

[Educational Program for Ph.D. in Clinical Biochemistry]

Tabriz University of Medical Sciences - Faculty of Medicine

Department of Biochemistry and Clinical Laboratories

Semester	Course Code	Course Name	Course Type	Credits		
				Th	Pr	Total
First(11 Credits)	13	Cancer Biochemistry and Tumor Markers	Compulsory	2	-	2
	8	Clinical Biochemistry 1	Compulsory	2	-	2
	18	Bioinformatics	Elective	1	1	2
	6	Biostatistics	Remedial	2	-	2
	1	Medical Information Systems	Remedial	0.5	0.5	1
	7	Research Methods in Medical Sciences	Remedial	2	-	2
Second(10 Credits)	9	Clinical Biochemistry 2	Compulsory	2	-	2
	10	Clinical Biochemistry 3	Compulsory	2	-	2
	12	Inherited Metabolic Diseases	Compulsory	2	-	2
	14	Novel Molecular Diagnostic Methods for Diseases	Compulsory	2	-	2
	19	Cell Culture	Elective	1	1	2
Third(12 Credits)	16	Internship in Clinical Laboratory	Compulsory	-	6	6
	11	Management of Clinical Biochemistry Lab and Quality Control	Compulsory	1	-	1
	15	Specialized Seminar	Compulsory	0.5	0.5	1
	-	Principles of Writing Articles in English	Remedial	2	-	2
	-	Principles and Foundations of Disaster and Accident Risk Management	Remedial	2	-	2
Fourth(20 Credits)	16	Comprehensive Exam and Dissertation	Compulsory	-	20	20
Total Credits				24	29	53

Essential Workshops

No.	Workshop Name	Semester
1	Educational Technology (Teaching Methods)	Semester 1
2	Novel Molecular Diagnostic Methods	Semester 2
3	Quality Control of Laboratory Results	Semester 3
4	Professional Ethics in Laboratory, Research, and Publication	Semester 4
5	Scientific Paper Writing and Connection with Entrepreneurship Methods	Semester 4