

**Semmelweis University**  
**Faculty of Pharmaceutical Sciences**

**The new curriculum of the credit-based training from the 2020/2021 academic year**

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
<b>1. SEMESTER</b>					
General and Inorganic Chemistry (practice) I.	-	4	4		practical mark
General and Inorganic Chemistry (theory) I.	3	-	3		semi-final
Informatics (practice)	-	2	2		practical mark
Biophysics (practice) I.	-	2.5	2		practical mark
Biophysics (theory) I.	1.5	-	2		semi-final
Biology (practice) I.	-	2	2		practical mark
Biology (theory) I.	2	-	2		semi-final
First Aid (practice)	-	1	1		practical mark
Pharmaceutical Terminology (practice)	-	2	2		practical mark
Mathematics for Pharmacists (practice)	-	2	2		practical mark
Mathematics for Pharmacists (theory)	2	-	2		semi-final
Introduction to Pharmaceutical Studies (methodology, law) (theory)	1	-	1		semi-final
History of Pharmaceutics and Propedeutics (theory)	2	-	2		semi-final
Principles of Professional Ethics I.	-	-	-		signature
Physical Education I.	-	1	-		signature
Hungarian Pharmaceutical Terminology (practice) I.	-	2	0		signature
Elective or obligatory elective subjects	-	-	-		semi-final or practical mark
<b>Total:</b>	<b>11.5</b>	<b>18.5</b>	<b>27</b>		
<b>2. SEMESTER</b>					
General and Inorganic Chemistry (theory) II.	3	-	3	General and Inorganic Chemistry I.	final*
Analytical Chemistry (theory+practice) I.	2	4	6	Gen. and Inorg. Chem. I. Introduction to Pharm. Stud. Mathematics for Pharm.	practical mark
Anatomy (practice)	-	2	-	Biology I. Pharmac. Terminology	signature
Anatomy (theory)	2	-	2	First Aid	semi-final
Biophysics (practice) II.	-	2.5	2	Biophysics I.	practical mark
Biophysics (theory) II.	1.5	-	2		final*
Biology (practice) II.	-	2	2	Biology I.	practical mark
Biology (theory) II.	2	-	2		final*
Communication and Information Networks (theory+practice)	1	1	2	Introduction to Pharmaceutical Studies	practical mark
Basics of Economics (theory)	1	-	1	Mathematics for Pharm. Introduction to Pharm. Stud.	semi-final
Physical Chemistry for Pharmacists (theory+practice)	2	2	4	Gen. and Inorg. Chem. I. Biophysics I. Mathematics for Pharm.	practical mark
Hungarian Pharmaceutical Terminology (practice) II.	-	2	0	Hungarian Pharmaceutical Terminology I.	signature
Physical Education II.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-		semi-final or practical mark
<b>Total:</b>	<b>14.5</b>	<b>16.5</b>	<b>26</b>		

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
<b>3. SEMESTER</b>					
Analytical Chemistry (practice) II.	-	4	4	Analytical Chemistry I. Gen. and Inorg. Chem. II.	practical mark
Analytical Chemistry (theory) II.	4	-	4		final*
Colloid Chemistry (theory and practice)	2	2	4	Physic. Chem. for Pharm. Biophysics II.	practical mark
Organic Chemistry (practice) I.	-	4	4	Gen. and Inorg. Chem. II.	practical mark
Organic Chemistry (theory) I.	4	-	4		semi-final
Physiology (practice) I.	-	2	1	Anatomy	practical mark
Physiology (theory) I.	4	-	4	Biology II.	semi-final
Biochemistry (theory+practice) I.	1.5	1.5	2	Biology II. Gen. and Inorg. Chem. II.	practical mark
Basic Immunology (theory)	2	-	2	Biology II.	semi-final
Hungarian Pharmaceutical Terminology (practice) III.	-	2	1	Hungarian Pharmaceutical Terminology (practice) II.	practical mark
Physical Education III.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-		semi-final or practical mark
<b>Total:</b>	<b>17.5</b>	<b>16.5</b>	<b>30</b>		
<b>4. SEMESTER</b>					
Biochemistry (theory) II.	3	-	3	Biochemistry I. Organic Chemistry I.	final*
Organic Chemistry (practice II.	-	4	4	Organic Chemistry I.	practical mark
Organic Chemistry (theory) II.	4	-	4		final*
Physiological Pharmaceutics and Pharmaceutical dosage forms (theory+practice)	2	2	3	Physiology I. Physic. Chem. for Pharm. History of Pharm. and Prop.	practical mark
Physiology (practice) II.	-	2	1	Physiology I. Biochemistry I.	practical mark
Physiology (theory) II.	6	-	6		final*
Biotechnology (theory)	1	-	1	Biochemistry I.	semi-final
Nanotechnology (theory+practice)	2	2	4	Colloid Chemistry	practical mark
Pharmacy Practice	-	20/semester	-	Analytical Chemistry II. Pharmaceutical Terminology	signature
Hungarian Pharmaceutical Terminology (practice) IV.	-	2	3	Hungarian Pharmaceutical Terminology (practice) III.	final
Physical Education IV.	-	1	-		signature
Summer Practice I.	--	40	4	Organic Chemistry II. Analytical Chemistry II.	practical mark
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
<b>Total:</b>	<b>18</b>	<b>13 20/semester 40/week</b>	<b>33</b>		
<b>5. SEMESTER</b>					
Pharmaceutical Botany (practice)	-	2	1	Biology II. Biotechnology	practical mark
Pharmaceutical Botany (theory)	2	-	2		semi-final
Nutrition and Dietetics (theory)	1	-	1	Physiology II; Biochemistry II.	semi-final
Pharmaceutical Technology I. (theory+practice)	2	3	4	Physiological Pharmaceutics and Pharmaceutical dosage forms, Pharmaceutical, Terminology Nanotechnology	practical mark
Pharmaceutical Chemistry and Analysis (practice) I.	-	4	3	Analytical Chemistry II. Organic Chemistry II.	practical mark
Pharmaceutical Chemistry and Analysis (theory) I.	4	-	4		semi-final
Pharmaceutical Microbiology (practice)	-	2	-	Basic Immunology	signature
Pharmaceutical Microbiology (theory)	3	-	4		semi-final
Basic Medical Pathophysiology I. (theory+practice)	2	1	2	Physiology II. Biochemistry II.	practical mark

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
Clinical-Chemistry and Laboratory Diagnostics (theory)	2	-	2	Physiology II. Biochemistry II.	semi-final
Statistics for Pharmacists (theory+practice)	2	2	4	Mathematics for Pharm.; Physiological Pharmaceutics and Pharmaceutical dosage forms	practical mark
Physical Education V.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
<b>Total:</b>	<b>18</b>	<b>15</b>	<b>27</b>		
<b>6. SEMESTER</b>					
Basic Medical Pathophysiology II. (theory+practice)	2	1	3	Basic Med. Pathophys. I. Pharmac. Microbiology Nutrition and Dietetics	final*
Pharmacognosy (theory+practice) I.	2	4	5	Pharmaceutical Botany	practical mark
Pharmaceutical Chemistry and Analysis (practice) II.	-	4	4	Pharmaceutical Chemistry and Analysis I.	practical mark
Pharmaceutical Chemistry and Analysis (theory) II.	4	-	4		final*
Pharmaceutical Technology (practice) II.	-	6	3	Pharmaceutical Techn. I. Pharmac.Chem. and Anal. I.	practical mark
Pharmaceutical Technology (theory) II.	2	-	3	Statistics for Pharmacists	semi-final
Veterinary Pharmaceuticals (theory)	1	-	1	Pharmaceutical Techn. I. Pharmac. Microbiology	semi-final
Pharmacology and Toxicology (practice) I.	-	2	2	Basic Med. Pathophys. I. Physiological Pharmaceutics and Pharmaceutical dosage forms	practical mark
Pharmacology and Toxicology (theory) I.	2	-	2		semi-final
Pharmacy Practice II.	-	20/semester	-	Pharmaceutical Techn. I. Pharmac.Chem. and Anal. I.	signature
Physical Education VI.	-	1	-		signature
Summer Practice II.	--	40	4	Pharmaceutical Chem and Analysis; Pharm. Techn. II.	practical mark
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
<b>Total:</b>	<b>13</b>	<b>18 20/semester 40/week</b>	<b>31</b>		
<b>7. SEMESTER</b>					
Pharmacognosy (practice) II.	-	4	2	Pharmacognosy I.	practical mark
Pharmacognosy (theory) II.	2	-	3		final*
Instrumental Pharmaceutical Analysis (practice)	-	5	4	Pharmac.Chem. and Anal. II Pharmac. Techn. II.	practical mark
Instrumental Pharmaceutical Analysis (theory)	2	-	2		semi-final
Pharmacology and Toxicology (practice) II.	-	2	2	Pharmac. and Toxi. I. Basic Med. Pathophys. II.	practical mark
Pharmacology and Toxicology (theory) II.	3	-	3		semi-final
Pharmaceutical Technology (practice) III.	-	8	5	Pharmac. Techn. II.	practical mark
Pharmaceutical Technology (theory) III.	2	-	2		semi-final
Industrial Pharmaceutical Technology I.	3	0	2	Pharm. Technology II. Pharm. Chem. and Anal. I.	semi-final
Biological Drugs (theory)	2	-	2	Pharmac.Chem. and Anal. II Pharmac. and Tox. I. Biotechnology	semi-final
Pharmacoeconomics (practice)	-	1	1	Pharmac. and Tox. I. Basics of Economics Statistics for Pharmacists	practical mark
Physical Education VII.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
<b>Total:</b>	<b>14</b>	<b>21</b>	<b>28</b>		

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
<b>8. SEMESTER</b>					
Pharmacology and Toxicology (practice) III.	-	2	2	Pharmacology and Toxicology II.	practical mark
Pharmacology and Toxicology (theory) III.	3	-	4		final*
Pharmaceutical Technology (practice) IV.	-	8	4	Pharmaceutical Technology III.	practical mark
Pharmaceutical Technology (theory) IV.	2	-	5		final*
Pharmacy Administration (theory+practice) I.	2	2	4	Pharmac. and Tox. II. Pharmacoeconomics	practical mark
Public Health (practice)	-	2	2	Basic Med. Pathophy. II. Nutrition and Dietetics	practical mark
Public Health (theory)	2	-	2		semi-final
Phytotherapy (theory)	2	-	2	Pharmacognosy II.	semi-final
Pharmaceutical management (practice)	-	1	1	Pharmacoeconomics	practical mark
Pharmaceutical management (theory)	1	-	1		semi-final
Industrial Pharmaceutical Technology II.	3	0	2	Pharm. Technology III. Industrial Pharm. Tech. II.	semi-final
Diploma Work I.	-	2	-		signature
Physical Education VIII.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
<b>Total:</b>	<b>15</b>	<b>18</b>	<b>29</b>		
<b>9. SEMESTER</b>					
Compulsory Practice Before the Board Exam I.	-	40	8	Passing all finals of the 8th semester	practical mark
Drug Therapy (theory+practice)	2	3	5	Pharmac. and Tox. III. Pharmac. Techn. IV. Phytotherapy	semi-final
Pharmaceutical Care (theory+practice)	2	3	4	Pharmac. and Tox. III. Pharmac. Techn. IV.	semi-final
Clinical Pharmacokinetics and Biopharmacy (theory+practice)	2	3	4	Pharmac. and Tox. III. Pharmac. Techn. IV.	semi-final
Pharmaceutical Communication and Integrated Consulting (theory+practice)	1	2	2	Pharmac. and Tox. III. Pharmacy Administration I.	practical mark
Pharmacy Administration (theory) II.	2	-	2	Pharmacy Administration I. Public Health Pharmac. Techn. IV.	final*
Pharmaceutical Informatics (theory+practice)	1	1	1	Pharmac. Techn. IV. Pharmacy Administration I.	practical mark
Clinical Pharmacy (theory+practice)	1	1	1	Pharmac. and Tox. III. Pharmac. Techn. IV.	semi-final
Pharmaceutical Ethics and Sociology (theory+practice)	1	1	1	Pharmac. and Tox. III. History of Pharm. and Prop.	semi-final
Diploma Work II.	-	5	-	Diploma Work I.	signature
Physical Education IX.	-	1	-		signature
Elective or obligatory elective subjects	-	-	-	-	semi-final or practical mark
Subject	Lecture (hour/sem.)	Practice (hour/sem.)	Credit	Prerequisites	Exam type
<b>Pharmaceutical industrial and regulatory affairs knowledge (teaching block)</b>	<b>28</b>	<b>28</b>	<b>4</b>		<b>practical mark</b>
Drug Licensing (theory+practice)	12	12	1	Pharmacy Administration I. Pharmac. Techn. IV.	practical mark
Pharmacovigilance and pharmacoepidemiology (theory+practice)	4	4	1	Pharmac. and Tox. III.	practical mark
Quality Assurance (theory+practice)	4	4	1	Pharmac. Techn. IV. Pharmacy Administration I.	practical mark
Drug innovation and clinical studies (theory+practice)	8	8	1	Pharmac. and Tox. III. Pharmac. Techn. IV.	practical mark
<b>Total:</b>	<b>12/week 28/sem.</b>	<b>20/week 40/week 28/sem.</b>	<b>32</b>		

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
<b>10. SEMESTER</b>					
Compulsory Practice Before the Board Exam II.	–	40	16	Compulsory Practice Before the Board Exam I.	practical mark
Diploma work/Thesis defense	1/sem.	–	10	Diploma Work II.	final*
Principles of Professional Ethics II.	-	-	-		signature
<b>Total:</b>	<b>1/sem.</b>	<b>40/week</b>	<b>26</b>		
<i>*Counts to the qualification of the diploma</i>					

### Obligatory elective subjects in the recommended curriculum

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
Hungarian Pharmaceutical Terminology (practice) IV.	-	2	3	Hungarian Pharmaceutical Terminology (practice) III.	final*
Industrial Pharmaceutical Technology I.	3	0	2	Pharm. Technology II. Pharm. Chem. and Analysis I.	semi-final
Industrial Pharmaceutical Technology II.	3	0	2	Industrial Pharm. Tech. I. Pharm. Technology II.	semi-final
Compulsory Practice Before the Board Exam I.	–	40	8	Passing all finals of the 8th semester	practical mark
Compulsory Practice Before the Board Exam II.	–	40	16	Compulsory Practice Before the Board Exam I.	practical mark
Diploma work/Thesis defense	1/sem.	–	10	Diploma Work II.	practical mark
<b>Total:</b>			<b>41</b>		

### Elective subjects in the recommended curriculum

Subject	Lecture (hour/week)	Practice (hour/week)	Credit	Prerequisites	Exam type
Summer Practice I.	--	40	4	Organic Chemistry II. Analytical Chemistry II.	practical mark
Summer Practice II.	--	40	4	Pharmaceutical Chemistry and Analysis Pharm. Techn. II.	practical mark
<b>Total:</b>			<b>8</b>		