



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

Department of Chest

Course Specifications

Medical Biochemistry for Chest Diploma Degree

2021-2022

Medical Biochemistry for Chest diploma degree Course specifications

University: Tanta

Faculty: Medicine

Department: Medical Biochemistry

1- Administrative Information

1- Program title: chest diploma degree

2- Department offering the program: Chest Department.

3- Department responsible for the course: Medical Biochemistry Department.

4- Course code: CHEST 7002

7-Authorization date of course specification: 21-8-2019

2_ professional information

1 – Overall program aims

To provide the candidate with professional knowledge, for analyzing routine diagnostic laboratory services in Medical and Clinical Biochemistry and perform medical research.

2 – Intended learning outcomes (ILOs):

A-knowledge and understanding:

By the end of the course the candidate will be able to:

a1-- Define the basic theories and principles of basic science that help him to understand cardiovascular diseases; regarding diagnosis, management and prevention.

b. Intellectual skills:

By the end of the course the candidate will be able to:

b1-Analyze, and evaluate medical information and relate it to medical problem solving in cardiology.

b2-Discuss Biochemical paper on evidence based manner

C. Professional and practical skills:

By the end of the course the candidate will be able to:

C1-Interpret biochemical investigations and understand the biochemical basis of diseases

C2-Ask for the suitable laboratory diagnostic tests

d. General and transferable skills:

By the end of the course the candidate will be able to:

d1-Perform continuous medical education

Academic standards adopted

Academic standards for postgraduates was considered according to the academic standards of Boston University, school of medicine

<http://www.bu.edu/academics/busm/>

And was in line with those approved by The Egyptian Authority for Quality Assurance and Accreditation for Education (NAQAAE)

3 – Curriculum structure and content:

Biochemistry	Theoretical	practical
Introduction to metabolism	1	1
Carbohydrate metabolism	1	1
Function of carbonic anhydrase	1	1
Hormones	1	1
Mineral metabolism	1	1
Vitamins (daily requirement and deficiency) .	2	2
Free radicals and anti-oxidants	2	2
Food chemistry	1	1
Total	10	10

Detailed contents of course topics: (Syllabus contents):

- General properties of Enzymes
- Catalysis, Coenzymes, Enzymes Specificity, Enzymes Classification & Nomenclature, Quantitative Measurement of Enzyme Activity, Isolation of Enzymes, Intracellular Distribution of Enzymes, Isoenzymes, Enzymes in Clinical Diagnosis
- Carbohydrate Metabolism: Intermediary Metabolism of Carbohydrate, Glycolysis, Oxidation of Pyruvate to Acetyl-CoA, Glycogen Formation & Degradation, Glycogenesis, Glycogenolysis, The Hexose Monophosphate Shunt or Pentose Phosphate Pathway, Gluconeogenesis, Metabolism of Hexoses, Minor Pathways of

Glucose Metabolism, The Uronic Acid Pathway, Metabolism of Fructose, Metabolism of Galactose.

- Lipid Metabolism: Oxidation of Fatty Acids, biosynthesis of Saturated Fatty Acids, Metabolism of Unsaturated Fatty Acids, Metabolism of Acylglycerols, Metabolism of Sphingolipids, Phospholipids & Sphingolipids in Disease (Lipidoses).
- Role of Tissues: Metabolism of the Plasma Lipoproteins, Role of the Liver in Lipid Metabolism. Cholesterol Metabolism. Regulation of Carbohydrate & lipid Metabolism Regulation of Ketogenesis, Interconversion of Major Foodsuffs. Te Economics of Carbohydrate & Lipid Metabolism in the Whole Body
- Function of carbonic anhydrase
- Hormones
- Mineral metabolism
- Vitamins (daily requirement and deficiency).
- Free radicals and anti-oxidants
- Food chemistry

4-Teaching and learning methods:hybride

Online Lectures, seminars, journal clubs, case presentation and assignments

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

5.1 Final written exam to assess (a₁, b₁, c_{1,2})

5.2 Oral exam to assess (b_{1,2}, c₂, d₁)

5.3 Log book to assess (c₁& d₁)

6-List of references

Text books

- Harper's Illustrated Biochemistry 28 edition Lange. Mcgraw Hill Boston 2010
- Lippincott ' S Illustrated review of Biochemistry fourth edition 2008
- Lehninger' Principle of Biochemistry fifth edition edition 2010
- Thomas M. Devlin Textbook of Biochemistry with Clinical Correlations Publisher: ECFC580B2John Wiley and Sons Ltd Edition: 6th Revised edition 2008
- William J. Marshall : Clinical Chemistry: With Access 4th edition 2008

Web sites

- www.tanta.edu.eg/faculties/medicine/departments/Bioch
- www.nlm.ncbi.gov
- [www. Medical biochemistry l.org](http://www.Medicalbiochemistry.l.org)
- [http://www.textbooks.com/Catalog/PD8/ biochemistry](http://www.textbooks.com/Catalog/PD8/biochemistry)

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

The department has different types of scientific activity includes

- weekly seminars to discuss new trend and techniques
- journal Club to discuss the new scientific paper in the field of Medical Biochemistry and Molecular Biology
- Free Internet access for international data bases is available for all students through the faculty postgraduate library
- The essential text books for this course are available either in department or faculty library

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

- Program external evaluator: Prof.Dr. TarakFoaad
- Program Internal evaluator: Prof. Dr. Thanaa El Shiek
- Reports of external and internal evaluators
- Questionnaire to students
- Reports of faculty internal auditing system

Will be included in the annual program report, and action plan will be structured accordingly

-Appendix courses specifications

9-we certified that all of the information required to deliver this program 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.....

