

#### 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

*Immunology and Serology in the Laboratory Medicine*, Turgeon 5th Edition and Quick Review Cards, Valorie Polanski 2ed.

#### REQUIRED SUPPLIES & SOFTWARE

Ink pens, pencil, highlighter, permanent marker, paper and any other supplies deemed necessary by instructor. Calculator is provided. Students should not share login credentials with others and should change passwords periodically to maintain security.

#### COURSE DESCRIPTION

Introduces the fundamental theory and techniques applicable to serology and immunology practice in the medical laboratory. Topics include immune system, antigen and antibody reactions, immunological diseases, concept in molecular diagnostics, common serological and molecular techniques, safety and quality control, and quality improvement.

#### MAJOR COURSE COMPETENCIES

- 1-Immune System
- 2-Antigen and Antibody Reactions
- 3-Immunological Diseases
- 4-Related Lab Math

5-Common Serological Techniques and Molecular techniques

6-Safety and Quality Control

7-Quality Improvement

### PREREQUISITE(S)

**MATH 1111, BIOL 2113, BIOL 2113L, ENGL1101, CLBT 1010**

### COURSE OUTLINE

Order	Description	Learning Domain	Level of Learning
1	Describe immune system characteristics.	Cognitive	Knowledge
2	Summarize the immune defense system roles and functions.	Cognitive	Comprehension

### Antigen and antibody reactions

Order	Description	Learning Domain	Level of Learning
1	Define selected terms.	Cognitive	Knowledge
2	Interpret immunoglobulin structures and functions.	Cognitive	Comprehension
3	Identify the characteristics and functions of the complement system.	Cognitive	Knowledge
4	Distinguish the basic concept and reactions of the serologic tests.	Cognitive	Analysis

### Immunological diseases

Order	Description	Learning Domain	Level of Learning
1	Correlate clinical symptoms and test results with immunological/serological diseases	Cognitive	Analysis
2	Recognize normal and abnormal test results.	Cognitive	Analysis

### Related lab math

Order	Description	Learning Domain	Level of Learning
1	Apply and perform dilutions, serial dilutions, and calculation of titers to serological test procedures.	Psychomotor	Mechanism

## Common Serological techniques and Molecular techniques

Order	Description	Learning Domain	Level of Learning
1	Describe serological tests for syphilis, viruses, bacteria, and miscellaneous microorganisms.	Cognitive	Knowledge
2	Perform selected serological tests.	Psychomotor	Guided Response
3	Evaluate serological result and normal value recording and reporting.	Cognitive	Evaluation
4	Identify proper specimen collection and handling techniques.	Cognitive	Knowledge
5	Describe foundation concepts and definitions in molecular diagnostic including nucleic acid structures and functions.	Cognitive	Knowledge

## Safety and quality control

Order	Description	Learning Domain	Level of Learning
1	Identify sources of error in serologic testing.	Cognitive	Knowledge
2	Perform and set-up selected quality control and safety procedures.	Psychomotor	Guided Response
3	Comply with safe work habits in the performance of serological testing and common serological techniques and molecular techniques.	Affective	Receiving
4	Demonstrate ability to document quality control and patient results in a legible manner.	Psychomotor	Guided Response
5	State variables in pre, analytical, and post analytical testing in common serological and molecular techniques.	Cognitive	Knowledge

## Quality improvement

Order	Description	Learning Domain	Level of Learning
1	Identify methods used to improve performance in the immunology department.	Cognitive	Knowledge
2	Consider the ethical issues associated with communicable immune system diseases.	Affective	Valuing

## 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**

Students are expected to complete all tests, assignments, and Laboratory Reports by the due dates. A ten point penalty will be assessed for each day an assignment or Laboratory Report is late. Students are required to pass all laboratory skills in three attempts. A student may not progress until skills are mastered. Students are responsible for policies, procedures, and requirements (drug screen, background check, immunizations, Fit test, CPR...) included in the STC Catalog/Clinical Laboratory Technology (CLT) handbook. Students are required to read the chapter prior to class. Tests will be timed. Points will be deducted for spelling due to Medical Liability in the work place. Laboratory results are legal documents.

## **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.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course a student must attend at least 90% of the scheduled instructional time. All work missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the Withdrawal Procedure.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course.

**For this class, which meets 4 days a week for 9 weeks, the maximum number of days a student may miss is 4 days during the semester.**

## **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:** [Macy Gay mgay@southeasterntech.edu](mailto:MacyGay@southeasterntech.edu), 478-289-2274, Building 1, Room 1208

**Vidalia Campus:** [Helen Thomas hthomas@southeasterntech.edu](mailto:HelenThomas@southeasterntech.edu), 912-538-3126, Building A, Room 108

## **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:** [Macy Gay mgay@southeasterntech.edu](mailto:Macy_Gay_mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1208

**Vidalia Campus:** [Helen Thomas hthomas@southeasterntech.edu](mailto:Helen_Thomas_hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 108

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.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" (Withdrawn Passing) or "WF" (Withdrawn Failing) for the semester.

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.

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

Exams or labs missed for any reason will be made up at the discretion of the instructor. A maximum of one exam can be made up. If more than one exam is missed the student will only be allowed to make up the first exam missed and a grade of "0" will be awarded for any other missed exams including the final. If you are 30 minutes late for class, you are considered absent and missed the test. Remember, the first test can be made up and the second will be a zero, to include the final. I grade scantron.

Extenuating circumstances are determined at the instructor's discretion. Unless otherwise scheduled with the instructor, it is expected that the test will be taken the next day, scheduled outside of regular class time.

Failure to follow this procedure will result in a grade of zero.

### **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 and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, 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 school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

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

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

## 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

Chapter test average of 70 or higher is required to sit for the comprehensive final (grades of 69.9 will not be rounded up). You MUST pass all skills in this course to pass this course. Test and labs will be timed. Points will be deducted for spelling due to Medical Liability in the work place. Laboratory results are legal documents. NO GRADES WILL BE DROPPED! You must receive a "C" or higher in all CLBT, core, and clinical courses to progress in the CLT program. I grade scantron.

Assessment/Assignment	Percentage
Chapter tests	65%
Lab Reports	5%
Comprehensive Final	30%

## GRADING SCALE

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

**CLBT 1050 IMMUNOLOGY AND SEROLOGY  
FALL SEMESTER 2020 LESSON PLAN**

Lesson Plan is subject to change at the discretion of the instructor.

<b>Week</b>	<b>Chap / Less</b>	<b>Content</b>	<b>Tests Labs</b>	<b>Comp Area</b>
1 September 28- October 2	6	Syllabi review Hematopoiesis chart Cell function chart	Cell lineage chart and CBC normal values Electrophoresis research	Course 1,2,3,4,5,6 Core A,C
2 October 5-9	1,7	Overview of Immunology Safety, QA, QC	Graft vs. host article assignment Khan videos Electrophoresis video Microscope- ID: seg, lymph, mono, RBC's	Course 1,4,5,6 Core A,C
3 October 12-16	2,3	Antigen/ Antibody Cells and cellular activity of the immune system; grans and monos	<b>Test 1,6,7</b> Research segmented neutrophils and macrophages. Blood type-forward Forensic/Paternity case	Course 1,2,3 Core A,C
4 October 19-23	4	Cells and cellular activity of the immune system: plasma cells and lymphocytes	Research Lymphocytes Graft vs. host article discussion Khan videos Serum protein electrophoresis HO	Course 1,2,3,4,5,6 Core A,C
5 October 26-30	5,10	Soluble mediators of the immune system Agglutination methods	<b>Test 2,3,4</b> Power point PCR, ELISA... UNK HO techniques Pregnancy test Lab- draw blood	Course 1,2,3,4,5,6 Core A,C
6 November 2-6	11,14	Electrophoresis techniques Molecular techniques	Lab - RSV, CRP, RPR Khan-DNA/Electrophoresis videos Research electrophoresis. Syringe draw	Course 1,2,3,4,5,6 Core A,C
7 November 9-13	15,17,18,19	Immune response to Infectious disease Streptococcal infection Syphilis Vector-borne diseases	<b>Test 5,10,11,14</b> Lab 4 ASO, Strep kit, RPR	Course 1,2,3,4,5,6 Core A,B,C
8 November 16-20	20,21,22,29,30	Toxoplasmosis Cytomegalovirus Infectious mono SLE,RA	<b>Test 15,17,18,19</b> Lab 5- Mono kit	Course 1,2,3 Core A,B,C
9	23,24,25	Viral Hepatitis	Lab 6- Rubella kit	Course



November 23-24 Holiday- Nov. 25- 27		Rubella HIV	Discuss performance improvement Troubleshooting/ Possible errors in testing Case studies MOCK final	1-7 Core A,B,C
10 November 30- December 3	Finals	Review	<b>Final</b> <b>December 2</b>	Course 1-7 Core A,B,C

**MAJOR COURSE COMPETENCIES:**

- 1-Immune System
- 2-Antigen and Antibody Reactions
- 3-Immunological Diseases
- 4-Related Lab Math
- 5-Common Serological Techniques
- 6-Safety and Quality Control
- 7-Process Improvement

**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