

# Department of Laboratory Sciences

## About the program

**Program title:** Medical Laboratory Sciences (B.Sc)

**Program length:** 4 years for continuous bachelor's programs

**Study Mode:** Full-time

### Medical Laboratory Sciences Work Course

The program total credits for students entering the program from 2020:

<b>Courses and credits</b>	
<b>General Courses</b>	<b>24</b>
<b>Basic Courses</b>	<b>27</b>
<b>Special Courses</b>	<b>63</b>
<b>Internship</b>	<b>16</b>
<b>Total</b>	<b>130</b>

*Table 1. General Courses*

Code	Title	No. of Credits			Course Duration (Hours)			Prerequisite (Code No.)
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	Theoretical Foundations of Islam (2 Courses)	4	-	4	68	-	68	-
2	Islamic Ethics (1 Courses)	2	-	2	34	-	34	-
3	Islamic Revolution (1 Courses)	2	-	2	34	-	34	-
4	Islamic History & Civilization (1 Courses)	2	-	2	34	-	34	-
5	the Introduction to Islamic Sources (1 Courses)	2	-	2	34	-	34	-
6	Persian Literature	3	-	3	51	-	51	-
7	General English	3	-	3	51	-	51	-
8	Physical Education (1)	-	1	1	-	34	34	-
9	Physical Education (2)	-	1	1	-	34	34	8
10	Family Planning and Population Science	2	-	2	34	-	34	-
11	Islam and Iran History & Civilization	2	-	2	34	-	34	-

*Table 2. Basic Courses*

Code	Title	No. of Credits			Course Duration (Hours)			Prerequisite/ Simultaneous (Code No.)
		Theoretical	Practical	Total	Theoretical	Practical	Total	
1	General Chemistry	2	-	2	34	-	34	-
2	General Chemistry Lab	-	1	1	-	34	34	1
3	Laboratory introduction	0.5	0.5	1	9	17	26	1
4	Anatomy	1.5	0.5	2	26	17	43	-
5	Histology	1	-	1	17	-	17	4
6	Histology Lab	-	1	1	-	34	34	5
7	General Biochemistry	3	-	3	51	-	51	1
8	General Biochemistry Lab	-	1	1	-	34	34	7
9	Cellular and Molecular Biology	2	-	2	34	-	34	7
10	Physiology	2	-	2	34	-	34	4
11	Physiology lab	-	1	1	-	34	34	10
12	Biophysics	2	-	2	34	-	34	7
13	Public Health and Epidemiology	1	-	1	17	-	17	-
14	General Psychology	2	-	2	34	-	34	-
15	Computer	1.5	0.5	2	26	17	43	-
16	Biostatistics and research methodology	2	-	2	34	-	34	-
17	medical emergency	0.75	0.25	1	13	8	21	-

*Table 3. Special Courses*

Code	Title	No. of Credits			Course Duration (Hours)			Prerequisite/ Simultaneous (Code No.)
		Theoretical	Practical	Total	Theoretical	Practical	Total	
18	Clinical Biochemistry (1)	2	-	2	34	-	34	7
19	Clinical Biochemistry Lab (1)	-	1	1	-	34	34	18
20	General Microbiology	2	-	2	34	-	34	9
21	General Microbiology Lab (1)	-	1	1	-	34	34	20
22	Parasitology (Helminths) (1)	2	-	2	34	-	34	9
23	Parasitology lab (Helminths) (1)	-	1	1	-	34	34	22
24	Medical Immunology (1)	2	-	2	34	-	34	20
25	Medical Immunology Lab (1)	-	1	1	-	34	34	24
26	Medical Virology	1.75	.25	2	30	8	38	20
27	Hematology (1)	3	-	3	51	-	51	10
28	Hematology lab (1)	-	2	2	-	68	68	27
29	Clinical Biochemistry (2)	3	-	3	51	-	51	18
30	Clinical Biochemistry Lab (2)	-	1	1	-	34	34	29
31	General Pathology	2	-	2	34	-	34	27, 50
32	General Pathology Lab	-	1	1	-	34	34	31
33	Pharmacology and Toxicology	2	-	2	34	-	34	31

*Table 4* Table 3. Special Courses

Code	Title	No. of Credits			Course Duration (Hours)			Prerequisite/ Simultaneous (Code No.)
		Theoretical	Practical	Total	Theoretical	Practical	Total	
34	Pharmacology and Toxicology lab	-	1	1	-	34	34	33
35	Parasitology (protozoans and entomology)(2)	2	-	2	34	-	34	22
36	Parasitology lab (protozoans and entomology)(2)	-	1	1	-	34	34	35
37	Medical Immunology (2)	1	-	1	17	-	17	24
38	Medical Immunology Lab (2)	-	1	1	-	34	34	37
39	English Texts and Laboratory Terminology	2	-	2	34	-	34	General English
40	Principles and Maintenance of Laboratory Equipment	1	-	1	17	-	17	12, 19
41	Hormonology	1.75	.25	2	30	8	38	29
42	Hematology (2)	2	-	2	34	-	34	27
43	Hematology lab (2)	-	1	1	-	34	34	42
44	Medical Mycology	2	-	2	34	-	34	20
45	Medical Mycology Lab	-	1	1	-	34	34	44
46	Immunoematology and Transfusion Medicine	2	-	2	34	-	34	27
47	Immunoematology and Transfusion Medicine lab	-	1	1	-	34	34	46
48	Medical Bacteriology	2	-	2	34	-	34	20, 24

*Table 3. Special Courses*

Code	Title	No. of Credits			Course Duration (Hours)			Prerequisite/ Simultaneous (Code No.)
		Theoretical	Practical	Total	Theoretical	Practical	Total	
49	Medical Bacteriology Lab	-	2	2	-	68	68	21, 48
50	Quality Assurance in Clinical Laboratory	2	-	2	34	-	34	42, 29
51	Laboratory Rules and Management Principles	1	-	1	17	-	17	50
52	Principles of Safety and Protection in Laboratory	1	-	1	17	-	17	26, 48
53	Introduction to Internal Medicine	2	-	2	34	-	34	29, 42
54	Medical Genetics	2	-	2	34	-	34	9, 29
55	advanced molecular techniques in clinical laboratory	1.5	0.5	2	26	17	43	54
56	Seminar	1	-	1	17	-	17	-

*Table 4. Internship Courses*

<b>Code</b>	<b>Title</b>	<b>No. of Credits</b>	<b>Course Duration (Hours)</b>	<b>Prerequisite/ Simultaneous (Code No.)</b>
<b>57</b>	<b>Internship (1)</b>	<b>2</b>	<b>102</b>	<b>3rd semester</b>
<b>58</b>	<b>Internship (2)</b>	<b>4</b>	<b>204</b>	<b>Senior year</b>
<b>59</b>	<b>Field internship</b>	<b>10</b>	<b>510</b>	<b>58</b>