



**COLLEGE OF PHARMACY**  
**University of the Philippines Manila**  
**The Health Sciences Center**  
**Pedro Gil St. cor. Taft Avenue, Manila**

**BACHELOR OF SCIENCE IN INDUSTRIAL PHARMACY**

**FIRST YEAR**

**1st Semester**

	<b>Units</b>	<b>PREREQUISITE/S</b>	<b>CO-REQUISITE/S</b>
_____ Comm I (AH)	3.0		
_____ Nat Sci 3 (MST)	3.0		
_____ History I (SSP)	3.0		
_____ Biology 20: Elementary Botany	5.0		
_____ Math 17: Algebra & Trigonometry	5.0		
_____ Phar 100: Perspectives in Pharmacy	1.0		
_____ Physical Education	(2.0)		
_____ NSTP I	(3.0)		
	<b>20.0</b>		

**2nd Semester**

_____ Comm II (AH)	3.0		
_____ Soc. Sci I (SSP)	3.0		
_____ GE (SSP)	3.0		
_____ Chem 14: Fundamentals of Gen. Chem 1	3.0	Math 17 or equiv	
_____ Chem 14.1: Fund of Gen. Chem 1Lab	1.0	Math 17 or equiv	
_____ Math 100: Introduction to Calculus	4.0	Math 17 or equiv	
_____ IP 121: PharmI Calculations & Techniques	3.0	Math 17 or equiv	Chem 14 &14.1
_____ Physical Education	(2.0)		
_____ NSTP	(3.0)		
	<b>20.0</b>		

**SECOND SEMESTER**

**1st Semester**

_____ Nat Sci 50 (AH)	3.0		
_____ GE (AH)	3.0		
_____ GE (SSP)	3.0		
_____ Physics 51: General Physics 1	3.0	Math 17 or equiv	
_____ Chem 18: Gen. Chem w/ Quali Analysis	3.0	Chem 14	
_____ Chem 18.1: Gen. Chem w/ Quali Anal Lab	2.0	Chem 14.1	Chem 18
_____ Ph Ch 125: Pharm. Organic Chem 1	2.0	Chem 14, IP 121	
_____ Ph Ch 125.1: Pharm. Organic Chem 1Lab	1.0	Chem 14, 14.1 IP 121	PhCh 125
_____ Physical Education	(2.0)		
	<b>20.0</b>		

**2nd Semester**

_____ GE (AH)	3.0		
_____ Bio 22: Fundamentals of Zoology	5.0	Chem 14	
_____ Physics 52: General Physics 2	3.0	Physics 51	
_____ Ph Ch 121: Inorganic Pharm. Chem.	3.0	IP 121, Chem 18 &18.1	
_____ Ph Ch 126: Pharm Organic Chemistry 2	2.0	Ph Ch 125	
_____ Ph Ch 126.1 Pharm Org. Chem 2	1.0	Ph Ch 125.1	
_____ IP 141: Pharmaceutical Dosage Forms	4.0	IP 121	
_____ Physical Education	(2.0)		
	<b>21.0</b>		

**THIRD YEAR****1st Semester**

_____	GE (SSP)	3.0		
_____	Chem 150: Intro to Physical Chemistry	3.0	Math 100, Phys 52	
_____	IP 195: Pharmaceutical Statistics 1	3.0	Math 17	
_____	Phar 105: Intro to Pharmacy Informatics	2.0	3rd yr standing	
_____	Phar 111: Human Anatomy Physio & Patho 1	3.0	Bio 22	Ph Ch 127
_____	Ph Ch 135: Pharmaceutical Analysis 1	3.0	PhCh 121, PhCh 125 & 125.1	
_____	Ph Ch 127: Pharmaceutical Biochemistry	2.0	Ph Ch 126	
_____	Ph Ch 127.1: Pharm. Biochem Lab	1.0	Ph Ch 126.1	Ph Ch 127
		<b>20.0</b>		

**2nd Semester**

_____	PI 100: Life & Works of Rizal	3.0		
_____	IP 196: Pharmaceutical Statistics 2	3.0	IP 195	
_____	IP 142: Physical Pharmacy	3.0	Chem 150, IP 141	
_____	Phar 112: Human Anatomy, Physio & Patho 2	3.0	Phar 111, Ph Ch 127	
_____	Ph Ch 136: Pharmaceutical Analysis 2	3.0	Ph Ch 135, Physics 52	
_____	Ph Ch 128: Medicinal Chemistry 1	5.0	Bio 20, Ph Ch 127 & 127.1	
		<b>20.0</b>		

**Summer**

_____	Phar 180.1 Community Pharmacy Internship	5.0	IP 141, 3rd yr standing	
-------	--	-----	-------------------------	--

**FOURTH YEAR****1st Semester**

_____	Phar 125: Pharmaceutical Accounting	2.0	4th yr standing	
_____	Phar 135: Pharmaceutical Microbiology	4.0	Phar 112, Ph Ch 127	
_____	Phar 140: Pharmacology for Pharmacy 1	3.0	Phar 112, Ph Ch 127	Phar 135
_____	PhCh 137: Pharmaceutical Analysis 3	3.0	PhCh 128, Ph Ch 136	
_____	IP 125: Pharmaceutical Manufacturing	3.0	IP 141	IP 131
_____	IP 131: Quality Assurance of Pharml.	3.0	Ph Ch 136	IP 125
_____	IP 135: Pharmaceutical Engineering	3.0	IP 142	IP 125
		<b>21.0</b>		

**2nd Semester**

_____	GE (AH)	3.0		
_____	Phar 127: Pharmaceutical Management	2.0	Phar 125	
_____	Phar 141: Pharmacology for Pharmacy 2	3.0	Phar 135, Phar 140	Phar 141
_____	Phar 154: Dispensing & Incompatibilities	3.0	IP 141, Phar 140	Phar 127, Phar 154
_____	Phar 155: Hospital Pharmacy	4.0	Phar 140	Phar 141
_____	Ph Ch 129: Medicinal Chemistry 2	3.0	Phar 140, PhCh 128	
_____	IP 155: Biopharmaceutics	3.0	IP 142, IP 125 & 126	
		<b>21.0</b>		

**Summer**

_____ Phar 180.2: Hospital Pharmacy Internship	5	Phar 155
_____ Phar 180.3: Industrial Pharmacy Internship	5	IP 126 or IP 125
	<u>10.0</u>	

**FIFTH YEAR  
1st Semester**

_____ GE (MST)	3.0		
_____ Phar 163: Legal Pharmacy 1	1.0	5th yr standing	
_____ Phar 199: Research Methods	3.0	Phar 105, IP 196, 5th yr standing	
_____ PhCh 180: Introduction to Drug Discovery	2.0	Ph Ch 128	
_____ IP 161: Pharmacokinetics	3.0	Phar 141, IP 155	
_____ IP 170: Pharm. Product Dev.	3.0	IP 125/126	
_____ IP 165: Prod. Planning & Inv. Ctrl	3.0	IP 125, IP 131	IP 161 & 175
_____ IP 175: Pharmaceutical Marketing	2.0	Phar 127, IP 125/126	
	<u>20.0</u>		

**2nd Semester**

_____ Phar 164: Legal Pharmacy 2	1.0	Phar 163	
_____ Phar 174: Pharmacoeconomics	2.0	Phar 154 & 199	
_____ Phar 185: Public Health Pharmacy	3.0	5th yr standing	
_____ Phar 190: Pharmaceutical Biotechnology	2.0	Phar 135	
_____ Phar 197: Pharmacy Seminar	1.0	Phar 199, 5th yr standing	
_____ Phar 200: Phar. Undergraduate Thesis	3.0	Phar 199, 5th yr standing	Phar 197
_____ PhCh 145: General Toxicology	3.0	Phar 140, Ph Ch 128	PhCh 129, Phar 141
_____ IP 185: Validation of Pharm. Processes	3.0	IP 135 & 170	
_____ IP 190: Cosmetic Product Development	3.0	IP 125 & IP 141	
	<u>22.0</u>		

**Total Units**

**220.0**



**COLLEGE OF PHARMACY**  
**University of the Philippines Manila**  
*The Health Sciences Center*  
**Pedro Gil St. cor. Taft Avenue, Manila**

**BACHELOR OF SCIENCE IN PHARMACY**

**FIRST YEAR**

***1st Semester***

	<b>Units</b>	<b>PREREQUISITE/S</b>	<b>CO-REQUISITE/S</b>
_____ GE (AH)	3.0		
_____ GE (MST)	3.0		
_____ GE (SSP)	3.0		
_____ Biology 20: Elementary Botany	5.0		
_____ Math 17: Algebra & Trigonometry	5.0		
_____ Phar 100: Perspectives in Pharmacy	1.0		
_____ Physical Education	(2.0)		
_____ NSTP	(3.0)		
	<hr style="width: 50%; margin: 0 auto;"/> 20.0		

***2nd Semester***

_____ GE (AH)	3.0		
_____ GE (SSP)	3.0		
_____ GE (SSP)	3.0		
_____ Chem 14: Fundamentals of Gen. Chem 1	3.0	Math 17	
_____ Chem 14.1: Fund of Gen. Chem 1Lab	1.0	Math 17	
_____ Math 100: Introduction to Calculus	4.0	Math 17	
_____ IP 121: PharmI Calculations & Techniques	3.0	Math 17 or equiv	Chem 14 &14.1
_____ Physical Education	(2.0)		
_____ NSTP	(3.0)		
	<hr style="width: 50%; margin: 0 auto;"/> 20.0		

**SECOND YEAR**

***1st Semester***

_____ GE (AH)	3.0		
_____ GE (AH)	3.0		
_____ GE (SSP)	3.0		
_____ Physics 51: General Physics 1	3.0	Math 17	
_____ Chem 18: Gen. Chem w/ Quali Analysis	3.0	Chem 14	
_____ Chem 18.1: Gen. Chem w/ Quali Anal Lab	2.0	Chem 14.1	Chem 18
_____ Ph Ch 125: Pharm. Organic Chem 1	2.0	Chem 14, IP 121	
_____ Ph Ch 125.1: Pharm. Organic Chem 1Lab	1.0	Chem 14, 14.1 IP 121	Ph Ch 125
_____ Physical Education	(2.0)		
	<hr style="width: 50%; margin: 0 auto;"/> 20.0		

***2nd Semester***

_____ GE (AH)	3.0		
_____ IP 141: Pharmaceutical Dosage Forms	4.0	IP 121	
_____ Bio 22: Fundamentals of Zoology	5.0	Chem 14	
_____ Physics 52: General Physics 2	3.0	Physics 51	
_____ Ph Ch 121: Inorganic Pharm. Chem.	3.0	IP 121, Chem 18 &18.1	
_____ Ph Ch 126: Pharm Organic Chemistry 2	2.0	Ph Ch 125	
_____ Ph Ch 126.1 Pharm Org. Chem 2	1.0	Ph Ch 125.1	Ph Ch 126
_____ Physical Education	(2.0)		
	<hr style="width: 50%; margin: 0 auto;"/> 21.0		

**THIRD YEAR****1st Semester**

_____ GE (SSP)	3.0		
_____ Chem 150: Intro to Physical Chemistry	3.0	Math 100, Phys 52	
_____ IP 195: Pharmaceutical Statistics 1	3.0	Math 17	
_____ Phar 105: Intro to Pharmacy Informatics	2.0	3rd yr standing	
_____ Phar 111: Human Anatomy Physio & Patho 1	3.0	Bio 22	Ph Ch 127
_____ Ph Ch 135: Pharmaceutical Analysis 1	3.0	PhCh 121, PhCh 125 & 125.1	
_____ Ph Ch 127: Pharmaceutical Biochemistry	2.0	Ph Ch 126	
_____ Ph Ch 127.1: Pharm. Biochem Lab	1.0	Ph Ch 126.1	Ph Ch 127
	<b>20.0</b>		

**2nd Semester**

_____ PI 100: Life & Works of Rizal	3.0		
_____ IP 196: Pharmaceutical Statistics 2	3.0	IP 195	
_____ IP 142: Physical Pharmacy	3.0	Chem 150, Ph Ch 127	
_____ Phar 112: Human Anatomy, Physio & Patho 2	3.0	Phar 111, Ph Ch 127	
_____ Ph Ch 136: Pharmaceutical Analysis 2	3.0	Ph Ch 135	
_____ Ph Ch 128: Medicinal Chemistry 1	5.0	Bio 20, Ph Ch 127	
	<b>20.0</b>		

**Summer**

_____ Phar 180.1 Community Pharmacy Internship	5.0	IP 141, 3rd yr standing	
--	-----	-------------------------	--

**FOURTH YEAR****1st Semester**

_____ GE (MST)	3.0		
_____ IP 126: Pharmaceutical Manuf. & Quality Ctrl	3.0	IP 141, Ph Ch 136	
_____ Phar 125: Pharmaceutical Accounting	2.0	4th yr standing	
_____ Phar 135: Pharmaceutical Microbiology	4.0	Phar 112	
_____ Phar 137: Complementary & Alternative Med.	2.0	Ph Ch 128, IP 141,	
_____ Phar 140: Pharmacology for Pharmacy 1	3.0	Phar 112, Ph Ch 127	Phar 135
_____ Ph Ch 137: Pharmaceutical Analysis 3	3.0	PhCh 128, Ph Ch 136	
	<b>20.0</b>		

**2nd Semester**

_____ IP 155: Biopharmaceutics	3.0	IP 142, IP 125 & 126	
_____ Phar 127: Pharmaceutical Management	2.0	Phar 125	
_____ Phar 141: Pharmacology for Pharmacy 2	3.0	Phar 135, Phar 140	
_____ Phar 154: Dispensing & Incompatibilities	3.0	IP 141, Phar 140	Phar 141
_____ Phar 155: Hospital Pharmacy	4.0	Phar 140	Phar 127, Phar 154
_____ Ph Ch 129: Medicinal Chemistry 2	3.0	Phar 140, PhCh 128	Phar 141
	<b>18.0</b>		

**Summer**

_____ Phar 180.2: Hospital Pharmacy Internship	5	Phar 155	
_____ Phar 180.3: Industrial Pharmacy Internship	5	IP 126 / IP 125	
	<b>10.0</b>		

**FIFTH YEAR****1st Semester**

_____	GE (MST)	3.0		
_____	IP 175: Pharmaceutical. Marketing	2.0	IP 125/126	
_____	Phar 163: Legal Pharmacy 1	1.0	5th yr standing	
_____	Phar 170:Pharmacotherapeutics for Pharm Stud	3.0	Phar 155	
_____	Phar 199: Research Methods	3.0	Phar 105, IP 196, 5th yr standing	
_____	Elective 1	3.0		
_____	Elective 1	3.0		
_____	Elective 1	2.0		

**#####****2nd Semester**

_____	PhCh 145: General Toxicology	3.0	Phar 140, PhCh 128	PhCh 129, phar 141
_____	Phar 164: Legal Pharmacy 2	1.0	Phar 163	
_____	Phar 174: Pharmacoeconomics	2.0	Phar 155 & 199	
_____	Phar 186: Public Health Pharmacy	3.0	5th yr standing	
_____	Phar 197: Pharmacy Seminar	1.0	5th yr standing, Phar 199	
_____	Phar 200: Phar. Undergraduate Thesis	3.0	5th yr standing, Phar 199	Phar 197
_____	Elective 2	2.0		
_____	Elective 2	3.0		

**18.0****Total Units****212.0****1st SEMESTER****ELECTIVE 1:**

Clin. Phar 175: Clinical Pharmacy Practice	3.0	Phar 155	
Clin. Phar 180: Patient Medication Counseling	2.0	Phar 155	Phar 170, Clin. Phar 175
IP 165: Production Planning & Inventory Control	3.0	IP 196 & 126	
PhCh 180: Introduction to Drug Discovery	2.0	PhCh 128	

**2nd SEMESTER****ELECTIVE 2:**

PhCh 185: Biological Assay of Natural Products	2.0	PhCh 128	
PhCh 190: Assay Validation	2.0	PhCh 137	
Phar 172: Pharmacoepidemiology	2.0	Phar 154& 155, IP 196	
Phar 190: Pharmaceutical Biotechnology	2.0	Phar 135	