COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Program offering the course:	**Postgraduate Master Degree in Clinical Pathology-CPATH 530**
(2) Department offering the program	**Clinical Pathology Department**
(3) Department responsible for teaching the course:	**Clinical Pathology Department**
(4) Part of the program	**Second part**
(5) Date of approval by the Department`s council	16/5/2016
(6) Date of last approval of program specification by Faculty council	9/8/2016
(7) Course title:	**Hematology**
(8) Course code:	**CPATH 530HE** **CPATH 530 HEP**
(9) Credit hours	**CPATH 530HE (6)** **CPATH 530HE HEP (5)**
(10) Total teaching hours:	**CPATH 530HE (90)** **CPATH 530 HEP (150)**

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

The overall aim of the course is to:

Provide the student with the technical knowledge, technical skills to perform laboratory tests in the field of hematology as well as interpretative skills of hematology laboratory data and communication skills with the referring clinicians and other health care providers so that a clinically useful opinion can be derived from data.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1-Describe the causes,pathophysiology and clinical picture of various type of anemias
A2-Recognize the presentation,diagnosis and classification of acute and chronic leukemias
A3-Define the diagnostic criteria of different myeloproliferative neoplasms
A4-Classify myelodysplasia according to WHO guidelines
A5-Outline the etiology, presentation and methods of diagnosis of various acquired and congenital platelet , coagulation and thrombotic disorders.
A6-Recognize clinical, laboratory and medicolegal aspects of blood transfusion
A7-Recall the hematological aspects of pregnancy and various systemic diseases

B- Intellectual skills

B-1Distinguish between various types of anemias based on laboratory results
B2-Interpret the results of appropriate laboratory methods to establish the diagnosis of acute and chronic leukemias
B3-Use appropriate laboratory methods to establish the dignosis of various myeloproliferative neoplasms
B4-Analyze the results of appropriate laboratory methods to establish the diagnosis of myelodysplastic syndromes
B5-Interpret the results of laboratory screening tests for hemostasis and thrombophilia

C- Professional/practical skills

C1-Perform different hematological tests for diagnosis of anemias
C2-Carry out different hematological tests for diagnosis of acute and chronic leukemias
C3-Develop skills in preparation, staining and examination of peripheral blood and bone marrow smears
C4-Perform blood grouping, cross matching and antiglobulin test

D- Communication & Transferable skills

D1- Demonstrate the ability to write an informative laboratory report including a precise diagnosis, differential diagnosis, and recommended follow up or additional studies as appropriate

D2- Demonstrate the ability to provide direct communication to the referring physician or appropriate clinical personnel when interpretation of a laboratory assay reveals an urgent , critical or unexpected finding and document this communication in an appropriate fashion

D3- Discuss professional errors in an honest way.

D4- Search effectively electronic resources to find valid appropriate information and use them for evidence-based diagnostic practice

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
Hemopoiesis:General considerations	1		1		2
Erythropoiesis	1		2		3
Microcytic hypochromic anemias:General aspects	1		2		3
Iron-deficiency anemia	2		3		5
Anemia of chronic disease	1		1		2
Sideroblastic anemia	1		1		2
The thalassemias	2		3		5
Iron overload	1		3		4
Megaloblastic anemia	2		3		5
General aspects of hemolytic anemias	1		3		4
Red cell membranopathies	2		3		5
Red cell enzymopathies	2		3		5
Hemoglobinopathies	2		3		5
Immune hemolytic anemias	2		3		5
Non-immune hemolytic anemias	2		3		5
Aplastic anemia and Pure red cell aplasia	2		3		5
Pancytopenia	2		3		5
Granulopoiesis	2		3		5
Benign disorders of granulocytes	2		3		5
Lymphopoiesis	2		3		5
Benign disorders of lymphocytes	2		3		5
Benign disorders of monocytes	2		3		5
The spleen	1				1
Acute lymphoblastic leukemia	2		4		6
Acute myeloid leukemia	2		4		6
Myelodysplasia	2		3		5
Chronic myeloid leukemia	2		3		5

Polycythemia	2		3		5
Myelofibrosis	2		3		5
Primary thrombocythemia	1		3		4
Chronic lymphocytic leukemias	2		4		6
Laboratory aspects of lymphoma	2		3		5
Multiple myeloma	1		3		4
Normal hemostasis	2		2		4
Thrombopoiesis	1				1
Vascular purpuras	1		3		4
Thrombocytopenia	2		3		5
Thrombocytosis	1		3		4
Hereditary qualitative platelet disorders	1		3		4
Acquired qualitative platelet disorders	1		3		4
Hemophilias	1		3		4
vonWillebrand's disease	1		3		4
Acquired coagulopathies	1		3		4
Hereditary thrombophilia	1		3		4
Acquired thrombophilia	1		3		4
Antithrombotic therapy	2		3		5
Red cell antigens and antibodies	2		3		5
Leukocytes and platelet antigen and antibodies	2		3		5
Donor selection and pretransfusion testing	1		3		4
Blood components therapy	2		3		5
Complications of blood transfusion	2		3		5
Autologous blood transfusion	1				1
Therapeutic apharesis	2		3		5
Hematologic aspects of systemic diseases	2		2		4
Hematology in pregnancy	2		2		4
Neonatal hematology	2		2		4

(4) Teaching methods:

4.1: Lectures

4.2: Case study

4.3: Practical Lab

4.4: Self-learning

4.5: Student teaching

(5) Assessment methods:

5.1: Written exam for assessment of knowledge & intellectual skills.

5.2: Oral exam for assessment of knowledge & intellectual skills.

5.3: Practical exam for assessment of practical and transferrable skills.

5.4: MCQ continuous assessment at the end of each semester

Percentage of each Assessment to the total mark:

Written exam: 40% (160 marks)

Practical exam: 25% (100 marks)

Oral exam: 25% (100 marks)

MCQ exam: 10% (40 marks)

(6) References of the course:

6.1: Hand books: Guide to Clinical Pathology

6.2: Text books: Essential hematology

6.3: Journals: Blood, Egyptian J of Hematology

Course coordinator: Prof. Tarek Selim

Head of the department: Prof. Osama Elbaz