



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

Department of Chest

Course Specifications

Physiology for Chest Diploma Degree

2021-2022

Physiology for Chest Diploma degree Course specifications

University: Tanta

Faculty: Medicine

Department: physiology

1- Administrative Information

1. Program title: Physiology for Chest Diploma degree
2. Department offering the program: chest medicine Department
3. Departments responsible for the program: physiology & chest medicine Department
4. Course Code: CHEST 7002
5. Authorization date of course specification: 21/8/2019

2- Professional Information

1- Overall Course aims:

- Our course aim to offer basis in physiology for the specialty of Respiratory Medicine and should have the knowledge, skills, attitudes and competencies to practice as an independent specialist in chest Medicine

2- Intended learning outcomes (ILOs):

a. knowledge and understanding:

At the end of the course graduate should be able to

- a.1. Recognize basic theory and principle of Physiology that help them to understand human disease regarding etiology, diagnosis and control.
- a.2. Identify basic clinical physiology in relation to respiratory medicine cardiovascular and autonomic nervous system.
- a.3. Recognize the various causes and pathogenesis of diseases in respiratory medicine.
- a.4. Identify knowledge of basic defect in physiological control mechanisms that result in disease state.

b. Intellectual skills:

At the end of the course graduate should be able to

- b.1. Interpret results of physiologic tests such as pulmonary function tests, arterial blood gases and electrolyte analysis.
- b.2. Use the results of all tests ordered to modify the problem list and the differential diagnosis accordingly. .

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d. General transferable skills:

At the end of the course graduate 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:

Physiology	Lectures	practical h
Physical properties of the lungs	1	1
Mechanics of breathing	1	1
Transport of respiratory gases	1	1
Regulation of respiration & types of breathing	1	1
Pulmonary circulation and pulmonary hypertension	1	1
Ventilation / perfusion ration	1	1
Hypoxia and cyanosis	1/2	1/2
Acid – base balance	1	1
Water and electrolyte Regulation	1/2	1/2
Blood elements (RBCs, WBCs and platelets)	1/2	1/2
Capillary circulation, body fluid formation and edema	1	1
Glucose homeostasis	1/2	1/2
Total	10	10

Detailed contents of course topics: (Syllabus contents):

General topics

- 1- Haemostasis and blood coagulation, anticoagulant, Hemorrhagic disorders.
- 2- Erythropoiesis and anemia.
- 3- ABO system & Rh factor, blood transfusion and incompatible blood transfusion.
- 4- Hypoxia and cyanosis.
- 5- Pulmonary function tests.
- 6- Homeostasis.
- 7- Regulation of gastrointestinal secretion.
- 8- Normal and abnormal motility of gastrointestinal tract.
- 9- Water balance, Blood volume, factors affecting and its regulation.
- 10- Regulation of food intake and obesity.
- 11- Endocrine functions of suprarenal cortex and its disorders.
- 12- Thyroid functions and its disorders.
- 13- Cellular mechanism of actions of hormones.
- 14- Pain sensation & pain analgesia system.
- 15- Glucose homeostasis and disturbances.
- 16- Arterial blood pressure, types and pathophysiological basis of hypertension
- 17- Heart rate and its regulation.
- 18- Acid base balance and its functions tests.
- 19- Ca^{++} homeostasis.
- 20- Mechanisms of transcellular and transcapillary exchange.
- 21- Control diameters of arterioles.
- 22- Hemorrhage & shock.
- 23- Coding of sensory information.
- 24- Functions of the thalamus and thalamic syndrome.
- 25- Mode of action of autonomic nervous system.
- 26- Chemical transmitter of autonomic nervous system

Related specialty systems:

1. Cardiovascular system.
2. Respiratory system.

3. Blood.

Related specialty topics:

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12. Glucose homeostasis

4-Teaching and learning methods:hybride

4.1 Online 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 topics.

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

5-Student Assessment:: may be electronic but inside the faculty(face to face)

5.1. Written one paper examination 3 parts in the form of short notes (Mention ,Explain ,Define compare etc) the second part is problem solving question and the third part is MCQ questions to assess(a.1, a.2, a.3,a4).

5.2. Oral to assess (a.1, a.2, a.3, a & b.1, b 2 and d.1,2,3,4,5,6)

6-List of references:

6.1 Essential books (Textbooks):

- Guyton & Hall textbook of Human Physiology and Mechanisms of Disease.
- Gannon (review of medical physiology).
- Vander's human physiology.

6.2 Recommended books:

- Applied physiology in intensive care by M.R. Pinsky (Editor), J. Mancebo (Editor), L. Brochard (Editor), Gran Hedenstierna 2009.
- An introduction to human disease: pathology & pathophysiology correlations by Leonard Crowley. Hardcover August 2009.
- Critical pathways in cardiovascular medicine: Second Edition Lippincott Williams & Wilkins.
- Applied physiology: A manual showing functions of the various organs in disease by Frederick Augustus Rhodes.

6.3 Periodicals, Web:

- www.tebawy.5u.com.
- <http://bcs.whfreeman.com>.
- <http://www.bpcc.edu/sciencealliedhealth/humanphysiologylinks.html>
- <http://bio-alive.com/animations/physiology.htm>.
- Human physiology from cell to system By: Lauralee Sherwood.

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

All facilities required for teaching are available.

8-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.....

