

LABORATORY EQUIPMANTS

1	Course Title:	LABORATORY EQUIPMANTS
2	Course Code:	TLTZ101
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	4.00
10	Laboratory (hour/week):	0
11	Prerequisites:	No
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. MELEHAT DİRİCAN
15	Course Lecturers:	Prof.Dr.Emre SARANDÖL-Prof.Dr.Arzu YILAZTEPE ORAL- Prof.Dr.Melehat DİRİCAN-Doç.Dr.Nesrin UĞRAŞ-Öğr.Gör.Dr. Perihan ERKAN ALKAN
16	Contact information of the Course Coordinator:	mdirican@uludag.edu.tr 2953912 Uludağ Üniversitesi Tıp Fakültesi, Temel Tıp Bilimleri Binası, Tıbbi Biyokimya Anabilim Dalı, 16059
17	Website:	
18	Objective of the Course:	Teach the information and skills to use, maintain and clean the laboratory gadgets
19	Contribution of the Course to Professional Development:	Usage of laboratory equipment is learned
20	Learning Outcomes:	
	1	Prepare, use and clean the tools for solutions
	2	Make incubation
	3	Make sterilization
	4	Gain laboratory water
	5	Precipitate liquids
	6	Screen the objects impossible to see with eye with a microscope
	7	Assign matter amount by using light sources
	8	Assign matter amount by using automatic analyser
	9	Assign the amounts of special molecules
	10	Preserve texture, blood, serum etc.
21	Course Content:	

	Course Content:			
Week	Theoretical	Practice		
1	Glass and plastic materials, to make material transfer with the aid of a micropipette and the glass pipette. To weigh article.	Introduction of glass and materials are used in the biochemistry laboratory, material transfer, weighing scales with the application materials		
2	Methods of mixing the solution, cleaning of the pH meter, glass and plastic materials,	Concentration calculation, the sample solution preparation, pH measurement and making titration		
3	Incubation methods	Introduction of materials used at the microbiology laboratory and incubation methods application. materials		
4	Sterilization methods	Sterilization methods application		
5	To obtain laboratory water	Using distilled water and deiyonize water apparatus and equipment		
6	Precipitating fluids by means of centrifuges	Centrifugation of various liquids		
7	Tto examine invisible objects-microscopic methods	Examination of the various preparations at microscope		
8	Spectrophotometric and nephelometric methods	Spectrophotometric determination of the amount of matter and the standard curve graph plotting		
9	Turbidimetric and fluorometric methods	Determination of amount of substance at nefelometer		
10	Flame photometry and atomic absorption spectrometry methods	Determination of amount of substance at turbidimeter		
11	Automatic Autoanalyzers (biochemistry, and hematology)	Using biochemistry and hematology autoanalyser and sample application		
12	Chromatographic methods	Determination of the amount of substances with HPLC		
13	Electrophoretic methods	Application of serum protein electrophoresis		
Activites		Number	Duration (hour)	Total Work Load (hour)
22	Textbooks, References and/or Other Materials:	14	2.00	28.00
Practicals/Labs		14	4.00	56.00
Self study and preperation		14	5.00	70.00
Homeworks		0	0.00	0.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
MIDTERM LEARNING ACTIVITIES		12.00	12.00	12.00
Others		0	0.00	0.00
Midterm Exam		1	14.00	14.00
Final Exams		1	14.00	14.00
Quiz		0	0.00	0.00
Total Work Load				192.00
Home work project		0	0.00	0.00
Total work load/ 30 hr		1	6.00	6.00
Final Exam		1	6.00	6.00
ECTS Credit of the Course				6.00
Total		2	100.00	
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course		There is a midterm and a final exam in the form of a multiple choice test.		
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	1	1	5	1	1	1	1	1	1	1	1	0	0	0	0
ÖK2	1	1	5	1	1	5	1	1	1	1	1	1	0	0	0	0
ÖK3	5	1	5	1	1	5	1	1	1	1	1	1	0	0	0	0
ÖK4	5	1	1	1	1	5	1	1	1	1	1	1	0	0	0	0
ÖK5	5	1	5	1	1	5	1	1	1	1	1	1	0	0	0	0
ÖK6	5	1	1	5	1	5	1	1	1	1	1	1	0	0	0	0
ÖK7	5	1	1	5	1	5	1	1	1	1	1	1	0	0	0	0
ÖK8	5	1	1	5	1	5	1	1	1	1	1	1	0	0	0	0
ÖK9	5	1	1	5	1	5	1	1	1	1	1	1	0	0	0	0
ÖK10	5	5	1	1	1	1	1	1	1	1	1	1	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			