Course Name	Code	Semester	Theory (hrs/week)	Application (hrs/week)	Laboratory (hrs/week)	ECTS
Basic Laboratory Techniques-2	BIK520	Spring	2	2	0	6
Prerequisites	No					
Course language	Turkish					
Course Type	Optional					
Learning and teaching techniques of the course	Lecture, question-answer, observation, practice/exercise					
Course instructor(s)	Assist. Asst. Prof. Meltem GÜNGÖR					
Course objectives	It is the examination of the basic principles of the methods used in laboratory applications and the usage areas and basic components of the devices using these methods.					
Learning outcomes of the course	1. Summarize the methods of collection of sample types in the clinical laboratory 2. Defines sample types, storage, and transportation 3. List the basic principles and usage areas of the methods and techniques used in the laboratory 4. Explains the working principle, general features and components of the devices used in the laboratory 5. Explain cell culture and experimental animals 6. Have knowledge about quality, standardization and calibration in the laboratory					
Resources	1. Burtis CA, Ashwood ER, Burns DE. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 4th Ed, Saunders, 2005 2. Adam B. Laboratory Instruments. Nobel Publications, 2000 3. Akbay A. Basic Concepts in Clinical Laboratory. Ankara Uni. Printing House, 2000 4. Petrucci RH, Harwood WS, Herring G. General Chemistry Principles and Modern Applications. Palme Publishing, 2015 5. Seen U. Laboratory World. Nobel Medical Bookstores, 2019					

Weekly Course Topics:

WEEKS	TOPICS TO BE DISCUSSED
1. Week	Sampling
2. Week	Specimen storage and transport
3. Week	Spektrofotometri-Kolorimetri
4. Week	Autoanalyzers
5. Week	Nephelometers-Türbidimeters
6. Week	Electron spin resonance-NMR spectroscopy
7. Week	Electrochemical techniques-Electrophoresis,
8. Week	Chromographic techniques
9. Week	Immunochemical and radioisotope techniques
10. Week	Polymerase chain reaction (PCR), ELISA
11. Week	Cell culture
12. Week	Experimental Animals
13. Week	Quality in the Laboratory
14. Week	Kalibrasyon, Standardizasyon
15. Week	**Final Exam**

Student Workload Table

Events	Number	Time	Total Workload
Lesson	14	2	28
Laboratory	14	2	28
Application			
Fieldwork			
Out-of-Class Study Time (Freelancing/Group Work/Pre-Study)	14	5	70
Presentation (Shooting videos/Preparing posters/Making Oral Presentations/Focus Group Interviews/Conducting Surveys/Observation and Report Writing)	2	8	16
Seminar Preparation			
Project			
Case Study			
Role Playing, Dramatizing			
Writing an article-Criticizing			
Mid-term exams	1	8	8
Final exams			
Total workload (hours) / 25(s)	150 seconds /25 seconds =6		
Ders ACT	**6**		

Evaluation System

Semester Studies	**Number**	**Contribution**
Midterm Exam	1	%40
Quiz		
Laboratory		
Application		
Fieldwork		
Course-Specific Internship (If Available)		
Assignments		
Presentation and Seminar		
Projects		
Other		
Total of Semester Studies		%40
Final Work		
Finale		
Homework		
Application	2	%30
Laboratory		
Total of Final Studies		%60
The Contribution of Semester Studies to the Success Grade		%40
The Contribution of the Final Exam to the Success Grade		%60
Sum of Success Grade		**100**

THE RELATIONSHIP BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM COMPETENCIES

No	PROGRAM QUALIFICATIONS	Learning Outcomes					
		ÖÇ1	ÖÇ2	ÖÇ3	ÖÇ4	ÖÇ5	ÖÇ6
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	5	5
2	Have 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	2	2
3	Integrates the knowledge in the field of medical biochemistry with the information from different disciplines and interprets it to create new information, analyzes and synthesizes using different research methods and proposes solutions.	4	4	4	4	4	4
4	He writes the report of his research.	3	3	3	3	3	3
5	Plans and conducts experimental research.	4	4	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	4	4
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	5	5
8	Critically evaluates the information related to the field of medical biochemistry and directs learning.	5	5	5	5	5	5
9	Apply the principles of professional development and lifelong learning related to the field of medical biochemistry in the studies they carry out.	5	5	5	5	5	5
10	Discuss and share their knowledge, current developments and their own studies in the field of medical biochemistry with groups in the same field or outside the same field in a systematic way in written, oral and visual forms.	5	5	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	5	5
12	Observes and teaches social, scientific and ethical values in the stages of collecting, recording, interpreting and announcing data related to the field of medical biochemistry.	5	5	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	5	5

14	Knows the importance of ethical principles and ethical committees for the individual and society, and behaves ethically.	4	4	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	5	5
Qualification level: 1: Low, 2: Low/Medium, 3: Medium, 4: High, 5: Excellent							