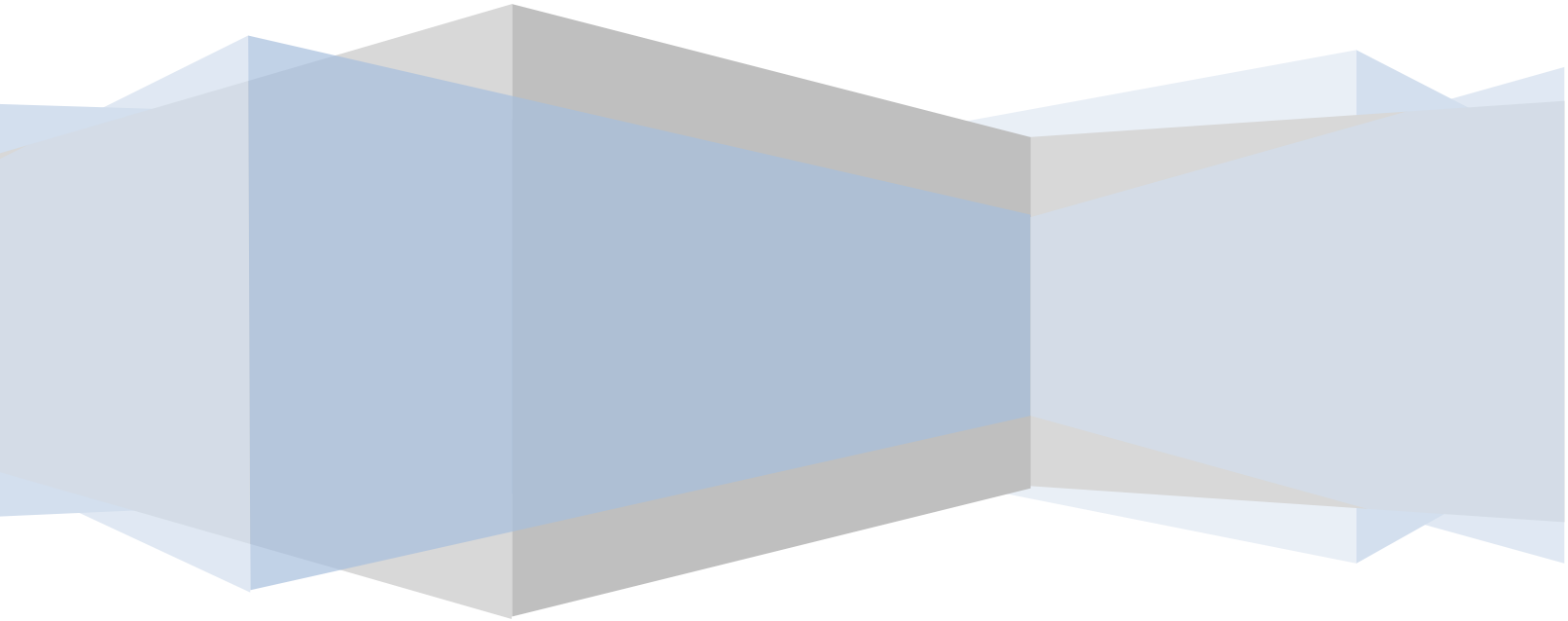
Course Specifications

Title:

Blood and Circulation

Year2



Course Specifications

University: South Valley University

Faculty: Qena Faculty of Medicine

Programme(s) on which the course is given: Bachelor of Medicine & Surgery (M.B.B.Ch).

Department offering the program: Education sector (Multidisciplinary integrated program)

Department offering the course: Histology and physiology.

Academic year / Level: Year 2(3rd semester)

Date of specification approval: Approved by the Faculty Board on 3/2010

Date of modification: 11/ 2018

1-basic information

Title: Blood and Cardiovascular System

Code: BAC102

Credit points: 195marks

Number of Credit hours/ week: - Lectures: 4 hours - practical: 2 and 1/2 hour

Lecture: 48 hrs

Practical academic lab: 36hrs

Total: 84hrs

Target Population: 2nd year medical students

The qualification degree: "Bachelor Degree in Medicine and Surgery (MBBCh)"

2- Professional Information

Overall Aims of Course:

The overall aims of the course are that the students:

- Develop the basic knowledge, skills, and attitude expected from a medical student to be able to participate in the prevention, diagnosis and management of blood and cardiovascular system diseases in the clinical training period.
- Know the structure of the blood and cardiovascular system and understand its function.
- Know the most common diseases affecting the blood and cardiovascular system.
- Know the risk factors related to blood and cardiovascular system diseases.

HISTOLOGY

1-Overall aims

By the end of the course, students should be able to:

- Understand the methods of studying blood and bone marrow.

- Understand and describe the myeloid and steps of formation of different blood elements.
- Mention and describe lymphatic tissues and lymphatic organs.
- Mention and understand types and components of the immune systems.
- Understand and describe the general structure of the blood and lymphatic vascular systems.

2- lntended learning outcomes (ILOs)

A- Knowledge and understanding

By the end of the course, students should be able to:

A1- Understand the basic steps in preparing good blood film.

A 2- Define and describe the histological characteristics of normal blood cells.

A3- Define and describe cells of the immune system.

A4-Understand and describe the steps of haemopoiesis.

A5- Differentiate between different types of blood capillaries and compare them with lymphatic capillaries.

A6- Describe and compare between different lymphatic organs.

B-Intellectual skills

By the end of the course, students should be able to:

B1-Identify the structure and function of different blood elements.

B2- Identify different types of blood vessels and arteriovenous connections.

B3-Differentiate between different lymphatic organs.

C- Professional skills

By the end of the course, students should be able to:

C1- Identify different blood cells in blood films.

C2- Identify and differentiate between different types of blood vessels (arteries, veins & special types of arteries and veins).

C3- Differentiate between different lymphatic organs in histological slides seen under the microscope (lymph node, spleen, thymus gland and tonsils).

D- General skills

By the end of the course, students should be able to:

D1- Appreciate the importance of life long learning and show a strong commitment to it.

D2- Use the sources of biomedical information to remain current with advances in knowledge and practice.

PHYSIOLOGY

1-Overall aims

By the end of the course, students should be able to:

- Acquire an appropriate background and recognize the normal structure and function of the cardiovascular system
- Know about and recognize the normal structure and function of the body and major systems.
- Acquire an appropriate functional background of cells & organs of blood and circulatory system.

- Describe the integration of physiological functions, which characterize the performance of the human body as a whole in health.

- Know the physiological principles of blood and circulation underlying diseases states that aids in interpretation of symptoms.

3- Intended Learning Outcomes ILOS

3-A- Knowledge and Understanding

By the end of the course, students should be able to: -

A1- Mention the general components of blood and its functions, mechanism of blood coagulation and regulation of blood volume and understand some of clinical conditions occurring due to deficiency of one or more of the blood components.

A2- know the properties of the cardiac muscle and factors affecting them; describe the functional structure of the circulatory system.

(3.B) Intellectual Skills

By the end of the course, students should be able to: -

B1- Interpret the most important physiological laboratory results of blood to distinguish the physiological form from the pathological conditions.

B2- comment on some clinical parameters (ABP, ECG, ESR, Blood fragility test, normal heart rate, factors affecting it, normal pulmonary function tests) in a normal individual.

B3- Integrate physiology of blood and circulation with other basic and clinical science.

(3.C) Professional and Practical Skills

By the end of the course, students should be able to: -

C1- Perform hematological tests: estimation of blood Hemoglobin, bleeding and clotting times, blood groups and read the erythrocyte sedimentation rate.

C2- Perform the measurement the arterial blood pressure.

C3- Use the stethoscope to hear the heart sounds.

C4- Record and read the ECG.

C5-Comment on experiments of properties of the cardiac muscle and factors affecting it.

(3.D) General Skills

D1- Use available presentation aids (Data show) to present clearly and effectively a scientific topic

D2- Work separately or in a team to research and prepare a scientific topic

3- Course Contents: Blood and Circulation

Histology

Date	Topic	Lecture	Practical
1st week	Red blood cells	1	1
2nd. Week	White blood cells, Blood platelets	1	1
3rd. week	Bone marrow structure, Stem cells	1	1
4th. Week	Haemopoiesis	1	1
5th. Week	Immune cells and immunoglobulins	1	1
6th. Week	Blood vascular system	1	1
7th. week	Lymphatic vascular system	1	1
8th. week	Lymph node	1	1
9th. Week	Spleen	1	1
10th. Week	Thymus	1	1
11th. Week	Tonsil	1	1
12th. Week	Mucosa associated lymphoid tissue	1	1

	Total	12 hours	12 hours

Physiology

Weeks	Topics	lectures	practical	total	percentage
1st week	Properities of cardiac muscle	3	2	5	8.3%
2nd week	Heart rhythm with impulse and conduction system	3	2	5	8.3%
3rd week	Electrocardiogram(ECG)	3	2	5	8.3%
4th week	Phases of cardiac cycle	3	2	5	8.3%
5thweek	Cardiac output and venous return	3	2	5	8.3%
6thWeek	Arterial blood pressure	3	2	5	8.3%
7th week	Energy consumption of the heart	3	2	5	8.3%
8th week	Shock	3	2	5	8.3%
9th week	Edema, lymphatic and capillary circulation	3	2	5	8.3%
10th week	Red blood cells	3	2	5	8.3%
11th week	Blood coagulation	3	2	5	8.3%

12th week	White blood cells Reticuloendothelial system	3	2	5	8.3%
	Total	36	24	60	100%

4- Teaching and Learning Methods

4.1- Lectures (for acquisition of knowledge: 3 hours/week).

4.2- Practical sessions (2 hours/ week) to gain practical skills (Laboratory demonstration, practical training and problem-based learning)

4.3- Assignment (practical book) and reports

5- Student Assessments

Histology

Student assessment Methods

Assessment1: Periodic and mid term MCQ assessment.

Assessment 2: Final practical examination.

Assessment 3: Final written examination.

Assessment 4: Final oral examination.

Assessment 5: Final drawing examination.

Assessment 6: Course assignment (practical book).

Weighting of assessments:

Blood & circulation

Periodic and mid term MCQ assessment 10 marks (22.2%)

Final written Examination 17 marks (37.7%)

Final Oral Examination	4 marks (8.88%)
Final practical examination	5 marks (11.11%)
Final drawing examination	6 marks (13.3%)
Course assignment (practical book)	3 marks (6.66%)
Total	**45 marks (100%)**

Physiology

Measured Skills (ILOs)	Tools	Time Schedule	Weight
Written exams to assess knowledge and intellectual ILOs (A1, A2, B1, B2).	Assessment 1: - Periodic (formative/summative) (short assay and MCQ)	By the end of the 5th week	30% 45 Mark
Written exams to assess knowledge and intellectual ILOs (A1, A2, B1, B2, B3).	Assessment2: 2: Midterm exam (formative/summative)	By the end of the 9th week	
Practical examinations to assess intellectual, Practical and general ILOs (C1-C5, B1-B3, D1,D2).	Assessment3: : Final practical examination	By the end of the 14th week	25% 37 Marks
Written exams to assess knowledge and intellectual ILOs (A1, A2, B1, B2, B3).	Assessment4: Final written examination (short assay and MCQ)	By the end of the semester	35% 53 Marks
Oral exams to assess knowledge, general and intellectual ILOs (A1, A2, B1, B2, B3, D1, D2)	Assessment4: Final oral examination	By the end of the semester	10% 15 Marks

6 - List of references

Histology

6.1- Essential Books (Text Books):

Junqueira, Cameino and Kelly (2008) L.C, 2016 Basic Histology, 7th ed .Librairrie du liban and Lang buruit, London, New York

6.2-Recommended Books:

Fawcett (2006): A Text book ofHistology ,12th edition .Chapman and Hall. New york, London

6.3- Periodicals:

Egyptian J of Histology

International J of Experimental Research

6.4- Web Sites of histology:

http://www.histology-world.com

Physiology

6.1- lectures notes

6.2- Recommended books

- Physiology department book and Lectures note. (Lectures and practical)
- Ganon textbook of physiology
- Essential pathophysiology

6.3 - Journal and websites

- American Journal of physiology

7- Facilities Required for Teaching and Learning

- Classrooms for small group tutorials (equipped with data show and computers)
- Equipped laboratories
- Clinical skills labs.
- Digital library
- Lecture Halls (data show)

Head of the department: Prof: DR: Omyma Galal Ahmed

Course Coordinator:

Dr. Eman Ahmad Abd El-Rahim

Dr/Rana Togan Farag

External Evaluator:

Prof: DR: Omyma Galal Ahmed

Prof.Dr Amal Taha Abou El ghait Taha