

**TISHK INTERNATIONAL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**Department of MEDICAL ANALYSIS,**  
**-2022 Spring**  
**Course Information for MA 508 BLOOD BANKING**

<b>Course Name:</b> BLOOD BANKING					
<b>Code</b> MA 508	<b>Regular Semester</b> 8	<b>Theoretical</b> 3	<b>Practical</b> -	<b>Credits</b> 3	<b>ECTS</b> 4
<b>Name of Lecturer(s)- Academic Title:</b> Goran Nuri - MSc					
<b>Teaching Assistant:</b> No---					
<b>Course Language:</b> English					
<b>Course Type:</b> Area Elective					
<b>Office Hours</b> Monday					
<b>Contact Email:</b> goran.nori@tiu.edu.iq Tel:07500000000					
<b>Teacher's academic profile:</b> Medical microbiology					
<b>Course Objectives:</b> What is the blood banking? • Basic knowledge about the various components available from blood and about the immunology. • The selection of blood donors. • Information about production of blood components and plasma derivatives. • Learning about collection and storage of blood. • Information about appropriateness and inappropriateness of blood transfusion.					
<b>Course Description (Course overview):</b> This course will introduce students to the fundamentals of blood grouping and typing, compatibility testing, antibody screening, component preparation, donor selection, and transfusion reactions and investigation. Also this course will teach the student the basic principles necessary to perform competently in a clinical blood bank.					

**COURSE CONTENT**

Week	Hour	Date	Topic
1	2	6-10/2/2022	Introduction
2	2	13-17/2/2022	Fundamentals of Immunology for Blood Bankers
3	2	20-24/2/2022	Collection and storage of blood
4	2	27/2-3/3/2022	Collection and storage of blood cont.
5	2	6-10/3/2022	Blood group system
6	2	27-31/3/2022	Blood components and plasma derivatives
7	2	3-7/4/2022	Midterm Exam
8	2	10-14/4/2022	Midterm Exam
9	2	17-21/4/2022	complete blood picture
10	2	24-28/4/2022	Blood transfusions and the immune system
11	2	8-12/5/2022	Blood transfusions and the immune system cont.
12	2	15-19/5/2022	Appropriateness and inappropriateness of blood transfusion
13	2	22-26/5/2022	Appropriateness and inappropriateness of blood transfusion cont.
14	2	29/5-2/6/2022	Hemolytic disease of Newborn (HDN)
15	2	5-9/6/2022	Final Exam
16	2	12-16/6/2022	Final Exam

### COURSE/STUDENT LEARNING OUTCOMES

- 1 Be familiar with different components of blood including red blood cells, leukocytes, platelets, plasma and cryoprecipitate.
- 2 Perform tests in the laboratory such as blood grouping, cross matching, antibody screening, apheresis and serology testing.
- 3 Describe the specification of the various RBC antigens and their significance.
- 4 Know the various complications of blood transfusion.
- 5 Perform Quality management and optimal utilization of blood bank products.

### COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced )

#### Program Learning Outcomes

**Cont.**

- |    |  |   |
|----|--|---|
| 1  | Evaluate clinical laboratory data by interpreting laboratory results and relating the data to various disease states.  | A |
| 2  | apply principles of evidence-based medicine to determine clinical diagnoses.   | A |
| 3  | apply the basic principles of gross and microscopic anatomy, physiology, biochemistry, immunology, microbiology/virology.  | A |
| 4  | formulate and implement acceptable treatment modalities to various disease states.   | A |
| 5  | use technology effectively in the delivery of instruction, assessment, and professional development.   | A |
| 6  | exhibit essential employability qualities by demonstrating laboratory safety, analyzing laboratory results, and displaying professional conduct.   | A |
| 7  | exhibit organizational skills, accountability, and ethical behavior.   | A |
| 8  | apply skills needed in operating laboratory equipment for testing, assessing quality assurance for lab equipment, and adhering to standard safety practices in the laboratory environment. | A |
| 9  | apply problem-solving and decision-making skills.  | A |
| 10 | apply and promote health policies and regulatory standards in the field career.  | A |
| 11 | develop research in the field of medical analysis using qualitative and quantitative methods.  | A |

**Prerequisites (Course Reading List and References):**

1-Handbook of Blood Banking and Transfusion Medicine, First Edition: 2006 2-Mary Louise Turgeon: Immunology & Serology in Laboratory Medicine, 5th Edition, 2013 Laura Dean: Blood Groups and Red Cell Antigens, 2005 Christopher D. Hillyer, MD, Leslie E. Sil

**Student's obligation (Special Requirements):**

Class attendance: Students are expected to attend all classes of this course (without exception). A prior approval is required for class absence except for emergencies. Tardy: Any student coming late will not be allowed to attend the class and he/she will be marked absent. Exam: Failure in attending a course exam will result in zero mark unless the student provides an excuse acceptable to the Dean who approves a re-sit exam. Failed courses will normally be reassessed in the scheduled semester. It is your responsibility to attend the exam at the correct time and place.

**Course Book/Textbook:**

1. Harmening, D., Baldwin, A. J., & Sohmer, P. R. (1983). Modern blood banking and transfusion practices. Philadelphia: F.A. Davis. 2. 2011. Manchester: British Blood Transfusion Society, British Association for Tissue Banking. 3. Reid, M. E., & Lomas-Francis, C. (2020). Blood Group Antigens & Antibodies: A Guide to Clinical Relevance & Technical Tips (2nd ed.). Star Bright Books. 4. Md, B. S. H., Md, C. H. D., & Gil, M. R. (2018). Transfusion Medicine and Hemostasis: Clinical and Laboratory Aspects (3rd ed.). Elsevier Science.

**Other Course Materials/References:**

1. Jaypee Brothers Medical Pub; 2nd edition (August 1,2013). 2. Md, B. S. H., Md, C. H. D., & Gil, M. R. (2018). Transfusion Medicine and Hemostasis: Clinical and Laboratory Aspects (3rd ed.). Elsevier Science. 3. Petrides, M. & AABB Press. (2007). Practical Guide To Transfusion Medicine, 2nd edition (2nd ed.). Amer Assn of Blood Banks. 4. M. (2006b). Rules and Guidance for Pharmaceutical Manufacturers and Distributors 2007: aka the Orange Guide (Revised edition). Pharmaceutical Press.

**Teaching Methods (Forms of Teaching):**

Lectures, Presentation, Seminar, Assignments, , ,

### COURSE EVALUATION CRITERIA

Method	Quantity	Percentage (%)
Attendance	1	10%
Participation	1	5%
Quiz	1	10%
Homework	1	5%
Midterm Exam	1	30

Final Exam	1	40
<b>Total</b>		<b>100</b>
<b>Examinations:</b> True-False, Fill in the Blanks, Multiple Choices, Short Answers, Matching, , ,		

**Extra Notes:**

<b>ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD</b>			
<b>Activities</b>	<b>Quantity</b>	<b>Workload Hours for 1 quantity*</b>	<b>Total Workload</b>
Theoretical Hours	16	3	48
Practical Hours	16	0	0
Final Exam	1	2	2
Attendance	1	1	1
Participation	1	10	10
Quiz	1	2	2
Homework	1	1	1
Midterm Exam	1	1	1
<b>Total Workload</b>			<b>65</b>
<b>ECTS Credit (Total workload/25)</b>			<b>2.6</b>

**Peer review**

Signature:  
Name:  
Lecturer

Signature:  
Name:  
Head of Department

Signature:  
Name:  
Dean