CLINICAL IMMUNOLOGY AND SEROLOGY

1	Course Title:	CLINICAL IMMUNOLOGY AND SEROLOGY	
2	Course Code:	TİM5004	
3	Type of Course:	Compulsory	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	1.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	Yok	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. BARBAROS ORAL	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Prof. Dr. H. Barbaros ORAL Bursa Uludağ Üniversitesi, Tıp Fakültesi, İmmünoloji Anabilim Dalı, 16059, Nilüfer, BURSA E-posta: oralb@uludag.edu.tr Tel: 2954114	
17	Website:		
18	Objective of the Course:	The aim of this course is to provide the student knowledge required for performing and evaluating advanced immunological methods.	
19	Contribution of the Course to Professional Development:	To gain knowledge and skills needed for application of immunological laboratory tests used in routine and research	
20	Learning Outcomes:		
		1	To gain knowledge and skills needed for application of immunological laboratory tests used in routine and research
		2	To gain knowledge and skills needed for the evaluation of immunological laboratory tests used in routine and research
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Fluorescent microcopy	Fluorescent microcope usage
2	ANA, AMA, ASMA	ANA, AMA , ASMA tests
3	Endomycium and gliadin antibody tests	Endomisium and gliadin tests

4	ANCA and Thyroid antibody tests	ANCA and Thyroid antibody tests
5	Immunoblot techniques	ANA profile immunoblotting tests
6	Immune electrophoresis	Immunofixation electrophoresis test
7	Luminex Technology	SSO-PCR HLA typing
8	Panel reactive antibodies	Panel reactive antibody screening and specific tests
9	Molecular HLA typing	SSP-PCR HLA typing
10	Lymphocyte cross-match test	CDC total lymphocyte cross-match
11	Quantitative RT-PCR	Quantitative RT-PCR application
12	Flow cytometry techniques	Flow cytometer (FC)
13	Leukemia/lymphoma typing	Leukemia/lymphoma typing with FC
14	Functional flow cytometry tests	Evaluation of cell functions by FC

22	Textbooks, References and/or Other Materials:	1. Stevens C.D., "Clinical Immunology & Serology: Laboratory Perspective", E.A. Davis Company, 3rd edition (2010). 2. Rich R.R., Fleisher T.A., Shearer W.T., Kotzin B.L., Schroeder Jr H.W., “Clinical Immunology: Principles and Practice”, Mosby International Ltd., 3rd edition (2008). 3. Thompson L., "Measuring Immunity: Basic and clinical practice", Elsevier Academi,c Press (2005). 4. Rose N.R, Friedman H., Fahey J.L., "Manual of Clinical Laboratory Immunology", American Society of Microbiology, 3rd edition (1986)

Activites		Number	Duration (hour)	Total Work Load (hour)
Midterm Exam	0	0.00		
Theoretical		14	1.00	14.00
Quiz	0	0.00		
Practicals/Labs		14	2.00	28.00
Home work-project	5	30.00		
Self study and preperation		14	6.00	84.00
Final Exam	1	50.00		
Homeworks		5	10.00	50.00
Total	6	100.00		
Projects		0	0.00	0.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00		
Field Studies		0	0.00	0.00
Midterm exams		0	0.00	0.00
Contribution of Final Exam to Success Grade		50.00		
Others		0	0.00	0.00
Total		100.00		
Final Exams		1	10.00	10.00
Total Work Load				186.00
Total work load/ 30 hr		Undergraduate Education.		6.20
ECTS Credit of the Course				6.00

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	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**