



**CLBT 1050 Serology/Immunology
Course syllabus
Summer Semester 2017**

Semester: Summer 2017
Course Title: Serology/Immunology
Course Number: CLBT 1050
Credit Hours/ Minutes: 3/3750
Class Location: Room #739 Gillis Building
Class Meets: MTW 12:30pm-3:30pm
CRN: 60085

Instructor: Cynthia Williams, MS, MT(AMT)(HHS)
Office Hours: 7:30-8am;3:30-5pm
Office Location:716 Gillis Building
Email Address: cwilliams@southeasterntech.edu
Phone: 912-538-3183
Fax Number: 912-538-3106

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.

METHODS OF INSTRUCTION:

May include, but not limited to, lectures, discussions, videos, laboratory skills, and handouts. Power points for all CLT courses are on the "M" drive.

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, related lab math, common serological techniques, safety and quality control, and process improvement.

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: STC has identified the following general education core competencies that graduates will attain:

- 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.

PREREQUISITE(S): MATH 1111, BIOL 2113, BIOL 2113L, ENGL1101, CLBT 1010

Learning Outcomes

Immune system

| Order | Description | Learning Domain | Level of Learning |
|-------|--|-----------------|-------------------|
| 1 | Describe immune system characteristics. | Cognitive | Knowledge |
| 2 | Discuss 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 | Discuss 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

| 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 | Define and describe the principles of common Molecular Diagnostic Techniques. | Cognitive | Knowledge |

Safety and quality control

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

Process 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 |

STUDENT REQUIREMENTS: Students are required to wear name badges. 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/CLT handbook*. Students are required to read the chapter prior to class. Test will be timed. Points will be deducted for spelling due to Medical Liability in the work place. Laboratory results are legal documents.

No cell phones allowed. If you are caught using the cell phone, you will be asked to leave class and receive an “early departure” for the class. (Note: Three (3) tardies or early departures equal one (1) absence for the course involved.) **If you are 30 minutes late to class, you will receive an absence for the day.**

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 also 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 and face financial aid repercussions in upcoming semesters.

ADDITIONAL ATTENDANCE PROVISIONS

Health Sciences

Requirements for instructional hours within Health Science programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences. All provisions for required make-up work in the classroom or clinical experiences are 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. Time and/or 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. If you are 30 minutes late to class, you are considered absent for the day.

For this class, which meets 3 days a week for 10 weeks, the maximum number of days a student may miss is 3 days during the semester.

Withdrawing from Learning Support and/or College Success and Survival Skills courses are not permitted unless the student intends to withdraw totally from the College.

TRADITIONAL ATTENDANCE ADDENDUM: For this class, which meets 3 days a week for 10 weeks, the maximum number of days a student may miss is 3 days during the semester.

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.

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, 912-538-3126, hthomas@southeasterntech.edu, to coordinate reasonable accommodations.

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 the Special Needs Office. Swainsboro Campus: Jan Brantley, Room 1208, (478) 289-2274 -- Vidalia Campus: Helen Thomas, Room 108, (912) 538-3126.

MAKEUP GUIDELINES: 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 this includes the final.

ACADEMIC DISHONESTY POLICY: The STC Academic Dishonesty Policy states *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 *STC Catalog and Student Handbook.*

Procedure for Academic Misconduct

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

--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.

--Second Offense--

Student is given a grade of **"WF" 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.

--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 second 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: Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, disabled veteran, veteran of Vietnam Era 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).

GRIEVANCE PROCEDURES: Grievance procedures can be found in the Catalog and Handbook located on STC'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 STC website at www.southeasterntech.edu.

GRADING: Chapter test average of 70 or higher is required to sit for the final exam (grades of 69.99 will not be rounded up: Chapter tests will determine this grade (no lab grades will be included). Only one makeup exam will be given for chapter test. If you miss a second exam you will receive a zero for the second exam missed. 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.

EXAMS: Students will be provided time to look at their exam score in class and a general discussion may occur; however, due to time constraints students are encouraged to schedule an appointment with their instructor to get further explanation on the missed concepts.

In addition, if a student believes a test question needs to be challenged, the student must email their instructor the rationale for consideration. This request must be received via email within 24 hours of the examination. No verbal or text message requests will be granted. The test question and rationale will be presented to faculty for decision.

GRADING POLICY

Chapter test =65%

Lab Reports = 5%

Comprehensive final =30%

GRADING SCALE

A: 90-100

B: 80-89

C: 70-79

D: 60-69

F: 0-59

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.*

**CLBT 1050 Serology/Immunology
Summer Semester Lesson Plan 2017**

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

| Week | Chap / Less | Content | Tests Labs | Comp Area |
|---|--------------------|--|--|--------------------------------------|
| Week 1 May 17 | | | | |
| 1 | 6 | Syllabi review Hematopoiesis chart Cell function chart | TCSG standards assigned Graft vs. host article assignment Cell lineage chart and CBC normal values Electrophoresis research | Course 1,2,3,4,5,6 Core A,C |
| Week 2 May 22-24 | | | | |
| 2 | 1,7 | Overview of Immunology Safety, QA, QC | Blood type-forward Khan videos Electrophoresis video Microscope- ID: seg, lymph, mono, RBC's Forensic/Paternity case | Course 1,4,5,6 Core A,C |
| Monday Holiday! Week 3 May 29-31 | | | | |
| 3 | 2,3 | Antigen/ Antibody Cells and cellular activity of the immune system; grans and monos | Test 1,6,7 Research segmented neutrophils and macrophages. Lab- draw blood | Course 1,2,3 Core A,C |
| Week 4 June 5-7 | | | | |
| 4 | 4 | Cells and cellular activity of the immune system: plasma cells and lymphs | Research Lymphocytes Graft vs. host article discussion Khan videos Serum protein electrophoresis HO | Course 1,2,3,4,5,6 Core A,C |
| Week 5 June 12-14 | | | | |
| 5 | 5,10 | Soluble mediators of the immune system Agglutination methods | Test 2,3,4 Power point PCR, ELISA... UNK HO techniques Pregnancy test | Course 1,2,3,4,5,6 Core A,C |
| Week 6 June 19-21 | | | | |
| 6 | 11,14 | Electrophoresis techniques Molecular techniques | Lab - RSV, CRP, RPR Khan-DNA/Electrophoresis videos Research electrophoresis. | Course 1,2,3,4,5,6 Core |

| | | | | |
|------------------------------|------------------------|---|--|--|
| | | | | A,C |
| Week 7 June 26-28 | | | | |
| 7 | 15,17 18,19 | Immune response to Infectious disease Streptococcal infection Syphilis Vector-borne diseases | Test 5,10,11,14 Lab 4 ASO, Strep kit, RPR | Course 1,2,3,4,5,6 Core A,B,C |
| Holiday week July 3-6 | | | | |
| Week 8 July 10-12 | | | | |
| 8 | 20,21, 22,29, 30 | Toxoplasmosis Cytomegalovirus Infectious mono SLE,RA | Test 15,17,18,19 Lab 5- Mono kit | Course 1,2,3 Core A,B,C |
| Week 9 July 17-19 | | | | |
| 9 | 23,24, 25 | Viral Hepatitis Rubella HIV | Lab 6- Rubella kit Discuss performance improvement Troubleshooting/ Possible errors in testing Case studies | Course 1-7 Core A,B,C |
| Week 10 July 24-26 | | | | |
| 10 | | Review | TCSG standards due MOCK final Monday Final Wednesday | Course 1-7 Core A,B,C |

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