



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

Department of Medical Physiology

Course specifications

Medical Physiology for M.D in Psychiatric Medicine

2016/2017

Medical Physiology for Psychiatric Medicine Doctorate degrees Course specifications

University: Tanta

Faculty: Medicine

Department: Medical Physiology

A- Administrative Information

- **Program title: Medical Physiology for M.D in Psychiatric Medicine**
- **Department offering the program : Neuropsychiatry Department**
- **Departments responsible for the program: Neuropsychiatry Department& Medical Physiology.**
- **Course Code: NEUROPSCH 900P1**
- **Academic year/ Level : 2016 /2017**
- **No. of Credit/taught hours: 7 credit hour.**
- **Authorization date of course specification:**

B- Professional Information

1- Overall Course aims:

Our course aim to:

- Acquire the bases and methods of medical researches
- Help the student s to go in depth in the field of psychiatry through original medical researches.
- Develop analytical and critical methods when dealing with medical problem related to psychiatry.
- Teach medical knowledge to hypothesize new relations and explain pathogenesis of different psychiatric disorders.
- Acquire deep orientation about the current psychiatric problems, and up to date hypothesis explaining it
- Discuss professional problems and suggest innovative solutions

2- Intended learning outcomes (ILOs):

a. knowledge and understanding:

At the end of the course the graduate should be able to:

- a1 -Specify selected topics in Medical Physiology of psychiatry at greater depth.
- a2 -Explain the fundamental mechanisms of disease and the pathophysiologic basis of major human diseases.
- a3 -Identify knowledge and understanding through a range of subjects relevant to your specific area of mental health
- a4 -Recognize on the Medical Physiology underlying mental health and diseases

b. Intellectual skills:

At the end of the course the graduate should be able to

b1 Demonstrate medical information related to psychiatric diseases to elicit new conclusions.

b2 Plan to solve medical problem related to psychiatric diseases

d. General transferable skills:

At the end of the course the graduate should be able to

d.1. Communicate effectively with his colleagues and scientific institutes.

d.2. Solve problem using the basic computer skills which serve his career development

d.3. Apply self evaluation and specify his medical educational needs.

d.4. Use different learning resources to get knowledge and information.

d.5. Manage time and practice team working through collaboration with other specialties

d.6. Apply continuous medical education

3- Course contents:

3.1 course structure:

- 15 weeks /semester
- **Semester** starts in 1st of May and in 1st of November

3.2 course admission and progression requirements:

Registration, progress requirements, and schedule of written exams are provided by the faculty post graduate by laws provided to all students through post graduate guide book

3.3 Course details/ semester

Course title	Topic	No. of credit hours	No of Credit points	prerequisite
NEUROPSCH 900P1	compulsory courses in applied Medical Physiology*	7 hs	21 points	-----

3.4 Details of teaching Course /wk/15wks first semester

Course code	Teaching courses	No. of credit hours/wk	No. of contact hours/wk	Remarks
NEUROPSCH 900P1	Formal lectures attended by the students	4hs	4hs	
	Tutorial	1h	2hs	
	Seminar	2h	4hs	

* The students should attend 75% of the activities related to the course . If the attendance less than 75%, the student should be notified and considered as forced withdrawal FW

*A log book is constructed to evaluate the attendance of each student for the different activities listed above by the main professor's advisory committee. The log book should be completed before the final comprehensive examination by one month.

Through out of the course different activities are recorded daily in the log book as follows; annex 1

Detailed contents of the course topics.

(Syllabus contents):

1. Theory & activities.

These listed topics below are covered through a mix of self learning and structured program (Formal lectures, tutorial, seminars and assignment) scheduled and previously announced in Medical Physiology department.

Detailed contents of the course topics. (Syllabus contents):

List of formal lectures, tutorials and seminars (Special topics).

1. Transport across cell membrane and ionic channels
2. Information and Signaling Mechanisms in Neurons and neuronal Circuits.
3. Neuronal, molecular and behavioral process involved between subject transfer of emotional information.
4. Central nervous system receptors transmitters and blockers and their role In psychotic behavior and dementia.
5. Intellectual functions of the brain ,learning and memory.
6. Functions of autonomic and association areas of the brain.
7. State of brain activity in psychosis.
8. Brain metabolism.
9. Behavior and motivation mechanisms of the brain.
10. Medical Physiology of the hypothalamus.
11. Vascular endothelial control of microcirculation.
12. Role of cerebellum in voluntary movement.
13. Function of thalamus and thalamic syndrome Sleep and its disorders.
14. Sleep and its disorders.
15. Reticular activating system.
16. Cardiovascular mechanic and hemodynamics
17. Regulation of body fluid, volume, osmolarity distribution and electrolyte balance
18. Functions of the limbic structures with special emphasis on the functional organization of the amygdaloid complex.
19. Neuronal, molecular & behavioral processes involved in between subject transfer of emotional information.
20. Factors influencing selective attention and habituation processes.
21. Medical Physiology studies the body's immune system and reactions to various diseases, allergens & infections.
22. Structure–function studies of nuclear receptors.

23. Neurochemistry.
24. Cerebrovascular system.
25. Synapses ,properties of synaptic plasticity, neurotransmitters and mode of transmission.
26. Cell membrane Medical Physiology and its role in maintaining cell function

Related specialty systems:

1. Central nervous system
2. Cardiovascular system.
3. Blood.

4- Teaching and learning methods:

- 4.1 Illustrated lectures.
 - 4.2 Tutorial is scheduled and previously announced special topics from the curriculum are discussed in the tutorial.
 - 4.3 Assignment to be prepared by the graduate in one of the special topic taught.
 - 4.4 Seminars are scheduled and previously announced
 - 4.5 Fully equipped Medical library well stocked with books and journals related to Medical Physiology
 - 4.6 Faculty equipped with internet access.
- Each teaching method is designed to serve different educational goal & together they provide an appropriate stimulating atmosphere for learning.

5- Student Assessment:

- 5.1. An end semester written and oral examinations
- 5.2. The grades of the semester (Final qualified examination) is recorded in transcript for each student and the grades should not be less than C- or the student should repeat this examination.

6- Assessment schedule:

6.1. End Semester Final written qualifying examination	At the end of the semester (60% of the total mark) with at least 60% grade if less, The student repeat the written and the oral examination.
6.2. oral qualifying examination	At the end of the courses(40% of the total mark), After the written (if its evaluation is satisfactory) with grade 60% if less the student repeat only the oral exam

7- Weighing of assessments:

Grading system for End Semester written Exam:

Grade	%	Code	CGPA points
Excelent	95% or more	A	4.000
	90% to less than 95%	A-	3.666
Very Good	85% to less than 90%	B+	3.333
	80% to less than 85%	B	3.000
Good	75% to less than 80%	B-	2.666
	70% to less than 75%	C+	2.333
Satisfactory	65% to less than 70%	C	2.000
	60% to less than 65%	C-	1,666
Failed	55% to less than 60%	D+	1.333
	30% to less than 55%	D	1.000
	Less than 30%	F	0.000

Final comprehensive exam

Medical Physiology	Final written	Final oral	Total
Final comprehensive exam	90 (60%)	60 (40%)	150

List any formative only assessment:

Final semester examination: In the form of:

- **Written examination:** consists of one paper, three hours designed to evaluate understanding of the subject..
- **Oral examination:** each student is evaluated by at least 4 examiners,

8- List of references:

8.1. Essential books (Textbooks):

The following textbooks will be used in the course

1. Guyton &Hall textbook of Human Medical Physiology and Mechanisms of Disease.
2. Gannon (review of medical Medical Physiology).
3. Vander's human Medical Physiology.
4. L.S. Costanzo. Medical Physiology. 3rd edition. W.B. Saunders Company.
5. R.A.Rhoades and D.Bell. Medical Medical Physiology. Lippincott Williams & Wilkins , 3rd edition

8.2. Alternative textbooks:

6. Principle of Medical Physiology. Robert M.Bern.
7. PathoMedical Physiology. Biological basis of disease. Kathren L. Macance RN..
8. Human Medical Physiology from cell to system by: Lauralee Sherwood.
9. L.S.Costanzo. Medical Physiology. Board review series. Lippincott Williams & Wilkins.
10. C.H. Best and N.B. Taylor. physiological basis of medical practice. Lippincott Williams & Wilkins.

8.3. Periodicals, Web sites, etc:

- www.tebawy.5ucom.

- <http://bcs.whfreeman.com>.
- <http://www.bpcc.eud/sciencealliedhealth/humanMedicalPhysiologylinks.html>.
- <http://bio-alive.com/animations/MedicalPhysiology.htm>.

9- Other resources/ facilities required for teaching and learning to achieve the above ILOs:

- All facilities required for teaching are available.

10- We certify that all of the information required to deliver this course is contained in the above specifications and will be implemented.

We verify that the above course and the analysis of students and external evaluator opinions are accurate.

Course coordinator and head of department
name.....signature.....Date.....

Head of quality assurance unit:
name.....signature.....Date.....