AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Clinical Biochemistry Application II								
Course Code	TL210		Couse Level		Short Cycle (Associate's Degree)				
ECTS Credit	5	Workload	125 *(Hours)*	Theory	0	Practice	4	Laboratory	0
Objectives of the Course	To perform the hospital Biochemistry laboratory tests during the normal work flow and appropriate laboratory, pre-preparation, sample processing, sample-making processes work and to get results.								
Course Content	Basic patient registration, sample collection, Various sample collectionc and their applications, preanalytical errors in lab., Blood counting (manuel methods), Blood counting (automatic analysis methods), Urine examination (manuel and automatic methods) urine protein and creatinine analysis., Urine sedimentation analysis (microscopic examination), Biochemical parameter analysis with automation, Turbidimetric methods (coagulation analysis vs.), Nephelometric methods (Apo A and Apo B, vs.), HPLC methods (HbA1C, vs.), Radioimmunassay methods, Chemiluminescence methods (Hormone analysis and Therapeutic drog monitoring).								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Practice Examination	1	100

Recommended or Required Reading	
1	Klinik Biyokimya, Bahattin Adam, Nobel Tıp Kitabevleri, 2000
2	Klinik Biyokimya Analiz Metodları, Bahattin Adam ve Yasemin Ardıçoğlu, Atlas Kitapçılık, 2002
3	Klinik Biyokimya Laboratuvarı El Kitabı, Idris Mehmetoğlu, Nobel Tıp Kitabevleri, 2007

Week	Weekly Detailed Course Contents	
1	Practice	Basic patient registration, sample collection
2	Practice	Various sample collectionc and their applications, preanalytical errors in lab.
3	Practice	Blood counting (manuel methods)
4	Practice	Blood counting (automatic analysis methods)
5	Practice	Urine examination (manuel and automatic methods) urine protein and creatinine analysis
6	Practice	Urine sedimentation analysis (microskopic examination)
7	Practice	Biochemical parameter analysis with automation 1
8	Practice	Biochemical parameter analysis with automation 2
9	Practice	Turbidimetric methods
10	Practice	Nephelometric methods
11	Practice	HPLC methods
12	Practice	Radioimmunassay methods
13	Practice	Chemiluminescence methods I (Hormone analysis)
14	Practice	Chemiluminescence methods II (Therapeutic drog monitoring)
15	Practice	Practice exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Practice	14	2	4	84
Individual Work	12	0	3	36
Practice Examination	1	1	4	5
			Total Workload (Hours)	125
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Biochemistry Laboratory has extensive experience of working
2	Have the knowledge about to clinical laboratory operations, laboratory safety and practices
3	Acquires theoretical knowledge and practical skills related to laboratory instruments, equipment, and use of them.
4	Have the knowledge and skills to accept or reject the samples to the laboratory,handling, transmitting, storing of them.
5	Have the knowledge and skills in routine biochemical analysis.

Programme Outcomes *(Medical Laboratory Techniques)*	
1	Understands the basic operation, organization, and safety rules of the medical laboratory; takes personal safety precautions and ensures a safe laboratory environment.
2	Accepts samples in the medical laboratory, performs pre-analysis preparation, ensures proper transfer conditions, and delivers results.
3	Performs basic tests in various fields of the medical laboratory, prepares analytical solutions, and effectively uses devices and techniques involved in the analysis process.
4	Applies disinfection and sterilization techniques, ensures laboratory hygiene, and complies with waste management procedures.
5	Evaluates and interprets the results of analyses and prepares laboratory reports in accordance with professional ethical principles.
6	Possesses fundamental knowledge of health sciences and effectively uses medical terminology in professional applications.
7	Communicates effectively in healthcare services, works well in teams, and uses Turkish proficiently; has a basic level of foreign language proficiency in professional applications. Embraces Atatürk's principles and reforms, adopts national, moral, spiritual, and cultural values, and maintains an open perspective toward universal and contemporary developments.
8	Keeps up with advancements in science and technology, continuously updates professional knowledge and skills, and engages in self-improvement.
9	Is aware of individual and public health, environmental protection, and occupational safety issues and fulfills responsibilities in these areas.
10	Possesses awareness of career management and lifelong learning within an academic context.