COURSE SPECIFICATION

(Transfusion Medicine–HEM 630 TM)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate Degree of Clinical Hematology/HEMA 600
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Hematology Unit and Clinical Pathology department.
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council:	26/04/2016
(6) Date of last approval of programme specification by Faculty council:	9/8/2016
(7) Course title:	Transfusion Medicine
(8) Course code:	HEM 630 TM
(9) Credit hours	1 hour
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The transfusion medicine course aims to provide the MD candidate with a comprehensive working knowledge of the procedures used to collect, evaluate and prepare blood products for safe and effective administration to patients.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding

A1: To identify the principles of blood product transfusion, including the evaluation of antibodies, blood compatibility, and the indications for and complications of blood component therapy and apheresis procedures. The candidate will demonstrate the following:

1. A comprehensive working knowledge of the components of blood products typically administered to patients, including red blood cell (RBC) preparations, platelet preparations, granulocyte preparations, fresh frozen plasma and cryoprecipitate. This will include an understanding of various methods by which these blood products can be handled and prepared in response to specific clinical situations, including irradiation, washing and filtering techniques.
2. A comprehensive working knowledge and practical competency of identifying the clinical indications for use of specific blood products and the clinical scenarios for which they are used.
3. A comprehensive working knowledge and practical competency of the potential risks associated with the administration of various blood products. This will include, but is not limited to, allergic (anaphylactic) reactions, graft versus host disease, rejection reactions, introduction of infectious organisms, alloimmunization, delayed transfusion reactions, hemolytic reactions, febrile reactions and others.
4. An understanding and orientation of the alternatives to blood product therapies.
5. A comprehensive working knowledge of the indications and processes of assays typically performed in a Blood Bank. These will include cross matching, direct antiglobulin tests (direct Coomb's test), antibody screen (indirect Coomb's test), ABO and Rh typing of red blood cells, and other antibody identification procedures.
6. A comprehensive working knowledge of therapeutic apheresis and the mechanism by which apheresis can be used to isolate and collect specific blood components from individuals.
7. A comprehensive working knowledge of the use of emergent plasmapheresis (as used in TTP), leukapheresis (as used in acute leukemias) and RBC exchange (as used in sickle cell anemia).

8. A working knowledge of the methods used for peripheral blood stem cell collections.

B- Intellectual skills:

B1: To correlate clinical information with laboratory, cytology and histology results, and immunodiagnostic imaging techniques to decide indication, contraindication and possible complication as well as the essential preparation steps for transfusion as a treatment option.

B2: To interpret results of complete blood count, including red blood cells and hemoglobin level, platelets and white cell differential to decide the whole or the proper blood component for transfusion

B3: to interpret the results of partial thromboplastin time, prothrombin time, platelet aggregation, and bleeding time, as well as other standard coagulation assays to decide the whole or the proper blood component for transfusion

(3) Course Contents (1 credit hours /15 teaching hours/theoretical):

Subjects	Lectures	Total Teaching Hours
Proper uses of red blood cell (RBC) transfusion	2	2 hours
Major Red Cell Products for Transfusion	2	2 hours
Pre-transfusion Testing	2	2 hours
Emergency Release of Blood Products	2	2 hours
Transfusion of Incompatible RBC	1.5	1.5 hours
Adverse Effects of Transfusion	1.5	1.5 hours
Safe and appropriate platelet transfusion	2	2 hours
Preparations of human plasma	2	2 hours
	1 credit hour/15 teaching hours	

(4) Teaching methods:

4.1: Power Point presentation.

4.2: Laboratory work.

(5) Assessment methods:

5.1: Written exam and MCQ for assessment of knowledge

Assessment schedule:

Final exam 25th week

Percentage of each Assessment to the total mark:

Written exam: 80 marks

MCQ: 20 marks

(6) References of the course:

Text books:

6.1: Manual of Clinical Hematology, Post Graduate Hematology, Williams Hematology, Wintrobes Clinical Hematology, Hollan-Frei Cancer Medicine, DeVita Cancer Principles and Practice of Oncology

6.2: Journals: American Society of Hematology (ASH), European Hematology Associatation (EHA).

(7) Facilities and resources mandatory for course completion:

-Lecture Hall.

-Data show.

-Equipped Laboratory.

Course coordinator: Dr Mona Taalab

Head of Hematology Unit: Prof Mohamed Nasr Mabed

Head of the Internal Medicine Department: Prof. Dr. Salah Al-Gamal

Date of First Approval: 22/12/2010

Date of Last Approval: 26/04/2016