

University: Khyber Medical University

Faculty: Muhammad Imran

Designation: Lecturer Cardiology

Institute of Paramedical Sciences Khyber Medical University Hayatabad Peshawar

Course Specification:

- Programme (s) on which the course is given.....**B.Sc (HONS) Paramedics.**
- Semester**2nd**
- Major or minor element of the programmes..... **Major**
- Department offering the programme..... **Institute of Paramedics.**
- Department offering the course..... **Physiology**
- Academic year/Level..... **2012**
- Date of specification approval..... **N/A**

A. Basic Information:

- Title: **Physiology**
- Credit Hours:**3+1**
- Lectures:**54 (Each lecture will of one hour)**
- Practical: **18**
- Practical Hours:**36hours(18*2)**
- Each practical will be of two hours
- Tutorial: **1 per month**
- Total Hours: **75 (54+18+3)**

B. Professional information

1. Overall aims of course.

- To understand the physiology of various systems including in this semester
- This course will also provide an aid to understand other subjects and application of this knowledge in other subjects.

2. Intended learning outcomes of the course

a. Knowledge and Understanding.

- On completion of this course the students of B.Sc (hons) Paramedics will be able to:
- (a). Understand the organization of various systems with respect to their functions.
- (b). Understand the physiology of Cardiovascular system, Lymphatic system, Blood and Immunity, Nervous system, Reproductive system and Functioning of special senses.

b. Intellectual skills

- On completion of this course the students of B.Sc (hons) Paramedics will be able to:
- (a). To understand the function of various organs and systems.
- (b). To understand the physiology of various systems

c. Professional and Practical skills

- On completion of this course the students of B.Sc (hons) Paramedics will be able to:

d. (a). To understand other subjects and application of other subjects. It will provide an aid to understand the pathophysiology of various organs and systems

e. General and transferable skills

- On completion of this course the students of B.Sc (hons) Paramedics will be able to:
- To apply the knowledge in clinical problems. To understand normal and abnormal functioning of various organs and systems.

3. Contents

Week	Topic	No. of hours	No of Lectures
1 st	The Heart as a Pump and Function of the Heart Valves	1	1
	Function of heart and cardiac muscle properties	1	1
	Rhythmical Excitation of the Heart	1	1
2 nd	Intrinsic and extrinsic control of heart	1	1
	Specialized Excitatory and Conductive System of the Heart	1	1

	Physiology of various types of Circulation	1	1
3 rd	Intrinsic and extrinsic control of local blood flow	1	1
	Normal ECG (an overview)	1	1
	Some abnormal ECG,s	1	1
4 th	Cardiac cycle and heart sounds	1	1
	Summary of Cardiovascular system	1	1
	Test discussion	1	1
5 th	Blood and its components	1	1
	Types of blood cells	1	1
	Blood cells their function and an overview of blood related disorders; anemia, polycythemia	1	1
6 th	Types of blood and blood transfusion	1	1
	Hemostasis and Blood Coagulation	1	1
	Immunity and its components	1	1
7 th	Role of B and T lymphocytes in immunity	1	1
	Types of immunity	1	1
	Blood tests	1	1
8 th	Organization of the Nervous System, Basic Functions of Synapses, "Transmitter Substances	1	1
	Types of neurons, nerves and their physiology	1	1
	Central nervous System its parts and its physiologic anatomy	1	1
9 th	Mid Term		
10 th	Cerebral Cortex, Intellectual Functions of the Brain, Learning and Memory	1	1
	Sympathetic and Parasympathetic Systems and their function, Motor Control of brain and spinal cord	1	1
	Cerebral Blood Flow, Cerebrospinal Fluid, and Brain Metabolism	1	1
11 th	Reproductive and Hormonal Functions of the Male	1	1
	Function of the Pineal Glands in male, Testosterone and Other Male Sex Hormones	1	1
	Physiologic Anatomy of the Male Sexual Organs	1	1
12 th	Spermatogenesis , Function of the Seminal Vesicles, Function of the	1	1

	Prostate Gland,		
	Female Physiology Before Pregnancy and Female Hormones,	1	1
	Female Hormonal System	1	1
13 th	Monthly Ovarian Cycle	1	1
	Female Fertility	1	1
	Pregnancy and Lactation	1	1
14 th	Physiology of Optics of Vision	1	1
	Central Neurophysiology of Vision	1	1
	Physiology of hearing	1	1
15 th	Physiology of balance	1	1
	The Chemical Senses-Taste and Smell	1	1
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16 th	Revision of Cardiovascular system + Tests	3	3
17 th	Revision of Blood and immunity + Tests	3	3
18 th	Revision of Reproductive system + Tests	3	3
19 th	Revision of Special senses Revision of Nervous system + Tests	3	3
20 th	Final Term		

4. Teaching and learning methods

- a. Lectures
- b. Presentations
- c. Assignments
- d. Tutorials
- e. Class tests
- f. Midterm/final term

5. Assessments/Tests schedule

Assessment No	Type of Assessment	Week No
1 st	1 st class test	4 th week
2 nd	Assignment	6 th week
3 rd	Class Presentation	10 th week onwards
4 th	2 nd Class test	16 th week
5 th	3 rd Class test	18 th week

6. Weighting of assessments/Exams

No	Category	Percentage
1	Attendance	5%
2	Assignments	5%
3	Class tests	5%
4	Class presentation	5%
5	Mid Term Examination	30%
6	Final Term Examination	50%
	Total	100%

7. References

a. Class Lectures

- Class lecture slides, pdf or any other presentations

b. Text and Reference Books

- Medical physiology by Guyton and Hall,
- Anatomy and physiology by Ross and Wilson
- Illustrated physiology
- Atlas of physiology
- Physiology MCQ,s books
- Physiology by Raja Shahzad Gull

c. Facilities required for teaching and learning

- Text books and Reference books in library.
- Computers/Laptops for teachers.
- Internet facility for teaches
- Printer for teachers.
- Labs for practical.
- Models, Skelton, bones.
- Practical Equipments.

Course Coordinator

Head of department