



Benha University.
Faculty of Medicine.
Department of Physiology.

Course Specifications

Course title: Physiology.

Code: MED 0703

Academic Year (2010 – 2011)

- Department offering the course: Physiology.
- Academic year of M.B. & B.Ch. program: Second year 2010 – 2011.
- Date of specification approval: Department council No: 184 Date:25/7/2010

Faculty council No: Date:

A) Basic Information:

- Allocated marks: 250marks.
- Course duration: 30 weeks of teaching.
- Teaching hours: 7 hours / week = 210 hrs total teaching hours.

	Hours / week	Total hours
1- Lectures	5hrs/week for 30 weeks	150 hrs
2- Small group teaching / tutorials		
3- Practical	2hrs/week for 30 weeks	60 hrs

Total	30 weeks	210 hrs
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B) Professional Information:

1- Overall Aim of the Course:

- 1.1. Introduction of the basic facts of physiology for the medical students in the 2nd stage.
- 1.2. Helps the students to understand & interpret many medical problems specially those related to internal medicine.
- 1.3. Development of several practical capacities in the students related to experimental work.

2- Intended Learning Outcomes (ILOs):

2.1. Knowledge and understanding:

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

- 2.1.1. Describe the functional organization & structure of various body systems and its relation to function.
- 2.1.2. Describe General & specific functions of the body systems.
- 2.1.3. Explain Mechanisms aiming at maintenance of homeostatic functions as: pH, osmolarity, body temperature, etc.....
- 2.1.4. Describe and explain some pathophysiological aspects underlying the development of common diseases.
- 2.1.5. Describe the integration between different body systems to maintain homeostasis.
- 2.1.6. Explain and describe the feedback controls and autoregulations that achieve the necessary balances without which we would not be able to live.
- 2.1.7. Explain the physical and chemical factors that are responsible for origin, development and progression of life.
- 2.1.8. Describe the adaptations that occur to maintain life and explaining them on physiological bases.

2.2. Practical and Clinical Skills

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

- 2.2.1. Have general skills for attendance in biological science laboratories.
- 2.2.2. Deal with experimental animals as: rats, frogs, and rabbits.
- 2.2.3. Have Skills for use of basic medical devices as sphygmomanometer, stethoscope and thermometer.
- 2.2.4 Have general skills for performing neurological examination as regard tone, power, reflexes, clonus,etc
- 2.2.5 Identify different types of deafness and differentiate between the conductive and perceptive deafness.
- 2.2.6 Perform visual acuity examination, corneal and light reflexes.

2.3. Professional Attitude and Behavioral skills:

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

- 2.3.1. Demonstrate Respect for patients' rights and involve them and /or their caretakers in management decisions.
- 2.3.2. Demonstrate respect to all patients irrespective of their socioeconomic levels, culture or religious beliefs using appropriate language to establish a good patient-physician relationship.
- 2.3.3. Respect the role and the contributions of other health care professionals regardless their degrees or rank (top management, subordinate or colleague).
- 2.3.4. Reflect critically on their own performance and that of others, to recognize personal limitations regarding skills and knowledge to refer patients to appropriate health facility at the appropriate stage.

2.4. Communication skills:

By the end of the program the graduate will be able to:

- 2.4.1. Communicate clearly, sensitively and effectively with patients and their relatives, and colleagues from a variety of health and social care professions.

- 2.4.2. Establish good relations with other health care professionals regardless their degrees or rank (top management, subordinate or colleague).
- 2.4.3. Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.
- 2.4.4. Cope up with difficult situations as breaking news.
- 2.4.5. Respect patients and their relatives, superiors, colleagues and all members of the health profession.

2.5. Intellectual Skills:

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

- 2.5.1. Recognize Integration of facts about function of different organs subserving the homeostasis
- 2.5.2. Analyze medical problems related to diagnosis & treatment of physiological problems as: pH, osmolarity, etc....
- 2.5.3. Observe scientific phenomena during the practical study

2.6. General and transferable Skills:

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

- 2.6.1. Develop of the capacity of free discussion of medical problems.
- 2.6.2. Establish life-long self-learning required for continuous professional development.
- 2.6.3. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.
- 2.6.4. Retrieve, manage, and manipulate information by all means, including electronic means.
- 2.6.5. Present information clearly in written, electronic and oral forms.
- 2.6.6. Establish effective interpersonal relationship to Communicate ideas and arguments.

3- Course contents:

Subject	Lectures (hrs)	Tutorial / Small group discussion (hrs)	Practical (hrs)	Total (hrs)	% of Total
1- Central Nervous System (Basic organization and functions of the central nervous system, The sensory system, and the sensory receptors, Sensations, and Neural coding of sensory information, Pain sensation, Pain Control System and Headache, Synapses of the CNS, Motor functions of the spinal cord, The vestibular apparatus, Postural reflexes, The thalamus, Reticular formation, The basal ganglia, The cerebellum, The Hypothalamus, and the Limbic System, The cerebral cortex)	50		30	80	38.3%
2-ENDOCRINE&Reproduction (Introduction, The pituitary gland, The thyroid gland, The parathyroid glands, Endocrine regulation of Ca ⁺⁺ , suprarenal gland , Hormones regulating blood glucose level, The reproductive system.)	30			30	14.2%
3- Kidney (The overall kidney functions, Nephron, Juxtaglomerular apparatus, Renal blood flow, Glomerular filtration rate, Tubular function, Renal handling of water, water balance, Regulation of sodium excretion & extracellular fluid volume, Renal handling of K ⁺ , Ca ²⁺ , mg ²⁺ , and phosphate, Diuresis and diuretics, Role of the kidney in acid - base balance, Micturition.)	20			20	9.5%
4- Physiology of Gastro-Intestinal Tract (Introduction, Salivary secretion,	20			20	9.5%

Mastication, Stomach, Pancreatic secretion and Liver, Bile secretion and jaundice, Small intestine, Large intestine.)					
5- Special senses (Physiology of vision, Physiology of hearing, Taste sensation, Olfactory sensation.)	15		18	33	15.7%
6- Metabolism: (Energy Metabolism, Metabolic Rate and Thermogenesis , Respiratory quotient , Control of food intake and Regulation of energy Stores, Obesity and starvation, Regulation of Body Temperature, Physiology of Exercise).	15			15	7.1%
7- Revision			12	12	5.7%
TOTAL	150		60	210	100%

4- Teaching and learning methods:

METHODS USED:

1. Lectures.
2. Practical classes

TEACHING PLAN:

Lectures: 150 lectures

Tutorials:

Practical classes: 60 practical classes

Time plain:

Item	Time schedule	Teaching	Total
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		hours	hours
Lectures	5 Times/week	150hours	71.4%
Practical classes	2Hours/ week	60hours	28.6%
Tutorials			
Total		210 hours	100%

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

1. Practical attendance
2. Log book

5-B) Assessment TOOLS:

Tool	Purpose (ILOs)
Written examination	To assess knowledge acquisition, including MCQs
Oral examination	To assess understanding and stability of knowledge given, attitude and presentation.
Practical examination	To assess practical skills.

5-C) TIME SCHEDULE:

Exam	Week
1- Assessment 1	Week -----12
2- Assessment 2	Week -----22
4- Final exam	At end of year (week 30)

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
1- Mid-term exam	50	20%

3- Final exam: a- Written b- Practical c- Oral	125 25 50	48% 12% 20%
4- Assignments & other activities	-----	-----
Total	250	100%

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-E) Examination description:

Examination	Description
1- Mid-term exam	Quiz (MCQs)
3- Final exam: a- Written b- Practical c- Oral	Long and short ac quistion Perform neurological examination and identify some neurological lesions, perform hearing tests and differentiate types of deafness. How many sessions
4- Assignments & other activities	Assignments, projects, practical books etc

6- List of references:

6.1- Basic materials:

Department books:

- 1- Medical physiology
- 2- Practical book

6.2- Essential books (text books):

- a) Textbook of Medical Physiology (Guyton & Hall).
- b) Review of Medical Physiology (William F. Ganong)

6.3- Recommended books:

Physiology (NMS).

6.4- Periodicals, Web sites, etc:

- <http://www.medscape.com>.
- <http://www.pubmed.com>.
- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lectures halls: 3
- Department lectures halls: 1
- Department laboratories: 2

Course coordinator: Prof Dr. Alaa Abd- Elaziz Al-teles

Head of Department: Prof Dr. Alaa Abd- Elaziz Al-teles

Date : 2010 – 2011.