COURSE DESCRIPTIONS

Faculty	Pharmacy				
Department	Medical Laboratory Sciences			**NQF level**	5
Course Title	Diagnostic Hematopathology	**Code**	902346	**Prerequisite**	902265
Credit Hours	3	**Theory**	2	**Practical**	1
Course Leader	Dr. Mohammad Bani-Ahmad	**email**	m.baniahmad@jadara.edu.jo		
Lecturers	Dr. Mohammad Bani-Ahmad	**emails**	m.baniahmad@jadara.edu.jo		
Lecture time	Sun, Tue 10:00-11:30	**Classroom**	D302	**Attendance**	Fulltime
Semester	First 2022/2023	**Production**	2019	**Updated**	2022

Short Description

This course is designed to provide the students with basics in hematological concept, principles and applications. A detailed description of cellular blood components will be provided with a major prospect on their generation, structure, function and metabolism. Furthermore, the course educates the students with the common hematological abnormalities (disorders) where specialized Topics will be discussed to cover erythrocytes, leukocytes and platelets disorders with a major emphasis on the etiology, pathogenicity and diagnosis of these disorders.

Course Objectives

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

1. To understand the basic concepts and terminology in hematopathology.
2. To classify blood cells disorders according to clinical features and laboratory investigations.
3. To understand the etiology and pathogenesis of the most common blood disease
4. To correlate clinical aspects of the disease with the prognostic issues
5. To understand the methods and application of hematological tests in the diagnosis of hematological disorders.

Course Intended Learning Outcomes (CILOs)

A. Knowledge - Theoretical Understanding

a1. Outline the structure, production, and function of blood cells.
a2. Explain the procedures, reference ranges, and principles of medical tests that are used in hematology laboratory.

B. Knowledge - Practical Application

a3. Apply technical laboratory procedures for the enumeration and examination of blood cells.

C. Skills - Generic Problem Solving and Analytical Skills

b1. Analyze the scientific evidence underlying our current understanding of hematology to solve problems in medical analysis.

D. Skills - Communication, ICT, and Numeracy
b2. prove the ability to intellectual independence and commitment to lifelong learning.
E. Competence: Autonomy, Responsibility, and Context
c1. Adapt the knowledge gained from this course, in some of the specific methodologies used in medical tests in hematology
Teaching and Learning Methods
• Lectures will be given according to the specified time and location as assigned on the academic • schedule (see course information above) Lectures will be administrated using power-point presentations and provided to students • through JU e-learning website. • Textbook is obligatory and required by the students
Assessment Methods
• Midterm Exam • Assignments • Quizes • Final Exam

Course Contents					
Week	**Hrs**	**CILOs**	**Topics**	**Teaching & Learning Methods**	**Assessment Methods**
1 Oct 23 – 25 2022	3	a1	• Introduction • Anemia	Handout Textbook (chapter 19)	Midterm & Final Exam
2 Oct 30 – Nov 25 2022	3	a1	• Iron Deficiency Anemia • Iron Utilization Anemia	Handout Textbook (chapter 20)	Midterm & Final Exam
3 Nov 6 – 8 2022	3	a1	• Thalassemia • Sickle cell disease	Handout Textbook (chapter 27, 28)	Midterm & Final Exam
4 Nov 13 – 15 2022	3	a2, a3, b1, c1	• Hemolytic anemia (I) • Hemolytic anemia (II)	Handout Textbook (chapter 23, 24)	Midterm & Final Exam
5 Nov 20 – 22 2022	3	a1	• Hemolytic anemia (III) • Megaloblastic and Aplastic Anemia	Handout Textbook (chapter 21-22, 25-26)	Midterm & Final Exam
6 Nov 27 – 29 2022	3	a3, b1, b2	• Leukemia (I): Introduction • Leukemia (II): Acute leukemia	Handout Textbook (chapter 35)	
7 Dec 4 – 6 2022	3	a2, a3, b1, c1	• Leukemia (III): Chronic Leukemia • Multiple Myeloma	Handout Textbook (chapter 36)	Final Exam
8 Dec 11 – 13 2022	3	a1	• Myeloproliferative Disease (MPD): (PV, ET, IT)	Handout Textbook (chapter 33)	Final Exam
9 Dec 18 – 20 2022	3	a1, a2, a3	• Myelodysplastic disease (MDS)	Handout Textbook (chapter 34)	Final Exam
10 Dec 25 – 27 2022	3	a1, a2, a3, b2	• Hemostatic Disorders (I)	Handout	Final Exam
11 Jan 1 – 3 2023	3	a2, a3 b1, b2, c1	• Practical: Erythrocytes Disorders	Lab Manual	Quizzes Reports & Final Exam

12 Jan 8 – 7 2023	3	a2, a3 b1, b2, c1	• Practical: Leukocytes Disorders	Lab Manual	Quizzes Reports & Final Exam
13 Jan 15 – 17 2023	3	a2, a3 b1, b2, c1	• Practical: Hemostatic Disorders	Lab Manual	Quizzes Reports & Final Exam

Infrastructure	
Textbook	**Hematology: Clinical principles and applications** Bernadette F. Rodak, George A. Fritsma and Kathryn Doig Saunders Elsevier 2016 5th edition ISBN: 9780-323-23906-6 https://evolve.elsevier.com
References	---
Required reading	---
Electronic materials	As provided at Jadara E-learning system
Other	---

Course Assessment Plan						
Assessment Method		**Grade**	**CILOs**			
First (Midterm)		30				
Second (if applicable)						
Final Exam		50				
Coursework						
Coursework assessment methods	Assignments					
	Case study					
	Discussion and interaction					
	Group work activities					
	Lab tests and assignments	10				
	Presentations					
	Quizzes	10				
Total		100				

Plagiarism
Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code). Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.