

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of MEDICAL ANALYSIS,
-2022 Fall
Course Information for MA 407 ADVANCED CLINICAL BIOCHEMISTRY I

Course Name: ADVANCED CLINICAL BIOCHEMISTRY I

Code	Regular Semester	Theoretical	Practical	Credits	ECTS
MA 407	7	2	2	3	4

**Name of Lecturer(s)-
Academic Title:** Rondik Ahmed - BSc. PhD

Teaching Assistant: Mohammed Rasul

Course Language: English

Course Type: Main

Office Hours 12:00-15:00

Contact Email: rundk.hwaiz@gmail.com

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Teacher's academic profile: BSc in Chemistry College of Science/University of Salahaddin. PhD in Medical Biochemistry Lund University/Department of Medical Sciences. Assistant professor at Hawler Medical University/ Collage of Health Sciences. Lecturer at Medical analysis Departments/Tishk International University

Course Objectives: 1.Understanding errors of metabolism of all nutrients. 2.Know how hormones act. 3.Know how small materials digest and diseases related to disorder with GIT. 4. Hormones action and function and disease related to them 5. Water and electrolytes importance and its interpretation

Course Description (Course overview): The course include overall of the clinical chemistry, include water and electrolytes, kidney diseases, error metabolism of carbohydrates, lipids, and proteins, details of hormones, and mechanism of hormone action, thyroid hormones in health and disease, gastrointestinal tract, digestion and diseases associated with GIT disorders

COURSE CONTENT

Week	Hour	Date	Topic
1	2	4-7/10/2021	Water and eletrolytes
2	2	10-14/10/2021	Acid base balance and disturbance
3	2	17-21/10/2021	kidney diseases
4	2	24-28/10/2021	Gastrointestinal tract
5	2	31/10-4/11/2021	Carbohydrate digestion and absorption
6	2	7-11/11/2021	lipid digestion and absorption
7	2	14-18/11/2021	Midterm Exam
8	2	21-25/11/2021	Protein digestion and absorption
9	2	28/11-2/12/2021	carbohydrates disorder 1
10	2	5-9/12/2021	Errors of carbohydrate metabolism1
11	2	12-16/12/2021	Errors of lipid metabolism1
12	2	19-23/12/2021	Errors of lipid metabolism2
13	2	26-30/12/2021	Errors of protein metabolism1
14	2	2-5/1/2022	Errors of protein metabolism2
15	2	9-13/1/2022	Final Exam
16	2	16-20/1/2022	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

- | | |
|---|---|
| 1 | 1. General information about, errors of carbohydrate metabolism, lipid metabolism, protein metabolism, nucleic acid metabolism. |
| 2 | 2. Hormones action. |
| 3 | 3. GIT disorders. |
| 4 | 4. water and electrolytes |
| 5 | 5. kidney functions and diseases |

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)

Program Learning Outcomes

Cont.

- | | | |
|----|--|---|
| 1 | Evaluate clinical laboratory data by interpreting laboratory results and relating the data to various disease states. | A |
| 2 | apply principles of evidence-based medicine to determine clinical diagnoses. | A |
| 3 | apply the basic principles of gross and microscopic anatomy, physiology, biochemistry, immunology, microbiology/virology. | A |
| 4 | formulate and implement acceptable treatment modalities to various disease states. | A |
| 5 | use technology effectively in the delivery of instruction, assessment, and professional development. | A |
| 6 | exhibit essential employability qualities by demonstrating laboratory safety, analyzing laboratory results, and displaying professional conduct. | A |
| 7 | exhibit organizational skills, accountability, and ethical behavior. | A |
| 8 | apply skills needed in operating laboratory equipment for testing, assessing quality assurance for lab equipment, and adhering to standard safety practices in the laboratory environment. | A |
| 9 | apply problem-solving and decision-making skills. | A |
| 10 | apply and promote health policies and regulatory standards in the field career. | A |
| 11 | develop research in the field of medical analysis using qualitative and quantitative methods. | A |

Prerequisites (Course Reading List and References):

Robert K. Murrary, Daryl K. Granner, and Victor W. Rodwell. 2006. Harpers biochemistry illustrated biochemistry 27th edition. Lange medical books/McGraw-Hill. London.

Student's obligation (Special Requirements):

Lab Attendance Lectures view offline Quiz Weekly lab report Students need to follow the rule and regulation of the lab like wearing lab coats, tighten hear, appropriate shows and not making noises. Student regards as absent if not following the rule and regulations.

Course Book/Textbook:

Robert K. Murrary, Daryl K. Granner, and Victor W. Rodwell. 2006. Harpers biochemistry illustrated biochemistry 27th edition. Lange medical books/McGraw-Hill. London.

Other Course Materials/References:

GIT system youtube

Teaching Methods (Forms of Teaching):

Lectures, Presentation, Assignments, Case studies, , ,

COURSE EVALUATION CRITERIA

Method	Quantity	Percentage (%)
Attendance	1	10
Quiz	1	10
Presentation	1	10
Laboratory	1	10
Practical Exam	1	20
Final Exam	1	40
Total		100

Examinations: Essay Questions, True-False, Multiple Choices, Short Answers, , ,

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD

Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	16	2	32
Practical Hours	16	2	16
Final Exam	1	1	1
Attendance	1	1	1
Quiz	1	1	1
Presentation	1	1	1
Laboratory	1		0
Practical Exam	1		0
Total Workload			52
ECTS Credit (Total workload/25)			2.08

Peer review

Signature:

Name:

Lecturer

Signature:

Name:

Head of Department

Signature:

Name:

Dean