



Univerziteti I Biznesit dhe Teknologjisë
University of Business and Technology

URL: <https://www.ubt-uni.net>

Syllabus

Biochemistry II

Objektivat e kursit/Course Objectives

The course aims to provide an advanced understanding of the core principles and topics of Biochemistry and their experimental basis, and to enable students to acquire a specialised knowledge and understanding of selected aspects by means of a stem/branch lecture series Through problem sets, exams, and seminars and quizzes, students will demonstrate the ability to engage in scientific as well as quantitative and qualitative reasoning. Students will also demonstrate the ability to communicate science in writing.

Përmbajtja e kursit/Course Content

The course should give basic knowledge in methodology and diagnostics within Biochemistry through theoretical and practical studies. Students gain knowledge and skills for critical interpretation of the biochemistry material presented in all modules of this course. The student can determine the biochemical composition of the body. He knows the structure of proteins, carbohydrates, lipids and nucleic acids. He can determine the enzymatic activity. He knows metabolic processes in cells. Analysis, interpretation and reporting of biochemical test results as they correlate to clinical diagnosis will be discussed.

Rezultatet mësimore të kursit/Learning Outcomes of the Course

Njohuritë dhe çështjet që duhet të kuptohen/ Knowledge and Understanding:

1. Knowledge and understanding of basic principles of biochemistry
2. Cognitive skills (thinking and analysis)
Thinking and analysis will be developed through solving case studies and problems
3. Communication skills (personal and academic)
Through experiment work within a group
4. Practical and subject specific skills (Transferable Skills).
Practical skills will be developed through experimentation work.
5. Exhibit a knowledge about differences of body chemistry levels under normal and unnormal conditions
6. Accurately record and report results, indicating normal and abnormal values.

Shkathtësitë intelektuale/ Intellectual skills	
1	Self learning
2	Application of theoretical knowledge in practice
3	Using of literature, scientific databases, libraries, internet resources in medicine, presentation and scientific skills
Shkathtësitë praktike profesionale/ Professional practical skills	
1	Acquiring practical experience in the techniques of experimental chemistry.
2	Developing more sophisticated chemical laboratory skills
3	Acquiring knowledge approved
4	Use the internet and to present before an audience.
Shkathtësitë për transferimin e njohurive/ Transferable skills	
1	Communication skills
2	Feedback
3	Learning, presentation
Qëndrimet dhe sjelljet/ Attitudes and behavior	
1	Confidentiality
2	Empathy
3	Patient centered approach
4	Self evaluation
5	Reflective practice
PËRMBLEDHJA E KURSIT/ORARI (javor)	
COURSE OUTLINE/SCHEDULE (Weekly)	
LIGJËRATAT	
1	• Modern clinical biochemistry laboratory
2	• Structure and metabolism of carbohydrates
3	▪ Glukose metabolism and the pathophysiology of diabetes mellitus
4	• Structure and metabolism of proteins
5	▪ Structures and metabolism of lipids
6	▪ Structure and metabolism of hormones
7	▪ Mid-Term Exam – Test 1
8	▪ Enzymes
9	▪ Vitamins
10	▪ Water and electrolytes
11	▪ Metabolism of ethanol
12	▪ Structure of nucleic acids
13	▪ Biology of Cancer-Types of cancer
14	▪ Biology of cancer-classification of protooncogenes

15	▪	Mid-Term Exam – Test 2
		USHTRIMET
1	•	Laboratory investigations
2	▪	Acquisition and interpretation of biochemical data
3	▪	Qualitative analysis of carbohydrates (Molisch's test, Fehling's test)
4	▪	Feling test with dissacharides (maltos, laktos and saharozë)
5	▪	Lugol test with amidon
6	▪	Qualitative analysis of carbohydrates (Benedict test, Barfoed's test)
7	▪	Mid-Term Exam – Test 1
8	▪	Qualitative analysis of aminoacids (Ninhydrin test, Xanthoproteinik test)
9	▪	Qualitative analysis of proteins (Biuret test, precipitation of proteins by NaCl)
10	▪	Qualitative analysis of lipids (Solubility test, emulsification test)
11	▪	Qualitative analysis of lipids (Hydrolysis test, Acroleic test, qualitativ estimation of cholesterol by Salkovsky test)
12	▪	Qualitative determination of amylase enzyme activity by Wohlegemuth method
13	▪	Determination of α-amylase enzyme termolability
14	▪	Qualitative determination of adrenalin
15	▪	Summary
15	▪	Mid-Term Exam – Test 2

Resurset/Resources		
Materiali i nevojshëm për kurs/Librat Required Course Material(s)/Reading(s)/Text Book(s)		
1. [Peter_Rae]_Clinical_Biochemistry_Lecture_Notes 2018		
2. William J.Marshall. Clinical biochemistry Metabolic and clinical aspects . Third edition 2014		
Materiali i nevojshëm për kurs/Librat tjera për lexim Recommended Course Material(s)/Reading(s)/Other		
1. (Allan Gaw, Michael J.Murphy).Clinical biochemistry AN ILLUSTRATED COLOUR TEKST.Fifth edition 2013(Përkthim shqip)		
SISTEMI VLERËSIMIT/EVALUATION SYSTEM		
Kërkesa gjatë semestrit / Semester Requirements	NUMRI/ NUMBER	Përqindja në gradim/ Percentage of Grade
Pjesëmarrja/Attendance	1	5
Perform/Performanca/ance	1	5
Laborato/Laboratori/ry	0	0
Provimi praktik/Practical exam	0	20
Puna në terren/Field Work	0	0
Internshipi special i kursit/Special Course Internship (Work Placement)	0	0
Kuizet/Quizzes	0	0

Bartës privat I arsimit të lartë
Privat Bearer of Higher Education

Detyrat e Shtëpisë/Homework Assignments	0	0
Prezentimi/Presentation	0	0
Projekti/Project	0	0
Seminaret; Workshopet/Seminar;Workshop	0	0
Vlerësim në mes-term/Midterm(s)	2	10
Vlerësimi final/Final	1	50
TOTAL		100
ECTS /NGARKESA E STUDENTIT ECTS/STUDENT WORKLOAD		
AKTIVITETET/ACTIVITIES	NUMRI NUMBER	Kohëzgjatja (orë) Duration (Hours)
Orë mësimi/ Course Hours	15	2
Laborator/ Laboratory	15	2
Provim praktik/ Practical Exam	1	1
Internshipi special i kursit/ Special Course Internship (Work Placement)	0	0
Puna në Terren/ Field Work	0	0
Orë të mësimi të vetëdrejtuar/ Study Hours Out of Class	15	5
Prezentim, seminar, workshop/ Presentations, Seminar, Workshop	15	1
Projekt/ Project	0	0
Detyra të shtëpisë/ Homework Assignments	0	0
Kuize/ Quizzes	0	0
Vlerësim në Mesterm/ Midterm(s)	2	1
Vlerësim Final/ Final EXAM	1	1
Ngarkesa Totale/ Total WorkLoad		124
Ngarkesa Totale/30 Total Workload/ 30		4.1
ECTS		4

Mësimdhënësi

Prof.ass.Kujtim Thaçi