



دانشکده داروسازی دانشگاه علوم پزشکی ارومیه

Pharmacy Curriculum

Urmia University of Medical Sciences (UMSU)- International Campus

Pharmacy curriculum for the PharmD degree offered as half-year semesters. Some subjects could be displaced between semesters.

Pharmacy- 1<sup>st</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	General Chemistry-Lab		2		2
2	General Chemistry	4			4
3	General English	3			3
4	English-Prerequisite	3			3
5	Anatomy	2			2
6	Anatomy-Lab		1		1
7	Islamic Thoughts-1	2			2
8	Mathematics	3			3
	<b>Total</b>	<b>17</b>	<b>3</b>		<b>20</b>

Pharmacy- 2<sup>nd</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Physics	2			2
2	Physics-Lab		1		1
3	Molecular Biotechnology and Genetics	2			2



4	Biochemistry	3			3
5	Biochemistry-Lab		1		1
6	First Aid	1	1		2
7	Islamic Thoughts-2	2			2
8	Organic Chemistry-1	3			3
9	Organic Chemistry-Lab 1		1		1
10	Islamic Texts-1	2			2
11	Sports-1		1		1
<b>Total</b>		<b>15</b>	<b>5</b>		<b>20</b>

**Pharmacy- 3<sup>rd</sup> semester**

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Organic Chemistry-2	3		General Chemistry	3
2	Organic Chemistry-Lab 2		1		1
3	Bacteriology	3		Molecular Biology	3
4	Virology		1		1
5	Microbiology-Lab		1		1
6	Parasitology	3			3
7	Parasitology-Lab		1		1
8	Physiology-1	4		Anatomy	4
9	Islamic Revolution	2			2
10	Sports-2		1		1



<b>Total</b>	<b>15</b>	<b>5</b>		<b>20</b>
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### Pharmacy- 4<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Analytical Chemistry	2			2
2	Analytical Chemistry-Lab		2		2
3	Physiology-2	4		Physiology-1	4
4	Physiology-Lab2		1		1
5	Immunology	3			3
6	Immunology-Lab		1		1
7	Persian Literature	3			3
8	Principles of Health Services	1			1
9	History of Islam	2			2
10	Islamic Text-2	2			2
<b>Total</b>		<b>17</b>	<b>4</b>		<b>21</b>

Taking part in Basic Science Exam

### Pharmacy- 5<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutics-1	2			2
2	Clinical Biochemistry	2		Biochemistry	2
3	Pharmacology	4		Physiology-Biochemistry	4
4	Biological Medicines	2		Immunology	2
5	English for	2		General English	2



	Pharmacists				
6	Medicinal Chemistry-1	3		Chemistry-Organic Chemistry-Pharmacology	3
7	Physical Pharmacy-1	2		Mathematics	2
8	Biostatistics	2	1	Mathematics	3
<b>Total</b>		<b>19</b>	<b>1</b>		<b>20</b>

### Pharmacy- 6<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutics-2	3	1	Pharmaceutics-1	4
2	Pharmacology-2	4	1	Pharmacology-1	5
3	Medical Terminology	2		English for Pharmacists	2
4	Herbal Medicines	2	1		3
5	Medicinal Chemistry-2	3		Medicinal Chemistry-1	3
6	Physical Pharmacy-2	2		Physical Pharmacy-1	2
<b>Total</b>		<b>16</b>	<b>3</b>		<b>19</b>

### Pharmacy- 7<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutics-3	3	1	Pharmaceutics-2	4
2	Toxicology	2	2	Pharmacology-2	4
3	Pharmacognosy-1	2		Herbal Medicines	2
4	Medicinal Chemistry-3	3		Medicinal Chemistry-1	3
5	Pharmacotherapy-1	3		Pharmacology-Physiology	3



6	Cell Culture	1		Molecular Biology	1
7	Community Pharmacy Training		2	Pharmacology	2
<b>Total</b>		<b>14</b>	<b>5</b>		<b>19</b>

### Pharmacy- 8<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutics-4	2	1	Pharmaceutics-1	3
2	Instrumental Analytical Methods	3	1	Organic Chemistry-Analytical Chemistry	4
3	Pharmacotherapy-2	3		Pharmacotherapy-1	3
4	Pharmacognosy-2	3		Pharmacognosy-1	3
5	Pharmacognosy-Lab		2	Pharmacognosy-2	2
6	Biopharmacy	3		Mathematics-Pharmacology-2	3
7	Thesis-1	2		After 140 Credits	2
<b>Total</b>		<b>16</b>	<b>4</b>		<b>20</b>

### Pharmacy- 9<sup>th</sup> semester

Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutics-5	2	1	Pharmaceutics-4	3
2	Hygienic & Cosmetic Products	2		Pharmaceutics-4	2
3	Pharmacotherapy-3	3		Pharmacotherapy-2	3
4	Nuclear Pharmacy	2		Pharmacology-Medicinal Chemistry	2
5	Toxicity Control	2		Toxicology-Pharmacology-First Aids	2



6	Hospital Pharmacy Training		2	Pharmacotherapy-3	2
7	Thesis-2	2		Thesis-1	2
<b>Total</b>		<b>13</b>	<b>3</b>		<b>16</b>
<p>Psychology and Sociology are non-core subjects. Students can take these subjects or any of the optional subjects with equivalent credits after consulting their thesis supervisor.</p>					

Pharmacy- 10 <sup>th</sup> semester					
Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Pharmaceutical Management and Economics	2		Mathematics	2
2	Microbial Control	2	1	Microbiology-Pharmaceutics 1-4	3
3	Physico-chemical Control	2	1	General Chemistry-Analytical Chemistry- Instrumental Analytical Methods	3
4	Pharmaceutical Biotechnology	3		Molecular Biology	3
5	Ethics in Pharmacy	1			1
6	Industrial Training-Basic		2	Pharmaceutics 1-4	2
7	Optional Modules	2		Relevant to the Thesis	2
<b>Total</b>		<b>12</b>	<b>4</b>		<b>16</b>

Pharmacy- 11 <sup>th</sup> semester					
Row	Subject	Number of Credits			Total credits
		Credit (theory)	Credit (practical)	Prerequisite	
1	Thesis-3		4	Thesis 1-2	4
2	Pharmacy Work Experience		6	Community Pharmacy Training	6



				<b>&amp; Pharmacotherapy 3</b>	
<b>3</b>	<b>Clinical Work Experience</b>		<b>6</b>	<b>Community Pharmacy Training &amp; Pharmacotherapy 3</b>	<b>6</b>
<b>4</b>	<b>Industrial Work Experience</b>		<b>6</b>	<b>Basic Industrial Training</b>	<b>6</b>
	<b>Total</b>	<b>0</b>	<b>22</b>	<b>*Modules 3 &amp; 4 are only considered as 6 credits</b>	<b>22</b>
<b>* Students can choose either of Clinical or Industrial Work Experience.</b>					