



Course Outline

Course Number MLT 207	Course Title CLINICAL IMMUNOHEMATOLOGY	Credits 4
Hours: Lecture 3/Lab 3	Pre-requisite MLT 112	Fall A 2017

Course description:

This class covers the basic theory and concepts of antigen-antibody reactions as they relate to blood cell transfusions. The structure of blood group antigens and the genetics of their inheritance are closely examined. Antibody production and the role of antibodies in transfusion reactions are studied in depth. Methods are introduced for performing blood grouping and compatibility testing. Proper donor and component selection are also covered. Laboratory sessions in the course help students develop blood banking skills and provide hands on experience in blood bank procedures.

Course Modifications: 08/2017

Required Text:

Title: Basic & Applied Concepts of Blood Banking and Transfusion Practices
3RD Edition
Author: Kathy D. Blaney, Paula R.Howard
Publisher: Elsevier 2013

Information resources:

AABB Technical Manual available at the reference desk at the MCCC library
<https://www.redcross.org>

Other learning resources: Blackboard LMS, Kahoot! and Websites (YouTube, SmartTalks, etc)

Course Instructor:

Lisa M Shave MS, MLS(ASCP)^{CM}SBB^{CM}

shavel@mccc.edu

Office: 609 570 3387

Office hours: See Front of Office Door MS156.

You may also request a Zoom/Skype Session as well.

MCCC's General Education Knowledge Goals & Core Skills

General Education Knowledge Goals

Goal 1 Communication - Students will communicate effectively in both speech and writing.

Goal 3 Science - Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

Goal 8 Diversity - Students will understand the importance of a global perspective and culturally diverse peoples.

Core Skills

Goal A - Written and Oral Communication in English. Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.

Goal B - Critical Thinking and Problem-solving. Students will use critical thinking and problem solving skills in analyzing information.

Goal D - Information Literacy. Students will recognize when information is needed; have the knowledge and skills to locate, evaluate and effectively use information for college level work.

Goal F - Collaboration and Cooperation. Students will develop the interpersonal skills required for effective performance in group situations.

Goal G - Intra-Cultural and Inter-Cultural Responsibility. Students will demonstrate an awareness of the responsibilities of intelligent citizenship in a diverse and pluralistic society, and will demonstrate cultural, global and environmental awareness.

Course Competencies/Goals

Upon completion of this course the student will be able to:

1. Exhibit knowledge of safety and quality control used in a blood bank laboratory. (G3, GB)
2. Describe the function of the human immune system as it applies to the principles of immunology, serology and blood bank testing. (G1,3, GA,B)
3. Apply the biological concepts of genetics and immunology to antigen and antibody development in ABO, Rh, and other blood group systems. (G3, GB)
4. Demonstrate knowledge and the application of principles of serological testing in pre-transfusion and compatibility testing and in the selection of component therapy as they relate to current blood bank practices. (G3, GB)
5. Incorporate knowledge of Hemolytic Disease of the Fetus/Newborn in the evaluation of prenatal, maternal and cord blood testing as it applies to current blood bank practices. (G3, GB)
6. Demonstrate competency in the performance and result evaluation of routine blood bank procedures. (G3, GB)
7. Research and give a classroom presentation on an assigned blood group system. Include information on genotype and phenotype frequencies and ethnic group diversities commonly associated with that system. (G1,3,8, GA,B,D,G)
8. Value working collaboratively using professional communication skills and behavioral attitudes while working with fellow students in the laboratory. (G8, GF,G)

**Week 1 History of Blood Banking, Blood Collection from Donors and Component Preparation
Quality Assurance and Regulatory Requirements of the Blood Bank**

Upon completion of this unit the student will be able to:

Learning objectives:

1. Describe the "ideal" setting and personnel in a blood donation center. (G1,3, GA,B)
2. State the differences between blood bank (transfusion service) and a blood center. (G1,3, GA,B)
3. List and describe five agencies and/or governing bodies involved in the regulation of blood banks and blood centers. (G1,3, GA,B)
4. Summarize the criteria for screening volunteer blood donors. Explain the registration process, health history review and the physical examination for potential donors. (G1,3, GA)
5. Discuss autologous blood unit collection. (G1,3, GA)
6. Define the terms 'directed donation', 'apheresis' and 'therapeutic phlebotomy'. (G1,3, GA)
7. List the required tests performed on allogenic and autologous donor blood units. (G1,3, GA,B)
8. Summarize the requirements for retention of donor records. (G1,3, GA)
9. List the information which must appear on the label of each donor unit. (G1,3, GA,B)
8. List the serological tests which must be confirmed by the transfusion service. (G1,3, GA,B)
9. State the storage temperature and length of time which donor samples must be saved by the transfusion service. (G1,3, GA,B)
10. Describe the steps performed in preparing components from a unit of whole blood including packed RBCs, fresh frozen plasma (FFP), platelets and cryoprecipitate. (G1,3, GA,B)
11. State the storage times & temperatures for the different blood products and components. (G1,3, GA)
12. Explain the purpose for preparing leukocyte-reduced & irradiated red blood cells. (G1,3, GA,B)
13. State requirements for administering of a unit of whole blood, packed cells, FFP, platelets or cryoprecipitate. (G1,3, GA)
14. Explain how Safety Practices and Quality Control are implemented in the blood bank. (G1,3, GA,B)

Performance objectives

1. Review donor qualifications and the questions asked of donors before donating blood components (G3).
2. Evaluate the length of time for deferral for all unacceptable responses to the questions asked. (G3)
3. Perform a donor interview and physical exam. (G3, GB)
4. Exercise safety practices during laboratory sessions. (G3, GB)
5. Distinguish between blood bank components in the laboratory. Explain the storage requirements for each. (G1,3, GA)
6. Reconfirm the blood type of donor units through the ABO/Rh testing procedures using quality-controlled blood bank reagents. (G3, GB)

Week 2 Immunology Applications in Blood Bank and Genetic Principles in Blood Banking ABO/RH BGS and Secretor Status

Upon completion of this unit the student will be able to:

Learning objectives:

1. Compare and contrast innate and acquired immune systems. (G1,3, GA)
2. Describe the molecular characteristics of antigens and antibodies and the attractive forces that bind them. (G1,3, GA)
3. Explain the difference between a primary and secondary immune response. Define 'anamnestic' response. (G1,3 GA)
4. Understand the principles of genetics as they apply to blood group antigens in immunohematology. (G3, GB)
5. Explain how RBC, WBC and platelet antigens can elicit an immune response during a transfusion. (G1,3, GA,B)
6. Define Landsteiner's rule. (G1,3, GA,B)
7. Determine possible ABO genotypes and corresponding phenotypes. (G3, GB)
8. Demonstrate knowledge of the genetics and antigen/antibody production as it pertains to the ABO Blood Group. (G3, GB)
9. Describe the relationships among the ABO, H and Se genes. (G1,3, GA)
10. Compare the A₁ and A₂ phenotypes with regard to serologic testing. (G1,3, GA,B)
11. List ABO antigen and antibody discrepancies that can occur. Describe test methods for resolving these discrepancies. (G1,3, GA,B)

Performance objectives:

1. Exercise safety practices during laboratory sessions. (G3, GB)
2. Perform quality control procedures before beginning each laboratory assignment. (G3, GB)
3. Correctly perform and interpret results of a forward and reverse blood type; interpret and record results using AABB standards. (G3, GB)
4. Recognize and solve ABO discrepancies. (G3, GB)
5. Visit a community blood center to witness and participate in the blood collection and manufacturing process. (G3, GB)

Week 3 RH Blood Group System and PreTransfusion Testing Other Blood Groups Systems

Upon completion of this unit the student will be able to:

Learning objectives

1. Compare and contrast theories of genetic inheritance for the Rh Blood group system. Translate Fisher-Race and Weiner Rh blood group system terminology. Compare the Rosenfield and ISBT terminology in Rh labeling. (G1,3, GA,B)
2. Describe the characteristics of Rh antibodies. (G1,3, GA)
3. Explain testing method for the weak D antigen. (G1,3, GA,B)
4. Compare and contrast a direct antiglobin and indirect antiglobulin test. (G1,3, GA,B)
5. State reasons why a patient may have a positive direct antiglobulin test. (G1,3, GA,B)
6. Identify the major antigens classified within other blood group systems. (G3)

7. Give a power point presentation of an assigned blood cell antigen group. (G1,3,8 GA,B,D, F)
8. List the frequencies of observed phenotypes in other blood group systems and associate the phenotypes with ethnic group diversity. (G1,3,8, GA,G)
9. Classify and state the clinical relevance of the antibodies of other major blood group systems. (G1,3, GA)

Performance objectives

1. Correctly perform and interpret results of an IAT. (G3, GB)
2. Perform an indirect antiglobulin test (IAT) for a weak D antigen. (G3, GB)
3. Use mono- and polyspecific reagents and Coomb's check cells when appropriate. (G3, GB)
4. Discuss and use critical-thinking skills to solve type and screen case studies. (G3, GB)

Week 4 Antibody Detection & Identification

Upon completion of this unit the student will be able to:

Learning Objectives

1. Define the term unexpected antibodies and state two reasons for their formation. (G1,3, GA,B)
2. Discuss the purpose and the procedure for performing an antibody screen test. (G1,3, GA,B)
3. Explain how patient information, including age, race, pregnancy history and medical diagnosis help in the process of antibody identification. (G1,3,8 GA,B,G)
4. Describe the purpose of a red blood cell panel; define the term antigram as it relates to a red blood cell panel. (G1,3, GA,B)
5. State the significance of the phase & strength of a reaction of an antibody in its identification. (G1,3, GA,B)
6. Demonstrate knowledge of the "rule out" technique. (G3, GB)
7. Explain the "rule of three" with regard to antibody identification. (G1,3, GA,B)
8. Summarize the effects of dosage, temperature, pH, and enhancement techniques with potentiators in antibody identification. (G1,3, GA,B)

Performance objectives:

1. Perform type and screen procedures on blood samples. (G3, GB)
2. Perform a direct antiglobulin (DAT) test on patient blood samples. (G3, GB)
3. Solve antibody panel report sheets for single and multiple antibodies.(G3, GB)
4. Perform antibody identification for single and multiple antibodies using screening cells and red blood cell panels (G3, GB)

Week 5 Compatibility Testing & Antigen Typing Automation

Upon completion of this unit the student will be able to:

Learning objectives

1. Demonstrate knowledge of AABB standards used in compatibility testing. (G3, GB)
2. Discuss the selection of compatible whole blood, packed cells, plasma and platelets for the various ABO blood groups. (G1,3, GA, GB)
3. Explain the difference between an Immediate Spin (IS) and a full Antiglobulin (IgG) crossmatch. (G1,3, GA,B)

4. Explain the protocol for issuing uncrossmatched blood in an emergency release. (G1,3, GA,B)
5. Explain the use of automation in routine testing in blood bank laboratories. (G1,3, GA,B)

Performance objectives

1. Perform antibody identification on blood samples for single and multiple antibodies using screening cells and red blood cell panels (G3, GB)
2. Properly select compatible units for transfusions candidates. (G3, GB)
3. Perform compatibility testing on samples of patient and donor blood. (G3, GB)
4. Antigen type donor units or patient blood samples for specific blood group antigens. (G3, GB)
5. Observe gel and solid phase automated methods for blood bank testing. (G3)

Week 6 Neonatal HDFN and Obstetrical Patients Adverse Complications of Blood Transfusion

Upon completion of this unit the student will be able to:

Learning objectives:

1. Summarize the etiology (causes) of Hemolytic Disease of the Fetus and Newborn (HDFN). (G1,3, GA,B)
2. State which tests are performed on a mother's pre-natal blood sample. (G1,3, GA,B)
3. List possible antibodies involved in HDFN. (G1,3, GA)
4. Explain the fetal cell screen (Rosette test) procedure for fetal-maternal hemorrhage. (G1,3, GA,B)
5. Summarize the principle and procedure of the Kleihaur-Betke stain for fetal-maternal hemorrhage. (G1,3, GA,B)
6. Discuss the composition, prescription criteria, dosage and timing of administering of Rh immune globulin (RhIG). (G1,3, GA,B)
7. List laboratory procedures that are performed on cord blood including the washing cord blood to remove Wharton's jelly. (G1,3, GA)
8. List the criteria used to select compatible blood products for an exchange transfusion on a fetus/newborn. (G1,3, GA,B)
9. State causes of transfusion reactions. Distinguish between symptoms of acute and delayed reactions. Describe the laboratory work-up for a post-blood transfusion reaction. (G1,3, GA,B)

Performance objectives

1. Perform maternal pre-natal testing and newborn cord blood testing. (G3, GB)
2. Evaluate laboratory test results of maternal blood and the baby's cord blood to determine if an HDFN has occurred. (G3, GB)
3. Evaluate lab test results of maternal blood to determine the need for administration of RhIG. (G3, GB)
4. Perform testing on a blood sample from a patient who experienced a transfusion reaction by performing a direct antiglobulin test (DAT). (G3, GB)
5. ABO type pre and post transfusion samples and confirm ABO typing of the donor unit.(G3, GB)
6. Antibody test pre and post transfusion samples with the use of enhancement techniques. (G3, GB)
7. Repeat crossmatch with pre and post transfusion samples using immediate spin and antiglobulin phase testing. (G3, GB)

8. Inspect donor unit for bacterial contamination. (G3)

Week 7 Transfusion Therapy

Upon completion of this unit the student will be able to:

Learning objectives

1. Describe the pathophysiology of acute blood loss and massive transfusion therapy. (G1,3, GA,B)
2. Explain the pathophysiology and transfusion needs of patients with sickle cell disease, thalassemia and autoimmune disease. (G1,3, GA,B)
3. Discuss the transfusion requirements of oncology patients. (G1,3, GA,B)
4. Present situations where a bone marrow transplant is required. (G1,3, GA,B)
5. List the appropriate transfusion support for hemostasis disorders. (G1,3, GA,B)
6. Describe the conditions which require therapeutic apheresis. (G1,3, GA,B)
7. Discuss the transfusion requirements and administering of erythropoietin for patients with chronic renal disease. (G1,3, GA,B)

Performance objectives

1. Perform an antibody panel with enzyme treated cells. (G3, GB)
2. Perform an elution and adsorption test. (G3, GB)

PERFORMANCE EXIT LEVEL SKILLS

Upon completion of this unit the student will be able to:

1. Demonstrates an understanding of safety and quality control practices in blood bank. (G3, GB)
2. Exhibits proficiency and accuracy in ABO and Rh typing of random samples at the 100% competency level. (G3, GB)
3. Demonstrates skill and understanding of antibody screening and identification. (G3, GB)
4. Demonstrates proficiency and accuracy in compatibility testing and component selection. Chooses the correct blood donor ABO and Rh type with 100% accuracy. (G3, GB)
5. Given laboratory prepared specimens, the student will select an appropriate donor for the patient and perform the following procedures: (G3, GB)
 - Patient – ABO grouping, Rh typing, antibody screening
 - Donor - Confirm ABO grouping, Rh typing, antigen typing if required
 - Compatibility testing
 - Component selection
6. Develop interpersonal skills required for effective performance in a lab setting with fellow students. (GF)

GRADING POLICY

To receive a passing grade, **students must earn a 77 or higher**. A final grade of 77 or higher in each Medical Laboratory Technician course is required in order to progress to the next MLT course and to graduate.

A	93-100 %	B-	80-82
A-	90-92	C+	77-79
B+	87-89	C	70-76
B	83-86	D	60-69
		F	0-59%

Lecture

Presentation	5%
ABID Info Chart	5%
Homework (6)	10%
4 Quizzes	10%
Midterm	15%
Final	<u>20%</u>
	65%

Laboratory

Pre-Lab Questions (12)	2.5%
Homework (4)	2.5%
Lab Competency	10%
Midterm	10%
Final	<u>10%</u>
	35%

Affective Objectives

Affective objectives are behavioral standards that will be implemented during the professional phase of the Medical Laboratory Technology Program. Students will be evaluated by faculty using these standards throughout the course. Unsatisfactory performance in any area of the behavioral standards will require a consultation with the faculty and/or the MLT Program coordinator. The reason for the consultation will be clearly stated, counsel will be given and an action plan will be implemented. The student will be given the opportunity to give a written response. The consultation form will be kept in the student's file.

Affective Scoring based on Professional Performance

Affective objectives are behavioral standards that will be implemented during the professional phase of the Medical Laboratory Technology Program. Students will be evaluated by faculty using these standards throughout the course. The student is evaluated on the demonstration of performance that reflects achievement of important objectives for medical laboratory technicians. This professional performance will be evaluated during the laboratory course and will be returned to the student with their all laboratory worksheets submitted. See the last page for a detailed list of the criteria.

PROFESSIONAL PERFORMANCE EVALUATION

1. DEPENDABILITY

The student arrives in the laboratory with adequate time to start lab session as scheduled. The student comes with appropriate manual and supplies, and wearing required laboratory attire. The student shows evidence of having reviewed the assigned topic before coming to the laboratory. The student completes assignments (lab reports, homework assignments, etc) on time.

2. ATTENTIVENESS

The student is attentive to the instructor, takes complete notes and proceeds with laboratory work without repeated instructions. The student follows verbal and written instructions, asks pertinent questions when necessary, and seeks the instructor's assistance when needed. The student neither distracts others nor allows distractions to affect completion of laboratory exercises.

3. ORGANIZATION

The student demonstrates the ability to organize work to be done within the available laboratory time. The student is able to perform multiple tasks without jeopardizing accuracy and precision.

4. INDEPENDENCE

The student demonstrates the ability to work independently by exercising independent judgement and thinking logically in using the protocols and instructions given. The student draws on previously gained information to solve problems without prompting from instructor. The student seeks activities to expand knowledge, ability and performance.

5. RECORD KEEPING

The student demonstrates the importance of proper record keeping by accurately and legibly labeling/recording laboratory work and reports (i.e. sample containers, reagents and worksheets).

6. MANAGEMENT AND ECONOMY

The student conserves reagents and supplies. The student maintains an adequate supply of common use items at their appropriate workstation. The student takes proper care of equipment.

7. SAFETY

The student works in an orderly and safe manner, enabling others to safely work in the same general area. The student adheres to the guidelines of the Laboratory Safety Regulations (e.g. wearing eye protection, keeping long hair tied back, and properly storing hazardous materials).

8. INTERPERSONAL SKILLS

The student communicates in a professional, positive, tactful manner with peers and instructors. The student consistently shows common courtesy (e.e. restocks supplies) and contributes towards achieving an environment conducive to work and learning for self and others.

9. COMPOSURE

The student maintains composure and work quality under stressful conditions and adapts quickly to new situations. The student recognizes his/her own personal strengths and weaknesses and works positively within that framework. The student accepts evaluation of performance as constructive when offered by instructors and follows through with suggestions made.

10. INTEGRITY

The student accepts accountability for work performed. The student readily admits errors, follows procedures (including quality control) as written, and maintains confidentiality of patient results, if applicable. Student exhibits perseverance to obtain accurate results.

Scoring: Total number of possible points = # of weeks x # of categories X 4 (Greatest achievable score) = n
Achieved points = student scores: Total of numbers each week (#4s + #3s + #2s + #1s)

Cut off values: Upper cut-off value = $0.675n$; lower cut-off value = $0.425n$

How your Final Grade can be Affected

If $a > 0.675n$, then the course grade is increased one step (e.g., from C to C+)
If a is between $0.425n$ and $0.675n$, then the course grade is unaffected (e.g. C remains C)
If $a < 0.425(n)$, then the course grade is decreased one step (e.g. C to C-).

If course grade remains within range: student will receive full credit for affective score

Progression in the MLT Professional Courses

As noted in the course handbook, a final grade of a C+ or better in each Medical Laboratory Technology course is necessary to progress to the next professional phase course.

Unsatisfactory Performance

Unsatisfactory performance in any area (cognitive, psychomotor or affective), failure to follow directions or procedures, unsafe or unethical behavior, or failure to keep a grade of 77 or above in the course will require a consultation with the faculty and/or the MLT Program coordinator. The reason for the consultation will be clearly stated, counsel will be given and an action plan will be implemented. The student will be given the opportunity to give a written response. The consultation form will be kept in the student's file and progress must be made by following the plan of action.

Attendance Policy

Students are expected to attend all lecture and laboratory sessions. If an absence is anticipated, please e-mail Lisa Shave at shavel@mccc.edu or Brianna Lee, if it pertains to her lab section at leeb@faculty.mccc.edu or leave a phone message in the MLT Program Coordinator's office at 609-570-3387. The student is responsible for any material missed. There are no make-up labs.

- **Pre-Lab Admission Tickets**

One way to track students' attendance in lab is to use Pre-lab assignments as admission tickets. Students **MUST PRINT OUT all lab procedures prior to coming to class**. These procedures should be read over and will be used to assist the student in completing the Pre-Lab assignment. Students **MUST TURN IN the Pre-lab assignment as they walk in the door to lab**. Failure to do so will result in the student receiving a grade of zero for that

day's assignments (Pre-lab and Lab Questions) and will negatively impact their professional behavior grade.

Cellular Telephones, Personal Telephone Calls, and Electronic Devices

Students are NOT to receive or place telephone calls or text messages during class, labs, or clinical hours. Cellular telephones and other electronic devices are to be silenced before entering the classroom, student laboratory, or the clinical site inappropriate use of any electronic device may result in disciplinary action. During testing cell phones, or any other electronic device must be turned off and placed away or in the front of the room with personal belongings **If you would like to use your phone, please obtain instructor permission before doing so (this includes recording lectures).**

Late work:

I expect assignments to be **turned in ON-TIME**. Pre-Lab=before class; Lecture/Lab HW will be handed in before the students leaves for the day. **I do not accept late assignments in this course. Late work will receive no points.** If you are sick on the day an assignment is due, you can e-mail me the assignment before lecture time. If this is an extended absence, you should phone or email me as soon as possible to discuss your return and submission of work with documentation. I encourage you to email me, or make an appointment if you are having any problems.

Blackboard

Grades:

All grades will be displayed in Blackboard as way to aid the student in tracking their performance.

Quizzes:

The Weekly Lecture Quizzes are **NOT** Optional. They **must be completed by Monday at Noon.**

Blackboard can be accessed by using your student username and password on the web url address www.mccc.blackboard.com or by signing in through your MyMercer portal. This assessment tool is being utilized as a tool to acclimate you to technology and the structure of the ASCP Board of Certification exam. It will also help you prepare for weekly in-class quizzes.

KAHOOT

The instructors may use short 5-10 question quizzes at the beginning of class to evaluate student understanding of the homework assignments and some class meeting content. To make these assessments more enjoyable for the students, we will use the Kahoot game-based web/mobile application to administer the quizzes. To earn participation credit, students must log on to Kahootit.com from any tablet, smartphone or laptop and enter in a NICKNAME.

For more information, visit kahoot.it.com

Extra Credit

Extra credit work will not generally be recognized in evaluating student performance; however, individual instructors have limited flexibility in recognizing additional effort by an individual student. For this course, *there is a folder with two optional extra credit opportunities for students. They must be completed and turned in by the start of the lecture final on October 17.*

Academic Integrity

Course work (quizzes, tests, individual assignments and laboratory practicals) must reflect the student's own work and knowledge. Any prohibited exchange of information by paper, comments or gestures constitutes a violation of academic integrity. All academic integrity violations are reported to the college's Academic Integrity Committee. Please refer to the MCCC Student Handbook.

Support Services for Differing Abilities

Mercer County Community College is in compliance with both the ADA and section 504 of the Rehabilitation Act. If you have, or believe you have, a differing ability that is protected under the law please contact Arlene Stinson in LB 216, 609 570-3525, stinsona@mccc.edu for information regarding support services.

Note: Students must seek out help from this department and alert the instructor of the accommodation(s) prior to the start of the course. We CANNOT make the accommodations AFTER the course has started.

MCCC MLT 207
Clinical Immunohematology
Fall A 2017
Lecture Schedule

We ek	Date	Topic	Chapters 3e	Chapters 4e	HW DUE THURSDAYS	BB Quiz
1	Tues 8/29/17	History of Blood Banking (Kahoot!) Blood Donor Collection & Testing Blood Components	BB Websites 12, 13 14	BB Websites 13, 14 15		
	Thurs 8/31/17	Quality Assurance & Safety Regs BB Reagents for Routine Testing	16 2	1 3	WEEK 1 HW DUE	BB QUIZ by Monday Noon
2	Tues 9/5/17	Quiz 1 (Week 1) Immunology & Serology RBC, WBC & Platelet Antigens Genetics in Blood Banking	1 1 3	2 2 4		
	Thurs 9/7/17	ABO & H BGS & Secretor Status ABO Discrepancies	4	5	WEEK 2 HW DUE	BB QUIZ by Monday Noon
3	Tues 9/12/17	Quiz 2 (Week 2) Rh Blood Group System Pre Transfusion Testing (DAT/IAT/ABSC)	5 2 (40-49)	6 2(57-60)		
	Thurs 9/14/17	Other Blood Group Systems (Student Presentations)	6	7	WEEK 3 HW DUE	BB QUIZ by Monday Noon
4	Tues 9/19/17	Lecture Midterm (Weeks 1-3)				
	Thurs 9/21/17	Antibody Detection & ID	7	8		
5	Tues 9/26/17	Compatibility Testing	8	9		
	Thurs 9/28/17	Blood Bank Automation	2 (49-52)	10	WEEK 4/5 HW DUE	BB QUIZ by Monday Noon
6	Tues 10/3/17	Quiz 3 (Week 4 and 5) Neonatal & Obstetrical Patients	11	12		
	Thurs 10/5/17	Adverse Complications of Blood Transfusion	10	11	WEEK 6 HW DUE	BB QUIZ by Monday Noon
7	Tues 10/10/17	Quiz 4 (Week 6) Transfusion Therapy for Select Patients	15	16		
	Thurs 10/12/17	Case Study Day/Review Session (ABID INFO CHART DUE(5% of Grade))				
8	Tues 10/17/17	Lecture Final Comprehensive Final				

EXTRA CREDIT FOLDER: Volunteer Donor
ABID Panels
ASCLS Student Forum October 20, 2017

MUST BE COMPLETED BY THE FINAL 10/17/17

**Clinical Immunohematology
Fall A 2017
Laboratory Schedule**

Week	Date	Topic	Pre-Lab Due?	Assignments Due Tuesdays
1	Tues 8/29/17	Donor History & Physical	YES	
	Thurs 8/31/17	Safety Practices & Quality Control in the Blood Bank Blood Donor Testing Blood Components	YES	Week 1 Study Questions
2	Tues 9/5/17	ABO Testing (Forward Typing + Reverse Typing) ABO Discrepancies	YES	Component HW
	Thurs 9/7/17	Community Blood Council of NJ Lab Visit (Everyone at Noon)	NO	
3	Tues 9/12/17	Rh Phenotyping (Weak D Testing)	YES	Week 2 Study Questions
	Thurs 9/14/17	Screens using PeG and LISS Use of Check Cells	YES	Week 3 Study Questions
4	Tues 9/19/17	Type and Screen Practice Intro to Antibody Panels	YES	
	Thurs 9/21/17	Lab Midterm Practicum	NO	NO HW DUE
5	Tues 9/26/17	Antibody Panels Special Techniques (Use of Enzymes)	YES	
	Thurs 9/28/17	Crossmatch & Antigen Typing	YES	Week 5 Study Questions Due
6	Tues 10/3/17	Type/Screen/ABID/Crossmatch/ABID Practical	NO	NO HW DUE
	Thurs 10/5/17	Rh Testing: Fetal cells, Fetal Screens, K-B	YES	
7	Tues 10/10/17	Transfusion Reaction Workup	YES	Week 6/7 Study Questions
	Thurs 10/12/17	Elutions & Adsorptions	YES	
8	Tues 10/17/17	Lab Final Practicum	NO	