



Module(Course Syllabus)Catalogue 2022-2023

College/ Institute	Shaqlawa Technical College	
Department	Medical Lab. Technology	
Module Name	Hematopathology	
Module Code	HEP303 (SHTC02M-2S-SM3)	
Degree	Technical Diploma <input checked="" type="checkbox"/>	Bachler <input type="checkbox"/>
	High Diploma <input type="checkbox"/>	Master <input type="checkbox"/>
		PhD <input type="checkbox"/>
Semester	3 rd semester	
Qualification	Ph.D.	
Scientific Title	Lecturer	
ECTS (Credits)		
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/>
		Assist. <input type="checkbox"/>
Weekly hours	8 Hrs.	
Weekly hours (Theory)	(4)hr Class	(8)Total hrs Workload
Weekly hours (Practical)	(2)hr Class	(8)Total hrs Workload
Number of Weeks	14	
Lecturer (Theory)	Dr. Salam Adil Ahmed	
E-Mail& Mobile NO.	salamadil@epu.edu.iq , 07508174822	
Lecturer (Practical)	Dr. Salam Adil, Mr. saefulla, Mrs. awaz, Mrs. iman,	
E-Mail & Mobile NO.	salamadil@epu.edu.iq , 07508174822	
Websites		

Course Book

Course Description	<p>Hematopathology includes the study of etiology, diagnosis, treatment, prognosis, and prevention of blood diseases. The laboratory work that goes into the study of blood is frequently performed by a medical technologist.</p> <p>The main subject areas will include blood cell morphology and function, the pathophysiology and genetics of hematological disorders and malignancies, blood testing and typing, and the processes governing hematopoiesis. Blood cell physiology, biochemistry and blood flow are covered in this course. This text is designed for hematologists, pathologists and laboratory staff in training and in practice. The work presented in this course will be of benefit to medical students and to researchers of hematology and blood flow in the microcirculation.</p>
Course objectives	<ol style="list-style-type: none"> 1. Understand blood cell production (Hematopoiesis) 2. Understand the particular functions of blood cells, blood proteins, and other blood components. 3. Understand blood cell disorders. 4. Understand established information and recent clinical advances in coagulopathies, anticoagulant and thrombolytic process and therapies. 5. Understand blood and bone marrow morphology and hematopathology. 6. Be familiar with the diagnosis, evaluation, and management of hematologic malignancies.
Student's obligation	<ul style="list-style-type: none"> • Attendance 85-90% of lectures. • Completion of all the requirements quizzes, exams, reports, assignments, seminars,etc.

	<ul style="list-style-type: none"> Participation in the laboratory works (practical lectures). 																																												
Required Learning Materials	<ul style="list-style-type: none"> The lectures showed by data show and the explanations discussed in the hall and at the same time the students will have a copies of the lectures. The lectures will be available on line (Moodle platform) Lab. Instruments and materials will used in Practical lectures. 																																												
Evaluation	<table border="1"> <thead> <tr> <th>Task</th> <th>Weight (Marks)</th> <th>Due Week</th> <th>Relevant Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Paper Review</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="6">Assignments</td> <td>Homework</td> <td>14%</td> <td></td> </tr> <tr> <td>Class Activity</td> <td>2%</td> <td></td> </tr> <tr> <td>Report</td> <td rowspan="4">24%</td> <td></td> </tr> <tr> <td>Seminar</td> <td></td> </tr> <tr> <td>Essay</td> <td></td> </tr> <tr> <td>Project</td> <td></td> </tr> <tr> <td>Quiz</td> <td>4%</td> <td></td> <td></td> </tr> <tr> <td>Lab.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Midterm Exam</td> <td>16%</td> <td></td> <td></td> </tr> <tr> <td>Final Exam</td> <td>40%</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100%</td> <td></td> <td></td> </tr> </tbody> </table>	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	Paper Review				Assignments	Homework	14%		Class Activity	2%		Report	24%		Seminar		Essay		Project		Quiz	4%			Lab.				Midterm Exam	16%			Final Exam	40%			Total	100%		
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Specific learning outcome:	<p>Students after this course will be able to identify the blood cells types and the pathway of production of each type. Then Learning the functions of blood cells and distinguishing its normality or abnormality. They will be able to identify the stains used in identifying diseases blood cells under the microscope. In addition to learning practically how to collect the blood samples and how to prepare it for examinations and how to read the results.</p>																																												
Course References:	<ul style="list-style-type: none"> "Blood Cell - An Overview of Studies in Hematology" edited by Terry E. Moschandreu, ISBN 978-953-51-0753-8, InTech, September 9, 2012 Handin, Robert I.; Samuel E. Lux; Thomas P. Stossel (2003). Blood: Principles and Practice of Hematology (2nd ed.). Philadelphia: Lippincott Williams and Wilkins. p. 471. ISBN 9780781719933. Retrieved 2013-06-18. 																																												

- Kenneth Kaushansky et al., eds. (2010). Williams hematology (8th ed.). New York: McGraw-Hill Medical. ISBN 0071621512.

Course topics (Theory)	Week	Learning Outcome
Overview and introduction to hematology	1	
Haematopoiesis, Composition of the blood	2	
Normal hemoglobin and abnormal hemoglobin	3	
Overview of haematopahtology	4	
Normal red blood cells, Red blood cell abnormalities	5	
Normal white blood cells, White blood cell disorders	6	
Homeostasis and platelet, Coagulation cascades	7	
Leukaemia	8	
Microcytic, normocytic and macrocytic anemias	9	
Bleeding, Platelet disorders; Thrombocytopenia and thrombocytosis.	10	
Thrombosis	11	
Hemochromatosis	12	
Lymphomas Hodgkin and non-Hodgkin disease	13	
Anemia: quantity and quality	14	
Practical Topics	Week	Learning Outcome
Blood collection procedures	1	
Anticoagulants	2	
ABO and Rh Blood groups test	3	
Hemoglobin test	4	
Packed Cell Volume test (PCV) (Hematocrit)	5	

Red blood cell count	6	
White blood cell count	7	
Platelet count	8	
Erythrocyte Sedimentation Rate (ESR test)	9	
Differential WBC count	10	
RBC Indices	11	
Reticulocyte count	12	
Preparation of peripheral blood film	13	

Questions Example Design

1- *Compositional:*

1. What are the leukocytes responsible for?
2. Enumerate the normal hemoglobins. And explain its contents.
3. Draw a diagram explaining the levels of platelet formation.

2- *True or false type of exams:*

1. Proerythroblasts develop into basophils, neutrophils, eosinophils.
2. Ecchymosed is subcutaneous haematoma larger than 2 cm.

3- *Fill in the blanks:*

1. Active.....cleaves plasminogen to plasmin which then dissolves the fibrin.
2. The organic molecule of heme group when straightened out is called

Extra notes:

External Evaluator

