Course Name	Code	Semester	Theory (hrs/week)	Application (hrs/week)	Laboratory (hrs/week)	ECTS
Basic Laboratory Techniques-1	BIK511	Fall	2	0	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	In order to create a basis for laboratory studies; It is the study of general laboratory rules, basic laboratory materials and cleaning, solution preparation, sampling and preparation, and centrifuge use.					
Learning outcomes of the course	1. Explain general laboratory rules and ensure safety in the laboratory 2. Recognizes the materials and devices in the laboratory and knows how to use them 3. Explain the characteristics of pure water types used in the laboratory 4. Explains how to clean materials, defines the concepts of disinfection and sterilization 5. Learns chemicals and prepares solutions 6. Calculates how to prepare the required solution and buffers and obtains multiple dilutions from the stock solution as needed 7. Describes the method of venous blood collection					
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. 3. Akbay A. Basic Concepts in Clinical Laboratory. Ankara Univ. Printer. 4. Petrucci RH, Harwood WS, Herring G. General Chemistry Principles and Modern Applications. Palme Publishing. 5. Seen U. Laboratory World. Nobel Medical Bookstores.					

Weekly Course Topics:

WEEKS	TOPICS TO BE DISCUSSED
1. Week	General laboratory rules
2. Week	Laboratory safety
3. Week	Laboratory glass and plastic materials
4. Week	Laboratory metal, porcelain and wood materials
5. Week	Micropipette, Precision balance, Microscope
6. Week	Vortex, magnetic heater mixer, oven, autoclave
7. Week	Homogenizer, Centrifuge, Fume hood
8. Week	Chemicals
9. Week	Cleaning of distilled water and materials in the laboratory
10. Week	Solution preparation; Definitions and general principles
11. Week	Percentage solution calculations and preparation
12. Week	Molar/normal solution calculation and preparation

13. Week	Buffer solution calculations and preparation
14. Week	Venous blood collection
15. Week	**Final Exam**

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)	14	7	98
Presentation (Shooting videos/Preparing posters/Making Oral Presentations/Focus Group Interviews/Conducting Surveys/Observation and Report Writing)			
Seminar Preparation			
Project			
Case Study			
Role Playing, Dramatizing			
Writing an article-Criticizing			
Mid-term exams	1	11	11
Final exams	1	13	13
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	1	%60
Homework		
Application		
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	ÖÇ7
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	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
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
4	He writes the report of his research.	3	3	3	3	3	3	3
5	Plans and conducts experimental research.	4	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	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	5	5	5
8	Critically evaluates the information related to the field of medical biochemistry and directs learning.	5	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	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	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	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	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	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	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	5
Qualification level: 1: Low, 2: Low/Medium, 3: Medium, 4: High, 5: Excellent								