

توصيف مساق علم الدم (Heamatology)

1. معلومات مدرس المساق (Instructor)

Lect. Amneh Ahmed Masalmeh	اسم (مدرس / منسق) المساق :
Mon. and Wed. (12:30-2:00)	الساعات المكتبية : _____
Ibn Rushd Building	رقم المكتب والرقم الفرعي : _____
malkawia@aabu.edu.jo	البريد الإلكتروني : _____
-----	مساعد البحث والتدريس/المشرف/الفاقي (إن وجد):

2. وصف المساق (Course Description)

This course is a description of the blood; its intended to provide the students with the basic concepts of the generation, structure, function and metabolism of cellular blood components: erythrocytes, leukocytes, and thrombocytes. This course also aims to introduce undergraduate students to basic hemostasis system and platelets function, Understand basic concepts of anemias, leukemias, and lymphomas.

Moreover, It's a combined lecture and laboratory course covering methods for analysis of blood cells, the classification and laboratory investigation of anemias and other common disorders involving erythrocytes, leukocytes, and platelets

3. بيانات المساق (Course Title)

المستوى: السنة الرابعة	اسم المساق: علم الدم	رقم المساق: 404411
وقت المحاضرة: 9:00-10:00	المتطلب السابق / المتزامن : علم وظائف أعضاء الحيوان	طبيعة المساق: نظري
عدد الساعات الدراسية: 3	الفصل الدراسي: الثاني	العام الجامعي: 2020/2021

4. أهداف المساق (Course Objectives)

The aims of the course are that the students understand the basic concepts and terminology in hematology and to acquire the bases in hematology to provide elementary knowledge/overview of structure and functions and metabolism of blood components, and understand the etiology and pathogenesis of the most common, blood diseases. Learn the disorders of white blood cells especially the pathophysiology of leukemia. Explore the hemostasis system function, In addition to disorders of platelet. Evaluate common abnormalities in coagulation and fibrinolysis

5. مخرجات التعلم (Intended Student Learning Outcomes)  
(المعرفة والمهارات والكفايات)

يفترض بالطالب بعد دراسته لهذا المساق أن يكون قادرا على:

On completion of the course, the student should be able to:

1. Demonstrate an understanding of the components of human blood and characteristics, functions, and abnormalities and disease states of each.
2. distinguish between normal and abnormal hematopoietic elements
3. Understand basic concepts of hemostasis, leukemias, and lymphomas.

4. Define hematopoiesis and differentiate the process as it applies to the fetus, child and adult
5. Illustrate the major components of a typical cell.
6. Explain the basic chemical structural composition of hemoglobin and indicate the relationship of heme to globin molecules.
7. Explain the function of platelets in hemostasis.
8. Define categories of leukocytes based on site of origin, specific function, interrelationships and morphology , and compare and contrast the major morphological changes during normal hematologic cell maturation in terms of cytoplasmic and nuclear maturation and changes in cell size.
9. Define the major hematological characteristics and causes of erythrocytic disorders, myeloproliferative disorders, leukemias and platelet disorders.
10. Define leukemia and distinguish between chronic. acute lymphoblastic and acute myeloid leukemias.

6. محتوى المساق (Course Content)

Week	Topics	Chapter in Textbooks (handouts)
1	Introduction To Hematology. Blood components & Bone marrow structure. Composition of blood Functions of blood	1 + handout
2	Erythrocytes: red cell membrane: structure & function Haematopoiesis/haemopoiesis- Erythropoiesis	2+ handout
3	Erythrocytes: Hemoglobin metabolism (I):structure and biosynthesis Erythrocytes: Hemoglobin metabolism (II):Function	3 + handout
4	Routine red cells analysis (I): Red cell indices Routine red cells analysis (II): Morphological examination Erythrocytes: Special approaches in red cell examination Erythropoiesis and general aspects of anaemia	2+ handout
<b>First Hour Exam</b>		
5	Classification of red cell disorders Hypochromic anaemias and iron overload Megaloblastic Anaemiasand other macrocytic anemias	3&4 + handout
6	Megaloblastic Anaemiasand other macrocytic anemias Genetic disorders of hemoglobin	3&4 6 + handout
7	Hemolytic Aneamias	5+ handout
8	Leukocytes: classification, structure and function	8
<b>Second Hour Exam</b>		
9	Leukocytes: Leukocytes malignancies (I): Acute Leukemias (2): Chronic Leukemias	12 ,13,15 + handout
10	Lymphoma and multiple myeloma	16,17,18 + handout
11	Thrombocytes: Blood Hemostasis(I): thrombocytes and thrombopoiesis	22 +

11	Thrombocytes : Hemostatic disorders (I): Thrombosis and platelets disorders Bleeding Disorders Coagulation Disorders	23 ,24
12	Coagulation Disorders Blood Transfusion	24,27

7. استراتيجيات التعليم والتعلم وطرق التقويم  
(Teaching and learning Strategies and Evaluation Methods)

ت	مخرجات التعلم	استراتيجيات التدريس	أنشطة التعلم	نوع التقويم/القياس (امتحان/عروض صفية/مناقشة/واجبات)
1	Class lectures and lecture notes are designed to achieve the course objectives. Each week four lectures (4 X 60-minutes). Student questions and student participation in discussions are encouraged.  Several teaching and learning tools that help the student earn and understand course content will be provided: 1. Textbook: contains material that will be covered in the lecture plus a small amount of additional material 2. PowerPoint presentations. Data shows and laptop for lectures 2. Graded quizzes. 3. Practice Exams: problem solving, multiple choices, and matching questions. 4. Communicate with students outside of class.			

8. تقييم الطلبة (Assessment)

توزيع الدرجات لكل أسلوب	توقيت التقييم	الأساليب المستخدمة
10	خلال الفصل	1-أعمال الفصل: (تقرير، وظائف، حضور)
20	الأسبوع السابع	2-امتحان تحريري أول
20	الأسبوع الثاني عشر	2-امتحان تحريري ثاني
50	أسبوع الامتحانات النهائية	3-امتحان تحريري نهائي

9. الكتاب المقرر (Text Book)

Text Books: Essential Hematology	المرجع الرئيس
Hoffbrand A.V, Moss P.H.A and Pettit J.E.	المؤلف
Blackwell	الناشر
2006	السنة
5 <sup>th</sup> edition	الطبعة
	الموقع الالكتروني للمرجع

10. المراجع الإضافية (References) (وتشمل الكتب والبحوث المنشورة في الدوريات او المواقع الالكترونية)

Schmaier AH, Petruzzelli LM. Hematology for the Medical Student. Philadelphia Lippincot Williams, and Wilkins, 2003.	-1
Internet web sites	-2