

Course Name	Code	Semester	Theory (hrs/week)	Application (hrs/week)	Laboratory (hrs/week)	ECTS
<b>Introduction to Nutritional Biochemistry</b>	BIK512	Fall	1	0	0	3
Prerequisites	No					
Course language	Turkish					
Course Type	Imperative					
Learning and teaching techniques of the course	Lecture, interactive, brainstorming					
Course instructor(s)	Prof. Dr. E. İlker SAYGILI					
Course objectives	It is the examination of the nutritional content of foods, the examination of daily consumption amounts for the maintenance of health, the discussion of the digestive and metabolic properties of nutrients, and the examination of the effect of certain eating habits on health-disease development.					
Learning outcomes of the course	1. Define the components of dietary reference intake. 2. Define simple and complex carbohydrates and classify foods according to their carbohydrate content. 3. Explain the absorption differences in the consumption of simple and complex carbohydrates. 4. Define the glycemic index, classify foods according to their glycemic index. 5. Counts the criteria for determining the protein quality of foods and classifies foods according to these criteria. 6. Classify foods according to their fat content and composition. 7. Classify foods according to their uric acid content					
Resources	1. Whitney E, Rady Rolfes S. Understanding Nutrition. 12th Ed., Wadsworth, Cengage Learning, 2011. 2. Stipanuk M. Biochemical and Physiological Aspects of Human Nutrition, 1st Ed, Saunders, 2000. 3. USDA National Nutrient Database. <a href="https://ndb.nal.usda.gov/ndb/nutrients/index4">https://ndb.nal.usda.gov/ndb/nutrients/index4</a> . Bhagavan NV, Ha CH. Essentials of Medical Biochemistry With Clinical Cases, Academic Press, 2nd Ed., 2015. 5. Rodwell VW, Bender DA, Botham KM, kennelly PJ, Weil PA. Harper's Illustrated Biochemistry, McGraw-Hill Education, 31th Ed. 2018					

### Weekly Course Topics:

WEEKS	TOPICS TO BE DISCUSSED
1. Week	The concept of nutrients and daily needs
2. Week	Basal metabolism, energy
3. Week	Carbohydrates in food
4. Week	Lipids in food
5. Week	Protein sources and absorption differences
6. Week	The concept of essentials, essential fatty acids, aminoacids and dietary sources
7. Week	Changes in metabolism according to eating habits
8. Week	Nucleotide-rich foods, nucleotide degradation products and their physical properties
9. Week	Dietary sources of fat-soluble vitamins

10. Week	Water-soluble vitamins and dietary sources
11. Week	Dietary sources of iron and absorption properties
12. Week	Sodium and water
13. Week	Calcium
14. Week	Magnesium
15. Week	<b>Final Exam</b>

### Student Workload Table

Events	Number	Time	Total Workload
Lesson	14	2	28
Laboratory			
Application			
Fieldwork			
Out-of-Class Study Time (Freelancing/Group Work/Pre-Study)	12	3	36
Presentation (Shooting videos/Preparing posters/Making Oral Presentations/Focus Group Interviews/Conducting Surveys/Observation and Report Writing)	1	1	2
Seminar Preparation	1	1	2
Project			
Case Study	1	5	5
Role Playing, Dramatizing			
Writing an article-Criticizing			
Mid-term exams			
Final exams	1	2	2
<b>Total workload (hours) / 25(s)</b>	75 seconds /25 seconds =3		
<b>Ders ACT</b>	<b>3</b>		

### Evaluation System

Semester Studies	Number	Contribution
Midterm Exam		
Quiz		
Laboratory		
Application		
Fieldwork		
Course-Specific Internship (If Available)		
Assignments		
Presentation and Seminar	2	%40
Projects		
Other	1	%10
<b>Total of Semester Studies</b>		%50
<b>Final Work</b>		
Finale	1	%50
Homework		
Application		

Laboratory		
<b>Total of Final Studies</b>		%50
The Contribution of Semester Studies to the Success Grade		%50
The Contribution of the Final Exam to the Success Grade		%50
<b>Sum of Success Grade</b>		<b>100</b>

### THE RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM COMPETENCIES

No	PROGRAM QUALIFICATIONS	Learning Outcomes			
		ÖÇ1	ÖÇ2	ÖÇ3	ÖÇ4
1	Have up-to-date knowledge at the level of expertise in the field of medical biochemistry based on undergraduate level competencies, develop and deepen them.	5	5	5	5
2	Has knowledge about information technologies, technical equipment and devices and instruments specific to the field at the level required by the field of Medical Biochemistry	2	2	3	3
3	Integrates the knowledge in the field of Medical Biochemistry with information from different disciplines, interprets it to create new information, analyzes and synthesizes using different research methods and proposes solutions.	4	4	4	4
4	He writes the report of his research.	3	3	3	3
5	Plans and conducts experimental research.	4	4	4	4
6	Constructs issues that require expertise in the field of Medical Biochemistry, proposes solutions, solves problems, evaluates the results obtained and applies them when necessary.	4	4	5	5
7	Conducts scientific, clinical and/or descriptive research/presentation/publication on priority issues related to the field of Medical Biochemistry and public health.	5	5	5	5
8	Critically evaluates the information related to the field of Medical Biochemistry and directs his/her learning.	5	5	5	5
9	Applies the principles of professional development and lifelong learning related to the field of Medical Biochemistry in the studies it performs.	5	5	5	5
10	Discuss and share his/her knowledge, current developments and his/her own studies in the field of Medical Biochemistry in a systematic way in written, oral and visual forms with groups in or outside the same field.	5	5	5	5
11	Critically examines the social relations in the professional and professional environment and the norms that guide these relations and does what is necessary to improve them.	5	5	5	5
12	Observes social, scientific and ethical values in the stages of collecting, recording, interpreting and announcing data related to the field of Medical Biochemistry and teaches these values.	5	5	5	5
13	Evaluates current developments in the field of Medical Biochemistry in line with national values and country realities, including the child and family, which are the basic units of society.	5	5	5	5
14	Knows the importance of ethical principles and ethical committees for the individual and society, and behaves ethically.	4	4	4	4

15	Develops strategies, policies and implementation plans on issues related to the field of Medical Biochemistry and evaluates the results obtained within the framework of quality processes.	5	5	5	5
<b>Qualification level: 1: Low, 2: Low/Medium, 3: Medium, 4: High, 5: Excellent</b>					