



**Faculty of Medicine
Quality Assurance Unit**



**Assiut University
Faculty of Medicine
Department Of Medical Physiology**

Physiology 2 Course Specifications

2nd year of M.B.B.Ch. Program

2016-2017

Physiology 2

University: Assiut

Faculty : Medicine

Departement : Medical Physiology.

Programme(s) on which the course is given: M.B.B.ch Program

_Date of last revision: 9/2016

External evaluator: Prof. Dr. Saad Kamal Taha

1- Basic information

Title: Physiology 2

Code: AMed 08

Academic year / Level: 2nd year of M.B.B.Ch. program

Department offering the course:

Department of medical physiology

Lecture: 150 hours

Tutorial/ Practical: 60 hours

2- Overall aims

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

- To provide the student with the knowledge about the normal structure, and function of the body and of each of its major systems.
- To enable the student to describe the integration of physiological functions, which characterize the performance of the human body as a whole in health.
- To provide the student with the knowledge about the physiological principles underlying disease states that aids in interpretation of symptoms.

3- Intended Learning Outcomes (ILOs)

A- Knowledge and understanding:

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

- A1- Define the different components of the CNS, their functions, its activity (sensation. motor and reflex action) and effect of lesions in different components of CNS (A 5,6,7,20)
- A2- Describe functional structures of the organs concerned with the special senses, their functions, receptors of sensations, their pathway and their localization in the cerebral cortex. (A 5, 6, 7, 20)
- A3- Describe nature of hormones, general mechanism of their actions and functions, dysfunctions. (A 5, 6,7, 20)

- A4- Define hormones secreted by the male and female reproductive systems, their functions, their role in different aspect of the reproductive process e.g. menstrual cycle, pregnancy, parturition and lactation. (A 5, 6, 7, 20)
- A5- Describe the functional structure of the kidney, renal blood flow, filtration through glomerulus, absorption, mechanism of urine formation, Micturation reflexes, regulatory functions of the kidney. (A 5, 6, 7, 20)
- A6- Define the metabolic rate, BMR and factors affecting it, mechanism of regulation of body temperature, underlying principles of obesity and starvation. (A 5, 6, 7, 20)
- A7- Identify the need to engage in lifelong learning. (A 5, 6, 7, 20)

B- Intellectual skills

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

- B1- Correlate the normal functions of different components of the CNS and the effect of their lesions. (B1)
- B2- Apply the normal pathways of the special sense and predict the defect in their functions. (B1)
- B3- Comprehend the effects of pathophysiology of endocrinology. (B1)
- B4- Comprehend the effects of pathophysiology of male and female reproductive systems. (B1)
- B5- Correlate mechanism by which kidney regulate body function. (B1)
- B6- Comprehend the importance of general metabolism in control body weight & know mechanisms of heat loss and heat gain. (B1)

C- Professional practical skills

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

- C1- Perform the systemic examination of the CNS (cranial nerves, sensory, motor, cerebellum and vestibular apparatus). (c1)
- C2- Perform some visual tests (corneal, light & accommodation reflexes, visual acuity, color vision and visual field). (c1)
- C3- Perform a preliminary function tests of common endocrinal glands. (c1)
- C4- Perform testicular function tests, detection of ovulation time, pregnancy test. (c1)
- C5- Perform Kidney function test. (c1)
- C6- Measure the basal metabolic rate and body temperature. (c1)

D- General and transferable skills

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

- D1- Communicate with staff members and their colleagues, manage time efficiently by preparing and displaying a scientific research topic.(d 11-17)
- D2- Present information clearly with efficient time management (d 11-17)

D3- Evaluate their and others' work and accept the limitation in his/her knowledge(d 11-17)

D2- Display physiological data in a graphical form. (d 11-17)

D3- Communicate using available presentation aids (Overhead projectors or Data show) to present clearly and effectively a scientific topic. (d 11-17)

4- Course contents

Topics	No. of hours	Lectures	Tutorial /Practical
Metabolism	14	14	-
Endocrine	38	20	18
Reproduction	28	20	8
Kidney	23	15	8
CNS	71	55	16
Vision	16	10	6
Hearing	12	8	4
smell&taste	8	8	-
Total	210	150	60

5- Teaching and learning Methods

- 1- Lectures for knowledge and intellectual skill outcomes using data shows, overhead, slide projector
- 2- Discussion sessions for general skills using rooms for small groups teaching
- 3- Practical sessions and case study classes with active participation of students for gain intellectual, practical and communication skills including laboratory demonstration, practical training .
- 4- Tutorials in the class using data show
- 5- Students asked to do small research presentations or poster and discuss it with their classmates and with the lecturers. This helps them gain the general skills outcomes (D 1-D5).
- 6- E-Learning System interactive discussions.

Facilities used for teaching and learning

- 1- Lecture halls
- 2- Rooms for small groups teaching
- 3- Audio visual aids (data shows, overhead, slide projector....etc)
- 4- Computers and internet facilities (E-Learning System)
- 5- Faculty library
- 6- Central library of the Assiut University
- 7- Skills laboratory

6- Teaching and learning Methods for students with learning difficulties:

- Lectures
- Practical classes
- Tutorials
- Special low price classes outside the teaching schedule

7- Student assessment

A- Methods

- 1- Written exams (short essay and MCQ) to assess knowledge and intellectual skills (a1-a6, b1-b6)
- 2- Oral exam to assess knowledge, general and intellectual skills (a1-a6, b1-b6)
- 3- Practical exam to assess intellectual, practical and general skills (c1-c6, d1-d4)

B-Assessment schedule

- Assessment 1:** Periodic assessment by the end of the 10th week
Assessment 2: Periodic assessment by the end of the 15th week
Assessment 3: Midterm assessment by the end of the 24th week
Assessment 4: Final practical exam by the end of the 30th week
Assessment 5: Final written exam by the end of the 30th week
Assessment 6: Final oral exam by the end of the 30th week

C-Weighting of assessments

Periodic and midterm assessments	50 marks (20%)
Final written exam	125 marks (50 %)
Final oral exam	50 marks (20 %)
Final practical exam	25 marks (10 %)
Total	250 marks (100%)

8- List of references

- 1- Course Notes:

Notes on Physiology and practical book by staff members of Physiology department

- 2- Essential Book (Text Books):

Textbook of Medical Physiology Arthur C. Guyton, John E. Hall, 13th Ed., 2016

- 3- Recommended books:

Review of Medical Physiology **William F. Ganong, 25th Ed, 2015**

Human Physiology: From Cells to Systems Lauralee Sherwood, 9th Ed., 2015

Human Physiology Stuart Ira Fox, 14th Edition 2016

Essentials of anatomy and physiology Seeley S Tate, 11th Ed., 2016

- 4- Periodicals and Web sites

American journal of Physiology, <http://www.med-ed-online.org/>

Course coordinator: Prof. Dr. Enas Hamed

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