Course Specifications

General Information

Course name	Immunohematology(Blood Bank)
Course number	AMSL4332
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	2
Credit hours (practical)	1
Course Prerequisites	

Course Objectives

1 - Upon successful completion of this course, the student should be able to:
2 - Apply the theoretical knowledge of immunology to testing performed in the transfusion service.
3 - State the principle of each testing procedure performed in Immunohematology.
4 - Demonstrate an understanding of genetics and immunology as it applies to Immunohematology.
5 - State the characteristics of the ABO, Rh, and other blood group system antigens and antibodies.
6 - Demonstrate problem solving by recognizing discrepant results and providing potential resolution of the problem.
7 - List the methods used to identify the most commonly encountered blood group antibodies.
8 - List the adverse complications of blood transfusion, stating the cause and appropriate treatment.
9 - State the methods for evaluating a positive direct antiglobulin test.
10 - State the requirements for performing compatibility testing.
11 - Be able to identify irregular antibodies by the antibody detection/identification method
12 - Describe the donor selection process and accurately determine donor eligibility when given results of donor screening tests
13 - Describe the preparation and indicate the appropriate use of blood components by determining the component needed based on laboratory data.
14 - Identify and describe the characteristics of the antigens and antibodies of the ABO, Rh, and other blood group systems and apply this knowledge to sample testing and case study materials.

Intended Learning Outcomes

Knowledge and Understanding	* Knowledge and Understanding
Intellectual Skills	* Intellectual Skills

Course Contents

1 - Introduction
2 - Immunology related to blood banking
3 - Genetics related to blood banking
4 - ABO (ABH) system
5 - Rh Blood group system
6 - Other major blood group systems
7 - Compatibility testing
8 - Identification of irregular blood bank irregular antibodies
9 - Blood components
10 - Donor Selection
11 - Donor blood bag testing
12 - Adverse reactions

Teaching and Learning Methods

1 - Lecture and PowerPoint presentations
2 - Discussions
3 - Case Studies and student partcipations
4 - Animations
5 - Laboratory Practice

Students Assessment

Assessment Method	TIME	MARKS
(1)Midterm Exam	one hour	15
(2)Midterm Exam	one hour	15
Practical	Semester Lab Works and Final practical exam	20
Final Theory Exam	Two hours	50

Books and References

Course note	Lecture powerpoints- handouts
Essential books	Modern Blood Banking and Transfusion Practices, 6th Ed., by Denise M. Harmening
Recommended books	- AABB, Technical Manual, 17th edition, 2011.