Quality Assurance Unit

Tanta University
Faculty of Medicine

Department of Medical Physiology

Course specifications

Medical Physiology for Pediatric Diploma & Master degrees First Part

2016 - 2017

Medical Physiology for Pediatric Diploma & Master degrees Course specifications

University: Tanta   **Faculty: Medicine**   **Department: Medical Physiology**

A- Administrative Information

• **Program title: Medical Physiology for Pediatric Diploma & Master degrees**

• **Department offering the program :Medical Physiology Department**

• **Departments responsible for the program: Medical Physiology & Pediatric medicine departments.**

• **Course Code: PED 7002& PED 8002**

• **Academic year/ Level : 2016 /2017**

• **No. of Credit/taught hours: 1 Theoretical credit hour(1 hour/week for 15 weeks)**

• **Authorization date of course specification: / /**

B- Professional Information

1-   Overall Course aims:

The aim of this course is to:

• Help the postgraduate students to achieve adequate level of both basic and advanced essential knowledge about established and evolving topics concerned with Medical Physiology related to their speciality.

• Acquire knowledge to address, demonstrate, and practice positive attitudes that will help them to achieve medical research on scientific bases

2-   Intended learning outcomes (ILOs):

a.   knowledge and understanding:

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

a.1. Identify the basic physiologic function of different body organs and systems

a.2. Explain the basic theories and principles of Medical Physiology and related sciences needed in his career

a.3. State the functions of the immune system

a.4. Recognize normal growth and development during infancy, childhood and adolescence

a.5. Identify the appropriate diagnostic tools (and describe how they would be interpreted) for the most important neonatal and pediatric problems

b.   Intellectual skills:

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

b.1. Analyze appropriate professional attitudes and behaviors in different practice situations.

b.2.   Practice presentation skills , and evidence based scientific discussion

d. General transferable skills:

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

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

d.2.   Use 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:

Course title	MSC or Diploma specialists	No. of credit hours	No of Credit points	Remarks
Medical Physiology	Pediatric medicine	$2_{1/3}$ hs (1for Medical Physiology)	7 points (3for Medical Physiology)	Co-requisite with biochemistry & Pharmacology

Detailed contents of the course topics (Syllabus contents):

General topics

Week No.	topic
1-	1-Hemostasis, anticoagulants and hemorrhagic disorders.
2-	2-pain, pain analgesia system 3-Homeostasis and Ca++ homeostasis
3-	4-Arterial Blood Pressure and pathophysiological basis of hypertension.
4-	5-chemical transmitters of ANS.
5-	6-Hemorrhage and shock.
6-	7-Heart rate and its regulation
7-	8-Control of diameter of arterioles
8-	9-Supra- renal cortical hormones and disorders 10- Hormones regulating glucose metabolism.(Diabetes mellitus: PathoMedical Physiology and its complications
9-	11- ABO system, Rh factor, Blood transfusion and its incompatibility. 12- Regulation of body water and electrolytes.
10-	13- Acid – Base balance and disorders 14- Hypoxia and cyanosis
11-	15- Erythropoiesis , Anemia and Polycyathemia. 16- Cardiac reserve
12-	17- Thermoregulation & Clinical aspects of thermoregulation 18- Cardiac Output

| **13-** | 19- Cellular mechanism of hormonal actions |
| | 20- Edema |

Related specialty systems:

1. Medical Physiology of newborn.
2. Digestive system.
3. Endocrinology.
4. CNS {sensory part (pain sensation) and motor part}.
5. Blood.

Related specialty topics:

1-Ionic transport and homeostasis.

2-Body fluid and parental fluid therapy.

3-Functional development of the organs systems of the fetus.

4-Adjustment of the infant to extrautrine life. Special functional problems of neonate.

5-Physiological problems of pre maturity.

6-Endocrine and neuroendocrine interaction that regulate puberty.

7-Disorders of bilirubin metabolism.

8-Fetal and neonatal Medical Physiology.

9-Body temperature regulation in health and diseases.

10- Control of growth.

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 scheduled and previously announced to facilitate selection identification of their thesis.

- Each teaching method is designed to serve different educational goal, and together they provide an appropriate stimulating atmosphere for learning.

5- Student Assessment:

End semester final examination consists of:

5.1. Final written consists of one paper, 3 hours. With the co-requisite subjects The written is divided into 3 parts part1 short questions in the form (state, mention ,explain compare define etc). the 2nd part in problem solving question the 3rd part is MCQ questions to assess(a.1, a.2, a.3, a.4).

5.2. Oral to assess (a.1, a.2, a.3, a.4 & b.1, d.,1 d2,d3,d4,d5,d6)

6- Assessment schedule:

6.1. **End Semester Final written qualifying examination**	At the end of the semester (60% of the total mark)
6.2. **oral qualifying examination**	After the written (40% of the total mark)

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

Final exam	Final written	Final oral	Total
Final comprehensive exam of Medical Physiology, biochemistry and Pharmacology	60	40	100

• Final written examination consists of one paper, 3 hour s. With the co-requisite biochemistry and Pharmacology

• Oral examination by two examiners

8- List of references:

8.1. Essential books (Textbooks):

- Guyton &Hall textbook of Human Medical Physiology and Mechanisms of Disease.
- Gannong's review of medical Medical Physiology.
- Vander's human Medical Physiology.

8.2. Recommended books:

- Applied Medical Physiology in intensive care by M.R. Pinsky (Editor), J. Mancebo (Editor), L. Brochard (Editor), Gran Hedenstierna 2009.
- An introduction to human disease: pathology & pathoMedical Physiology correlations by Leonard Crowley. Hardcover August 2009.

- Critical pathways in cardiovascular medicine: Second Edition Lippincott Williams & Wilkins.
- Applied Medical Physiology: A manual showing functions of the various organs in disease by Frederich Augustus Rhodes.

8.3. Periodicals, Web:

- www.tebawy.5u.com.
- http://bcs.whfreeman.com.
- http://www.bpcc.edu/sciencealliedhealth/humanMedical Physiologylinks.htmlhttp://bio–alive.com/animations/Medical Physiology.htm.
- Human Medical Physiology from cell to system By: Lauralee Sherwood.

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………………