

## Course Tables

**Table 1 - Compensatory courses for Biochemistry in Master's Degree**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Biochemistry Basics	2	0	2	32	0	32	
2	Elemental molecular biology	2	0	2	32	0	32	
<b>TOTAL</b>		4	0	4	64	0	64	

**Table 2 - Compensatory courses for Biochemistry in Ph.D. Degree**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Enzymology	2	0	2	32	0	32	
2	Advanced Molecular Biology	2	0	2	32	0	32	
3	Metabolic Regulation	2	0	2	32	0	32	
<b>TOTAL</b>		6	0	6	96	0	96	

**Table 3. Specialized courses for Biochemistry in Master's Degree**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Enzymology	2	0	2	32	0	32	
2	Advanced Molecular Biology	2	0	2	32	0	32	
3	Biochemistry of Nucleic acids	2	0	2	32	0	32	
4	Structure and function of proteins	2	0	2	32	0	32	
5	Metabolic Regulation	2	0	2	32	0	32	
6	Seminar I	1	0	1	16	0	16	
7	Seminar II	1	0	1	16	0	16	
<b>TOTAL</b>		12	0	12	192	0	192	

**Table 4. Specialized-Optional courses for Biochemistry in Master's & Ph.D. Degree**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Immunobiology	2	0	2	32	0	32	
2	Immunochemistry	2	0	2	32	0	32	
3	Biochemistry of neural systems	2	0	2	32	0	32	
4	Biochemistry of Cognitive Networks	2	0	2	32	0	32	
5	Cell Signaling Biochemistry	2	0	2	32	0	32	
6	Membrane Biochemistry	2	0	2	32	0	32	
7	Chromatin and epigenetics	2	0	2	32	0	32	
8	Proteomics	2	0	2	32	0	32	
9	Structural and functional studies of proteins involved in health and disease	2	0	2	32	0	32	
10	Chaperones	2	0	2	32	0	32	
11	Recombinant DNA methods	2	0	2	32	0	32	
12	Chemical Biology of Peptides	2	0	2	32	0	32	
13	Chemical Synthetic Biology	2	0	2	32	0	32	
14	Medicinal Chemistry: DNA Targeting Drugs	2	0	2	32	0	32	
15	Bioinorganic Chemistry	2	0	2	32	0	32	
16	Design of Enzyme Inhibitors	2	0	2	32	0	32	
17	Introductory Macromolecular X-ray Crystallography	2	0	2	32	0	32	
18	Macromolecular X-ray Crystallography 2	2	0	2	32	0	32	Introductory Macromolecular X-ray Crystallography
19	Principles and Techniques of Electron Microscopy	2	0	2	32	0	32	
20	Advanced Topics in Biochemistry	2	0	2	32	0	32	
21	Methods in Genetic Engineering	2	0	2	32	0	32	

**Continue Table 4.**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
22	Methods of extraction and identification of biological macromolecules	2	0	2	32	0	32	
23	Biomedical mass spectrometry	2	0	2	32	0	32	
24	Computational Drug Design	2	0	2	32	0	32	
25	Molecular Modeling	2	0	2	32	0	32	
<b>TOTAL</b>		50	0	50	800	0	800	

- MSc student is allowed to select 10 units from the table above.

**Table 5. Specialized-Optional courses for Biochemistry in Ph.D. Degree**

Index	Course Title	Number of units			Total Hours			Prerequisite
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Glycolipobiology	2	0	2	32	0	32	
2	Advanced Biochemistry of Proteins and Nucleic acids	2	0	2	32	0	32	
3	Mechanism of enzyme action	2	0	2	32	0	32	
4	Seminar I	1	0	1	16	0	16	
5	Seminar II	1	0	1	16	0	16	
<b>TOTAL</b>		8	0	8	128	0	128	

- Ph.D. student is allowed to select 14 units as a total of courses in Tables 4 and 5, and endorsed by their supervisor.