



**CLBT 1060 Immunohematology
Course syllabus
Fall Semester 2015**

Semester: Fall 2015
Course Title: Immunohematology
Course Number: CLBT 1060
Credit Hours/ Minutes: 4/6000
Class Location: Room #739 Gillis Building
Class Meets: MTW 1-3:45pm
CRN: 20286

Instructor: Cynthia Williams, MS, MT(AMT)(HHS)
Office Hours: 7-8 am, 4-5pm MTW; Thursday 9-5
Office Location: 716 Gillis Building
Email Address: cwilliams@southeasterntech.edu
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Fax Number: 912-538-3106

REQUIRED TEXT: *Basic and Applied Concepts of Blood Banking and Transfusion Practices 3rd.ed. Blaney and Howard*

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.

COURSE DESCRIPTION: Provides an in-depth study of immunohematology principles and practices as applicable to medical laboratory technology. Topics include: genetic theory and clinical applications, immunology, donor unit collection, related lab math, pre-transfusion testing, management of disease states and transfusion reactions, safety and quality control, and process improvement.

MAJOR COURSE COMPETENCIES:

1. Genetic Theory and clinical applications
2. Immunology
3. Donor unit collection
4. Related lab math
5. Pre-transfusion testing
6. Management of disease states and transfusion reactions
7. Safety and quality control
8. 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.

All students pursuing a degree, a diploma, or a Technical Certificate of Credit with a General Education component will be required to pass the General Education **Competency Exams** prior to graduation.

PREREQUISITE(S): MATH 1111, BIOL 2113, BIOL 2113L, ENGL1101, CLBT 1050

COURSE OUTLINE:

Learning Outcomes

Genetic theory and clinical applications

Order	Description	Learning Domain	Level of Learning
1	Discuss Mendelian genetics and laws of inheritance.	Cognitive	Comprehension
2	Define selected terms.	Cognitive	Knowledge
3	Formulate genotypes and phenotypes.	Cognitive	Synthesis

Immunology

Order	Description	Learning Domain	Level of Learning
1	Relate the role of defense in the body.	Cognitive	Application
2	Differentiate between the types of acquired immunity.	Cognitive	Analysis
3	Describe red blood cell antigens.	Cognitive	Knowledge
4	Describe blood group antibodies.	Cognitive	Knowledge
5	Correlate the role of complement in blood banking.	Cognitive	Analysis
6	Evaluate antigen/antibody reactions.	Cognitive	Evaluation

Donor unit collection

Order	Description	Learning Domain	Level of Learning
1	Identify donor selection criteria.	Cognitive	Knowledge
2	Correlate donor selection techniques.	Cognitive	Analysis
3	Describe the end products of hemapheresis and their uses.	Cognitive	Knowledge
4	Discuss blood component therapy.	Cognitive	Comprehension
5	List accepted blood storage and shipping requirements.	Cognitive	Knowledge

Related lab math

Order	Description	Learning Domain	Level of Learning
1	Demonstrate knowledge and ability to use laboratory math to calculate and resolve problems related to	Cognitive	Application

	immunohematology.		
2	Perform related math calculations for dilutions, preparation of %RBC solutions, and Fetal-dex.	Cognitive	Synthesis

Pre-transfusion testing

Order	Description	Learning Domain	Level of Learning
1	Discuss ABO blood group systems.	Cognitive	Comprehension
2	Perform ABO grouping.	Psychomotor	Guided Response
3	Evaluate ABO discrepancies.	Cognitive	Evaluation
4	Discuss Rh/Hr blood group systems.	Cognitive	Comprehension
5	Convert Rh/Hr nomenclatures.	Cognitive	Comprehension
6	List Rh/Hr antigens.	Cognitive	Knowledge
7	List and discuss Rh/Hr antibodies and their clinical significance.	Cognitive	Knowledge
8	Perform Rh testing, Du testing, and titers.	Psychomotor	Guided Response
9	Describe other antigen systems.	Cognitive	Knowledge
10	List antibodies and describe characteristics.	Cognitive	Knowledge
11	Relate antibodies to specified antigens.	Cognitive	Application
12	Discuss the clinical significance of antibody/antigen relationship.	Cognitive	Comprehension
13	Perform selected tests.	Psychomotor	Guided Response
14	Perform selected special techniques, such as elutions and absorptions, prenatal and postnatal transfusions, alloantibody identification, multiple antibodies identification, and enzyme techniques.	Psychomotor	Guided Response
15	Recognize common problems and sources of error.	Cognitive	Analysis
16	Perform compatibility testing.	Psychomotor	Guided Response
17	Interpret and resolve compatibility test results.	Cognitive	Comprehension

Management of disease states and transfusion reactions

Order	Description	Learning Domain	Level of Learning
1	Describe transfusion reaction investigations.	Cognitive	Knowledge
2	Describe selected hemolytic diseases (e.g., autoimmune	Cognitive	Knowledge

	hemolytic anemia, hemolytic disease of newborn) and supporting test procedures (e.g., cord blood studies).		
3	Perform selected tests.	Psychomotor	Guided Response

Safety and quality control

Order	Description	Learning Domain	Level of Learning
1	Set up and perform selected quality control and safety procedures.	Psychomotor	Guided Response

Process improvement

Order	Description	Learning Domain	Level of Learning
1	Discuss methods used to improve performance in the immunohematology lab.	Cognitive	Comprehension
2	Consider the ethical issues associated with transfusions.	Affective	Valuing

STUDENT REQUIREMENTS: Students are required to wear name badge. 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 15 weeks, the maximum number of days a student may miss is 5 days during the semester.

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 (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" is assigned when the student completes the withdrawal form from the course.

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. 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 also speak with a representative of the Financial Aid Office to determine any financial penalties that may be accessed 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.

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 15

weeks, the maximum number of days a student may miss is 5 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 documented special needs may be provided with an individualized Instructional Plan with specifications for scheduled instructional time. It is the student's responsibility to inform the Special Needs Specialist as students and instructors are required to have documented evidence prior to receiving or allowing special accommodations. See the STC Catalog and Student Handbook, Student Affairs section for further information regarding special needs.

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.

SPECIAL NEEDS ADDENDUM: Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Jan Brantley, Room 2108 Swainsboro Campus, 478-289-2274, or Helen Thomas, Room 108 Vidalia Campus, 912-538-3126, to coordinate reasonable accommodations.

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.**

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 Angel, 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 skills lab exam and comprehensive final* (grades of 69.9 will not be rounded up): Chapter tests will determine your final grade (no lab grades will be included). **The student must receive a 100% on the lab final skills exam to take the comprehensive Immunohematology final exam due to the critical nature of this course. The student may have two attempts at the Lab final skills exam. 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.

GRADING POLICY

Chapter test =60%

Lab Reports = 5%

Lab Final (part 1 & 2)= 15%

Comprehensive final =20%

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 1060 Immunohematology
Fall semester Lesson Plan 2015**

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

Week	Chap / Less	Content	Tests Labs	Comp Area
Week 1 Aug.17-21				
1	1	Immunology	Cell suspensions, cell washing, grading reactions,	Course 2 Core A,C
Week 2 Aug.24-28				
2	2	Blood bank reagents	ABO & Rh, DAT Ab panel Practice sheet- what serum?/what cell?	Course 1,2,5 Core A,C
Week 3 Aug. 31-4				
3	3	Genetic principles	Type and screen/comp xmatch/incompatible xmatch	Course 1 Core A,C
Week 4 Sept. 7 Holiday!- 11				
4	4	ABO	Test chp 1,2,3 Practice sheet- what serum?/what cell?	Course 2,5 Core A,C
Week 5 Sept. 14-18				
5	5	Rh	Du	Course 1,2,4,5 Core A,C
Week 6 Sept. 21-25				
6	6	Other Blood groups	AB screen/x match Student draw and xmatch each other Ag typing and QC	Course 1,2,4,5 Core A,B,C
Week 7 Sept. 28-2				
7	7	Antibody ID	Panels	Course

				1,2,4,5,6 Core A,B,C
Week 8 Oct. 5-9				
8	8	Compatibility Testing	Test chp 4,5,6,7 QC BB reagents Gel xmatch/Ab screen Type, screen and x match	Course 1,2,4,5,6,7 Core A,B,C
Week 9 Oct. 12-16				
9	12	Donor Selection and Phlebotomy	Red cross blood drive and info sheet	Course 3,5,6 Core A,B,C
Week 10 Oct. 19-23				
10	14	Blood Component Preparation and Transfusion Therapy	Type, screen and x match	Course 3,4,5,6,7 Core A,B,C
Week 11 Oct. 26-30				
11	10	Adverse Complications of Transfusions	Test chp 8,12,14 Type, screen and x match Transfusion reaction workup	Course 3,4,5,6,7 Core A,B,C
Week 12 Nov. 2-6				
12	11	Hemolytic Disease of the Fetus and Newborn	Rh immune globulin/Rosette test(fetal screen)	Course 1,2,3,6 Core A,B,C
Week 13 Nov.9-13				
13	15	Transfusion Therapy in Selected Patients		Course 1-7 Core A,B,C
Week 14 Nov. 16-20				
14	13	Testing of Donor Blood	Test 10,11,15 Type, screen and x match Extra lab time AAB practice test	Course 1-7 Core

				A,B,C
Nov. 26 & 27 Holiday!				
Week 15 Nov. 23 & 24 (25-27 Holiday!)				
15	16	Quality and Safety Issues Review	TCSG competency/Standards Due Extra lab time Read <i>The Spirit catches you and you fall down</i> during Christmas break. The book is in our library.	Course 7,8 Core A-C
Finals! Nov. 30- Dec. 3				
Lab Final part 1 Lab Final part 2 Comprehensive Final				

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